

E-appendix to  
*Students' perspectives on learning  
mathematics and science: Results from  
TIMSS 2015 in Ireland*

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## Introduction

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This e-appendix provides supplementary statistical information (e.g., standard errors) for data presented in Chapters 3-5 of *Students' perspectives on learning mathematics and science: Results from TIMSS 2015 in Ireland*.<sup>1</sup> This information has been excluded from the main report in order to facilitate a clear presentation of findings. The main report is available for download here: [www.erc.ie/timss](http://www.erc.ie/timss).

Tables and figures are presented in the order in which they appear, or are referenced, in the main report.

### Interpreting tables in this e-Appendix

#### **Statistical significance**

In the current report, tests of statistical significance are conducted to establish if differences between mean scale scores are large enough and reliable enough that we can be confident that the difference reported here is unlikely to have occurred by chance. For each comparison, a reference category was selected for each variable and comparisons were made between the mean score for this group and each remaining group. Statistical significance tests are reported at the 95% confidence level and measurement and sampling error are accounted for in the statistical comparisons.

Tests of statistical significance are not performed between mean scores for Ireland and the TIMSS average as Irish mean scores form part of the TIMSS average and therefore they are not mutually exclusive groups.

#### **TIMSS average**

Reference is made to the *TIMSS average* or *international average* throughout this report. This refers to the average of all 49 countries at Fourth grade (including Jordan and South Africa which participated in the TIMSS Numeracy assessment) or all 39 countries at Eighth grade for which data were available.

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<sup>1</sup> See Perkins, Clerkin & Chubb (2020): <http://www.erc.ie/studies/timss>

## Chapter 3 tables: Absence from school and school belonging

Table A3.1: Percentage of Fourth grade students reporting absence from school, and mean achievement for mathematics and science with standard errors in parentheses – Ireland and comparison countries  
(Table 3.1)

	Once every two weeks or more (reference)			Once a month			Never or almost never		
	%	Maths	Science	%	Maths	Science	%	Maths	Science
Australia	13 (0.7)	459 (5.1)	473 (4.8)	23 (1.0)	<b>523</b> (4.1)	<b>531</b> (3.7)	63 (1.1)	<b>528</b> (3.4)	<b>533</b> (2.9)
England	9 (0.6)	494 (4.8)	487 (4.4)	16 (0.7)	<b>541</b> (4.8)	<b>534</b> (4.1)	75 (0.9)	<b>555</b> (3.0)	<b>543</b> (2.5)
Finland	8 (0.5)	504 (5.1)	525 (5.8)	37 (0.9)	<b>534</b> (2.5)	<b>552</b> (2.8)	55 (1.1)	<b>541</b> (2.3)	<b>560</b> (2.6)
Hong Kong SAR	6 (0.4)	563 (6.6)	508 (6.9)	14 (0.8)	<b>599</b> (5.3)	<b>543</b> (5.7)	81 (0.8)	<b>621</b> (2.9)	<b>562</b> (3.0)
Ireland	10 (0.8)	488 (4.9)	477 (4.6)	20 (0.9)	<b>541</b> (3.5)	<b>527</b> (3.5)	70 (1.2)	<b>558</b> (2.1)	<b>537</b> (2.5)
New Zealand	--	--	--	--	--	--	--	--	--
Northern Ireland	11 (0.7)	499 (5.8)	470 (5.0)	16 (0.9)	<b>560</b> (4.6)	<b>517</b> (3.8)	73 (1.2)	<b>583</b> (2.8)	<b>528</b> (2.2)
Rep. of Korea	2 (0.2)	533 (8.8)	530 (8.5)	5 (0.4)	<b>574</b> (5.6)	<b>558</b> (5.4)	93 (0.5)	<b>612</b> (2.3)	<b>592</b> (2.1)
Russian Fed.	8 (0.6)	530 (6.7)	533 (6.1)	12 (0.6)	<b>558</b> (5.9)	<b>560</b> (4.8)	81 (0.9)	<b>568</b> (3.2)	<b>572</b> (3.1)
Singapore	10 (0.7)	524 (6.7)	495 (6.5)	14 (0.5)	<b>598</b> (4.4)	<b>571</b> (4.2)	76 (0.8)	<b>634</b> (3.5)	<b>607</b> (3.3)
Slovenia	14 (0.7)	488 (3.9)	510 (5.3)	18 (0.7)	<b>517</b> (3.7)	<b>540</b> (3.9)	68 (1.0)	<b>528</b> (1.9)	<b>551</b> (2.3)
United States	12 (0.5)	492 (3.5)	499 (3.7)	18 (0.5)	<b>539</b> (3.1)	<b>545</b> (3.0)	70 (0.7)	<b>549</b> (2.3)	<b>556</b> (2.2)
TIMSS	15 (0.1)	468 (0.8)	465 (0.9)	18 (0.1)	<b>506</b> (0.7)	<b>503</b> (0.7)	67 (0.2)	<b>521</b> (0.5)	<b>517</b> (0.5)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

The TIMSS average mathematics scores do not include South Africa and Jordan both of which participated in the TIMSS Numeracy study.

Table A3.2: Percentage of Fourth grade students by frequency of school absence and gender with standard errors in parentheses – Ireland and TIMSS average (Figure 3.1, tabulated)

		Once every two weeks or more	Once a month	Never or almost never
Ireland	Girls	9 (1.1)	20 (1.1)	71 (1.5)
	Boys	11 (0.8)	21 (1.2)	68 (1.4)
TIMSS	Girls	14 (0.1)	18 (0.2)	68 (0.2)
	Boys	16 (0.2)	18 (0.2)	66 (0.2)

Table A3.3: Percentage of Eighth grade students reporting absence from school, and mean achievement for mathematics and science with standard errors in parentheses – Ireland and comparison countries (*Table 3.2*)

	Once every two weeks or more (reference)			Once a month			Never or almost never		
	%	Maths	Science	%	Maths	Science	%	Maths	Science
Australia	13 (0.5)	466 (4.2)	474 (3.9)	28 (0.8)	<b>501</b> (3.3)	<b>510</b> (3.4)	59 (0.8)	<b>519</b> (3.3)	<b>525</b> (2.6)
England	8 (0.5)	472 (6.9)	484 (6.7)	24 (0.8)	<b>505</b> (5.1)	<b>525</b> (4.9)	69 (1.0)	<b>531</b> (4.3)	<b>549</b> (3.8)
Hong Kong SAR	4 (0.5)	528 (10.7)	487 (9.9)	9 (0.5)	<b>576</b> (5.4)	<b>538</b> (4.5)	87 (0.8)	<b>600</b> (4.5)	<b>550</b> (3.8)
<b>Ireland</b>	<b>10 (0.6)</b>	<b>480 (5.0)</b>	<b>482 (5.5)</b>	<b>27 (0.8)</b>	<b>516</b> (3.4)	<b>520</b> (3.8)	<b>63 (0.9)</b>	<b>535</b> (2.8)	<b>543</b> (2.9)
New Zealand	--	--	--	--	--	--	--	--	--
Rep. of Korea	1 (0.2)	518 (14.2)	480 (14.3)	3 (0.2)	520 (9.1)	486 (8.7)	96 (0.3)	<b>609</b> (2.6)	<b>558</b> (2.2)
Russian Fed.	18 (0.7)	522 (7.0)	527 (5.9)	23 (0.9)	<b>539</b> (5.3)	<b>543</b> (4.6)	58 (1.2)	<b>542</b> (4.6)	<b>550</b> (4.5)
Singapore	6 (0.4)	527 (7.7)	493 (8.3)	12 (0.5)	<b>587</b> (5.6)	<b>568</b> (5.3)	82 (0.7)	<b>633</b> (2.8)	<b>609</b> (2.8)
Slovenia	12 (0.6)	495 (4.6)	523 (5.3)	32 (0.9)	<b>517</b> (2.4)	<b>552</b> (3.0)	57 (1.0)	<b>521</b> (2.6)	<b>558</b> (2.9)
United States	12 (0.5)	478 (4.1)	489 (4.2)	26 (0.6)	<b>516</b> (3.2)	<b>530</b> (3.1)	62 (0.8)	<b>528</b> (3.3)	<b>539</b> (2.9)
<b>TIMSS</b>	<b>16 (0.1)</b>	<b>435 (1.0)</b>	<b>437 (1.0)</b>	<b>23 (0.1)</b>	<b>471</b> (0.7)	<b>477</b> (0.8)	<b>61 (0.2)</b>	<b>496</b> (0.6)	<b>502</b> (0.6)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A3.4: Percentage of Eighth grade students by frequency of school absence and gender with standard errors in parentheses – Ireland and TIMSS average (*Figure 3.2, tabulated*)

		Once every two weeks or more	Once a month	Never or almost never
Ireland	Girls	11 (0.8)	26 (1.1)	64 (1.2)
	Boys	10 (0.7)	28 (1.0)	62 (1.0)
TIMSS	Girls	16 (0.2)	23 (0.2)	61 (0.2)
	Boys	16 (0.2)	23 (0.2)	60 (0.2)

Table A3.5: Percentage of Fourth grade students endorsing various statements about their attitudes to school with standard errors in parentheses– Ireland and TIMSS average (*Table 3.3*)

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I like being in school	IRL	37 (1.4)	42 (1.1)	11 (0.7)	10 (0.7)
	TIMSS	53 (0.2)	33 (0.1)	8 (0.1)	6 (0.1)
I feel safe when I am at school	IRL	73 (1.0)	20 (0.8)	4 (0.4)	2 (0.3)
	TIMSS	63 (0.2)	27 (0.1)	7 (0.1)	4 (0.1)
I feel like I belong at this school	IRL	68 (1.2)	20 (0.9)	7 (0.5)	5 (0.4)
	TIMSS	64 (0.2)	24 (0.1)	7 (0.1)	5 (0.1)
I like to see my classmates at school	IRL	92 (0.6)	6 (0.5)	1 (0.2)	1 (0.2)
	TIMSS	84 (0.1)	13 (0.1)	2 (0.04)	1 (0.03)
Teachers at my school are fair to me	IRL	76 (1.1)	18 (0.8)	4 (0.4)	2 (0.2)
	TIMSS	68 (0.2)	23 (0.1)	5 (0.1)	4 (0.1)
I am proud to go to this school	IRL	79 (1.1)	15 (0.9)	3 (0.4)	2 (0.3)
	TIMSS	68 (0.2)	23 (0.1)	5 (0.1)	4 (0.1)
I learn a lot in school	IRL	87 (0.9)	11 (0.8)	2 (0.2)	1 (0.2)
	TIMSS	79 (0.1)	17 (0.1)	2 (0.04)	1 (0.03)

Table A3.6: Percentage of Fourth grade students by the extent to which they feel they belong in their school and mean achievement for mathematics and science with standard errors in parentheses– Ireland and comparison countries (*Table 3.4*)

	High sense of school belonging (reference)			Some sense of school belonging			Little sense of school belonging		
	%	Maths	Science	%	Maths	Science	%	Maths	Science
Australia	62 (1.2)	524 (3.7)	529 (3.3)	33 (1.0)	<b>511</b> (3.2)	<b>520</b> (3.6)	5 (0.4)	<b>483</b> (7.3)	<b>493</b> (6.0)
England	71 (1.4)	551 (3.3)	540 (2.8)	25 (1.2)	<b>538</b> (3.9)	<b>530</b> (3.9)	4 (0.4)	<b>505</b> (7.5)	<b>503</b> (6.1)
Finland	68 (1.3)	539 (2.2)	556 (2.3)	28 (1.1)	<b>531</b> (3.1)	552 (3.4)	3 (0.4)	<b>509</b> (6.0)	<b>527</b> (5.9)
Hong Kong SAR	46 (1.6)	624 (3.6)	565 (3.9)	43 (1.2)	<b>611</b> (3.0)	<b>552</b> (3.1)	11 (0.9)	<b>593</b> (3.8)	<b>540</b> (4.7)
Ireland	73 (1.2)	553 (2.3)	533 (2.7)	23 (1.1)	<b>537</b> (3.5)	<b>521</b> (3.3)	4 (0.4)	<b>519</b> (7.8)	513 (8.3)
New Zealand	67 (1.0)	493 (2.6)	508 (3.3)	29 (0.9)	492 (3.4)	507 (3.0)	4 (0.3)	<b>459</b> (8.3)	<b>481</b> (9.3)
Northern Ireland	71 (1.3)	576 (3.3)	523 (2.5)	25 (1.1)	<b>561</b> (5.0)	515 (4.2)	3 (0.5)	<b>523</b> (10.4)	<b>494</b> (8.4)
Rep. of Korea	52 (1.3)	614 (2.5)	591 (2.3)	45 (1.2)	<b>603</b> (2.4)	588 (2.3)	3 (0.4)	<b>587</b> (9.1)	578 (8.0)
Russian Fed.	68 (1.3)	568 (3.6)	568 (3.3)	29 (1.2)	<b>558</b> (4.4)	566 (4.2)	3 (0.3)	548 (9.3)	566 (10.1)
Singapore	56 (0.8)	622 (3.9)	593 (3.7)	39 (0.7)	<b>615</b> (4.2)	590 (4.0)	6 (0.4)	<b>596</b> (6.7)	<b>573</b> (7.1)
Slovenia	55 (1.5)	519 (2.2)	542 (2.8)	39 (1.1)	523 (2.7)	545 (2.8)	6 (0.6)	518 (5.3)	541 (6.5)
United States	64 (0.8)	548 (2.3)	554 (2.3)	29 (0.6)	<b>532</b> (2.6)	<b>539</b> (2.6)	7 (0.4)	<b>506</b> (4.5)	<b>518</b> (4.8)
TIMSS	66 (0.2)	510 (0.4)	511 (0.5)	30 (0.1)	<b>499</b> (0.6)	501 (0.7)	4 (0.1)	<b>482</b> (1.2)	487 (1.4)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.



Table A3.7 Fourth grade students' sense of school belonging scale scores by gender with standard errors in parentheses– Ireland and TIMSS average (*Figure 3.3, tabulated*)

Mean (SE)		
Ireland	Girls	10.69 (0.1)
	Boys	9.75 (0.1)
TIMSS	Girls	10.24 (0.01)
	Boys	9.77 (0.01)

Table A3.8: Percentage of Eighth grade students endorsing various statements about their attitudes to school with standard errors in parentheses – Ireland and TIMSS average (*Table 3.5*)

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I like being in school	IRL	24 (0.9)	49 (0.8)	17 (0.6)	10 (0.6)
	TIMSS	38 (0.2)	43 (0.2)	12 (0.1)	6 (0.1)
I feel safe when I am at school	IRL	52 (1.3)	38 (1.0)	8 (0.4)	3 (0.3)
	TIMSS	47 (0.2)	38 (0.1)	10 (0.1)	5 (0.1)
I feel like I belong at this school	IRL	45 (1.2)	37 (0.9)	12 (0.6)	6 (0.5)
	TIMSS	46 (0.2)	36 (0.1)	11 (0.1)	6 (0.1)
I like to see my classmates at school	IRL	75 (0.9)	20 (0.7)	3 (0.4)	1 (0.2)
	TIMSS	71 (0.1)	23 (0.1)	5 (0.1)	2 (0.04)
Teachers at my school are fair to me	IRL	39 (1.1)	43 (0.8)	14 (0.7)	4 (0.4)
	TIMSS	44 (0.2)	39 (0.1)	12 (0.1)	5 (0.1)
I am proud to go to this school	IRL	51 (1.4)	35 (1.0)	9 (0.6)	4 (0.4)
	TIMSS	47 (0.2)	35 (0.1)	12 (0.1)	7 (0.1)
I learn a lot in school	IRL	53 (1.3)	37 (1.1)	8 (0.5)	2 (0.3)
	TIMSS	56 (0.2)	34 (0.1)	7 (0.1)	3 (0.1)

Table A3.9: Percentage of Eighth grade students by the extent to which they feel they belong in their school and mean achievement for mathematics and science with standard errors in parentheses – Ireland and comparison countries (*Table 3.6*)

	High sense of school belonging ( <i>reference</i> )			Some sense of school belonging			Little sense of school belonging		
	%	Maths	Science	%	Maths	Science	%	Maths	Science
Australia	41 (1.1)	528 (3.4)	535 (2.9)	48 (0.9)	<b>499</b> (2.8)	<b>506</b> (2.3)	11 (0.5)	<b>460</b> (5.0)	<b>465</b> (5.1)
England	35 (1.3)	542 (4.4)	560 (4.1)	54 (1.0)	<b>513</b> (4.4)	<b>532</b> (3.9)	11 (0.6)	<b>478</b> (5.5)	<b>497</b> (6.3)
Hong Kong SAR	31 (1.6)	616 (5.1)	562 (4.4)	55 (1.3)	<b>591</b> (4.2)	<b>542</b> (3.8)	14 (0.8)	<b>560</b> (7.1)	<b>525</b> (6.4)
Ireland	42 (1.3)	537 (2.7)	545 (2.8)	48 (1.0)	<b>519</b> (3.1)	<b>525</b> (3.1)	10 (0.7)	<b>491</b> (5.9)	<b>492</b> (6.8)
New Zealand	43 (1.2)	509 (3.8)	528 (3.9)	49 (1.0)	<b>488</b> (3.5)	<b>509</b> (3.4)	8 (0.5)	<b>449</b> (5.8)	<b>474</b> (5.5)
Rep. of Korea	24 (0.9)	621 (3.9)	565 (3.6)	69 (0.8)	<b>605</b> (2.6)	<b>555</b> (2.1)	7 (0.5)	<b>568</b> (6.2)	<b>526</b> (5.3)
Russian Fed.	36 (1.2)	544 (5.9)	547 (5.6)	55 (1.1)	536 (4.6)	544 (4.2)	9 (0.6)	<b>526</b> (6.2)	536 (5.5)
Singapore	37 (0.7)	638 (3.2)	614 (3.2)	55 (0.7)	<b>615</b> (3.5)	<b>591</b> (3.5)	9 (0.4)	<b>589</b> (5.9)	<b>564</b> (6.4)
Slovenia	12 (0.7)	527 (4.7)	564 (4.9)	66 (0.9)	519 (2.3)	555 (2.6)	22 (1.0)	<b>502</b> (2.9)	<b>533</b> (3.1)
United States	37 (0.9)	538 (3.9)	548 (3.3)	49 (0.7)	<b>514</b> (2.9)	<b>526</b> (2.8)	14 (0.6)	<b>485</b> (3.6)	<b>501</b> (3.6)
TIMSS	44 (0.2)	492 (0.7)	498 (0.6)	47 (0.2)	<b>479</b> (0.6)	<b>483</b> (0.6)	9 (0.1)	<b>458</b> (1.0)	<b>459</b> (1.1)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A3.10: Eighth grade students' sense of school belonging scale scores by gender with standard errors in parentheses– Ireland and TIMSS average (*Figure 3.4, tabulated*)

Mean (SE)		
Ireland	Girls	10.08 (0.1)
	Boys	9.80 (0.1)
TIMSS	Girls	10.12 (0.01)
	Boys	9.89 (0.01)

## Chapter 4 tables: Students' attitudes toward mathematics and mathematics lessons

Table A4.1: Percentage of Fourth grade students endorsing various statements about their attitudes to mathematics with standard errors in parentheses– Ireland and TIMSS average

		<b>Agree a lot</b>	<b>Agree a little</b>	<b>Disagree a little</b>	<b>Disagree a lot</b>
I enjoy learning mathematics	IRL	48 (1.3)	35 (0.9)	10 (0.6)	8 (0.7)
	TIMSS	56 (0.2)	29 (0.1)	9 (0.1)	7 (0.1)
I wish I did not have to study mathematics	IRL	12 (0.7)	19 (0.9)	24 (0.7)	45 (1.2)
	TIMSS	13 (0.1)	12 (0.1)	18 (0.1)	56 (0.2)
Mathematics is boring	IRL	12 (0.7)	22 (0.8)	23 (0.8)	44 (1.1)
	TIMSS	11 (0.1)	15 (0.1)	20 (0.1)	54 (0.2)
I learn many interesting things in mathematics	IRL	62 (1.1)	26 (0.9)	8 (0.6)	5 (0.5)
	TIMSS	65 (0.2)	24 (0.1)	7 (0.1)	4 (0.1)
I like mathematics	IRL	50 (1.2)	29 (0.9)	9 (0.6)	11 (0.7)
	TIMSS	57 (0.2)	25 (0.1)	10 (0.1)	9 (0.1)
I like any schoolwork that involves numbers	IRL	34 (1.0)	36 (0.9)	20 (0.8)	11 (0.6)
	TIMSS	47 (0.2)	30 (0.1)	15 (0.1)	8 (0.9)
I like to solve mathematics problems	IRL	43 (1.1)	29 (0.9)	14 (0.7)	13 (0.7)
	TIMSS	48 (0.2)	28 (0.1)	14 (0.1)	10 (0.1)
I look forward to mathematics lessons	IRL	35 (1.3)	30 (0.8)	20 (0.8)	15 (0.9)
	TIMSS	42 (0.2)	29 (0.1)	17 (0.1)	12 (0.1)
Mathematics is one of my favourite subjects	IRL	44 (1.1)	22 (0.7)	15 (0.7)	20 (0.8)
	TIMSS	48 (0.2)	21 (0.1)	15 (0.1)	16 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.2: Percentage of Fourth grade students by the extent to which they like learning mathematics and mean mathematics achievement with standard errors in parentheses – Ireland and comparison countries  
(Table 4.1)

	<b>Very much like learning maths</b> (reference)		<b>Like learning maths</b>		<b>Do not like learning maths</b>	
	%	Maths	%	Maths	%	Maths
Australia	37 (1.0)	535 (4.7)	36 (0.8)	<b>516</b> (3.1)	27 (0.7)	<b>496</b> (4.2)
England	50 (1.4)	555 (3.7)	32 (0.9)	<b>546</b> (3.5)	17 (1.0)	<b>523</b> (4.4)
Finland	28 (1.0)	550 (3.4)	41 (0.9)	<b>537</b> (2.4)	31 (1.0)	<b>521</b> (2.5)
Hong Kong SAR	35 (1.1)	631 (3.2)	38 (1.0)	<b>612</b> (3.6)	27 (1.2)	<b>596</b> (3.8)
<b>Ireland</b>	<b>38</b> (1.2)	<b>561</b> (3.0)	<b>39</b> (0.9)	<b>547</b> (2.6)	<b>23</b> (1.1)	<b>528</b> (3.2)
New Zealand	43 (0.9)	498 (3.1)	34 (0.7)	<b>488</b> (3.2)	23 (0.8)	<b>485</b> (3.4)
Northern Ireland	35 (1.1)	585 (4.0)	38 (1.0)	<b>573</b> (3.8)	27 (1.1)	<b>547</b> (4.4)
Rep. of Korea	19 (0.7)	645 (3.3)	46 (1.0)	<b>610</b> (2.4)	35 (1.0)	<b>586</b> (2.7)
Russian Fed.	52 (1.1)	577 (4.4)	37 (0.8)	<b>555</b> (3.4)	11 (0.9)	<b>536</b> (3.9)
Singapore	39 (0.8)	640 (4.1)	38 (0.7)	<b>611</b> (4.1)	23 (0.8)	<b>591</b> (4.5)
Slovenia	35 (1.1)	535 (2.7)	39 (0.9)	<b>518</b> (2.7)	27 (1.4)	<b>505</b> (2.5)
United States	42 (0.8)	555 (2.8)	35 (0.5)	<b>536</b> (2.7)	23 (0.7)	<b>524</b> (2.3)
<b>TIMSS</b>	<b>46</b> (0.2)	<b>521</b> (0.5)	<b>35</b> (0.1)	<b>495</b> (0.5)	<b>19</b> (0.1)	<b>483</b> (0.8)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A4.3: Fourth grade students' enjoyment of learning mathematics scale scores by gender with standard errors in parentheses – Ireland and TIMSS average (Figure 4.1, tabulated)

		<b>Mean (SE)</b>
Ireland	Girls	9.62 (0.1)
	Boys	9.56 (0.1)
TIMSS	Girls	9.86 (0.01)
	Boys	9.99 (0.01)

Table A4.4: Percentage of Eighth grade students endorsing various statements about their attitudes to mathematics with standard errors in parentheses– Ireland and TIMSS average

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I enjoy learning maths	IRL	23 (1.0)	40 (0.8)	21 (0.7)	16 (0.8)
	TIMSS	34 (0.2)	37 (0.1)	17 (0.1)	12 (0.1)
I wish I did not have to study maths	IRL	22 (0.9)	25 (0.7)	25 (0.8)	28 (0.9)
	TIMSS	18 (0.1)	22 (0.1)	25 (0.1)	35 (0.2)
Maths is boring	IRL	24 (0.9)	34 (0.9)	27 (0.7)	16 (0.8)
	TIMSS	17 (0.1)	27 (0.1)	27 (0.1)	28 (0.2)
I learn many interesting things in maths	IRL	23 (0.9)	40 (0.7)	24 (0.7)	13 (0.6)
	TIMSS	37 (0.2)	36 (0.1)	18 (0.1)	9 (0.1)
I like maths	IRL	25 (1.0)	37 (0.8)	19 (0.6)	19 (0.8)
	TIMSS	33 (0.2)	33 (0.1)	19 (0.1)	15 (0.1)
I like any schoolwork that involves numbers	IRL	15 (0.6)	28 (0.7)	34 (0.7)	22 (0.9)
	TIMSS	24 (0.1)	32 (0.1)	28 (0.1)	16 (0.1)
I like to solve maths problems	IRL	18 (0.7)	28 (0.8)	26 (0.7)	28 (0.9)
	TIMSS	27 (0.1)	32 (0.1)	24 (0.1)	18 (0.1)
I look forward to maths class	IRL	12 (0.7)	26 (0.8)	33 (0.8)	29 (0.9)
	TIMSS	20 (0.1)	30 (0.1)	28 (0.1)	21 (0.2)
Maths is one of my favourite subjects	IRL	18 (0.8)	20 (0.8)	23 (0.7)	39 (1.2)
	TIMSS	27 (0.1)	24 (0.1)	23 (0.1)	26 (0.2)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.5: Percentage of Eighth grade students by the extent to which they like learning mathematics and mean mathematics achievement with standard errors in parentheses – Ireland and comparison countries (Table 4.2)

	Very much like learning maths (reference)		Like learning maths		Do not like learning maths	
	%	Maths	%	Maths	%	Maths
Australia	13 (0.7)	551 (4.4)	36 (0.9)	<b>522</b> (3.3)	50 (1.2)	<b>482</b> (3.0)
England	14 (0.8)	559 (6.4)	39 (1.0)	<b>532</b> (4.7)	48 (1.4)	<b>498</b> (4.4)
Hong Kong SAR	15 (0.6)	638 (4.5)	39 (0.8)	<b>605</b> (4.6)	46 (1.1)	<b>572</b> (5.2)
Ireland	14 (0.7)	562 (4.6)	35 (0.9)	<b>537</b> (3.1)	52 (1.2)	<b>505</b> (2.8)
New Zealand	14 (0.6)	534 (5.9)	40 (1.0)	<b>501</b> (4.5)	46 (1.2)	<b>476</b> (3.1)
Rep. of Korea	8 (0.4)	668 (4.2)	34 (0.7)	<b>634</b> (3.0)	58 (0.8)	<b>581</b> (2.7)
Russian Fed.	19 (1.0)	566 (6.8)	48 (0.7)	<b>545</b> (5.1)	33 (1.1)	<b>512</b> (4.6)
Singapore	24 (0.7)	654 (3.2)	42 (0.8)	<b>625</b> (3.5)	33 (0.8)	<b>592</b> (4.3)
Slovenia	5 (0.4)	560 (7.0)	28 (1.1)	<b>541</b> (2.7)	67 (1.2)	<b>503</b> (2.2)
United States	17 (0.6)	554 (4.0)	36 (0.6)	<b>528</b> (3.4)	47 (0.9)	<b>499</b> (3.0)
TIMSS	22 (0.1)	518 (0.8)	39 (0.1)	<b>485</b> (0.6)	38 (0.2)	<b>462</b> (0.6)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A4.6: Eighth grade students' enjoyment of learning mathematics scale scores by gender with standard errors in parentheses – Ireland and TIMSS average (*Figure 4.2, tabulated*)

		<b>Mean (SE)</b>
Ireland	Girls	9.24 (0.1)
	Boys	9.39 (0.1)
TIMSS	Girls	9.83 (0.01)
	Boys	10.05 (0.01)

Table A4.7: Percentage of Fourth grade students endorsing various statements about their confidence in mathematics with standard errors in parentheses– Ireland and TIMSS average

		<b>Agree a lot</b>	<b>Agree a little</b>	<b>Disagree a little</b>	<b>Disagree a lot</b>
I usually do well in mathematics	IRL	54 (1.1)	37 (0.9)	7 (0.5)	3 (0.3)
	TIMSS	50 (0.2)	36 (0.1)	9 (0.1)	4 (0.1)
Mathematics is harder for me than my classmates	IRL	12 (0.6)	21 (0.8)	27 (1.0)	41 (1.0)
	TIMSS	16 (0.1)	22 (0.1)	23 (0.1)	40 (0.1)
I am just not good at mathematics	IRL	8 (0.6)	14 (0.7)	23 (0.9)	54 (1.1)
	TIMSS	13 (0.1)	17 (0.1)	21 (0.1)	49 (0.2)
I learn things quickly in mathematics	IRL	44 (0.8)	37 (0.8)	12 (0.7)	6 (0.6)
	TIMSS	47 (0.2)	34 (0.1)	13 (0.1)	6 (0.1)
Mathematics makes me nervous	IRL	9 (0.7)	17 (0.7)	18 (0.7)	56 (1.1)
	TIMSS	15 (0.1)	18 (0.1)	20 (0.1)	47 (0.2)
I am good at working out difficult mathematics problems	IRL	33 (1.1)	38 (1.1)	18 (0.8)	12 (0.6)
	TIMSS	33 (0.1)	35 (0.1)	20 (0.1)	12 (0.1)
My teacher tells me I am good at mathematics	IRL	46 (1.4)	36 (0.9)	12 (0.8)	7 (0.7)
	TIMSS	41 (0.2)	35 (0.1)	16 (0.1)	8 (0.1)
Mathematics is harder for me than any other subject	IRL	13 (0.7)	15 (0.5)	17 (0.7)	55 (1.0)
	TIMSS	17 (0.1)	17 (0.1)	19 (0.1)	47 (0.2)
Mathematics makes me confused	IRL	12 (0.7)	20 (0.7)	21 (0.8)	47 (1.0)
	TIMSS	14 (0.1)	17 (0.1)	21 (0.1)	48 (0.2)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.8: Percentage of Fourth grade students by the extent to which they feel confident in learning mathematics and mean mathematics achievement with standard errors in parentheses – Ireland and comparison countries (*Table 4.3*)

	<b>Very confident in maths</b> ( <i>reference</i> )		<b>Confident in maths</b>		<b>Not confident in maths</b>	
	%	Maths	%	Maths	%	Maths
Australia	27 (0.8)	569 (3.9)	46 (1.0)	<b>514</b> (2.9)	27 (1.0)	<b>473</b> (4.1)
England	37 (1.1)	578 (4.7)	43 (1.0)	<b>541</b> (3.4)	20 (0.9)	<b>499</b> (3.3)
Finland	28 (0.9)	572 (2.8)	51 (1.0)	<b>532</b> (2.1)	20 (0.7)	<b>493</b> (2.7)
Hong Kong SAR	19 (0.8)	660 (3.7)	45 (1.0)	<b>622</b> (3.0)	36 (1.1)	<b>583</b> (3.4)
<b>Ireland</b>	<b>37 (0.9)</b>	<b>583 (2.6)</b>	<b>45 (0.8)</b>	<b>539 (2.4)</b>	<b>18 (0.8)</b>	<b>498 (3.7)</b>
New Zealand	22 (0.7)	543 (3.4)	48 (0.8)	<b>492</b> (2.6)	30 (0.7)	<b>452</b> (3.3)
Northern Ireland	31 (1.1)	614 (3.8)	46 (1.0)	<b>568</b> (3.8)	23 (1.1)	<b>518</b> (3.7)
Rep. of Korea	13 (0.6)	668 (3.2)	51 (0.9)	<b>623</b> (2.2)	36 (1.0)	<b>566</b> (2.3)
Russian Fed.	28 (0.8)	599 (4.7)	45 (0.9)	<b>569</b> (3.6)	28 (0.8)	<b>522</b> (3.4)
Singapore	19 (0.8)	681 (3.6)	42 (0.6)	<b>633</b> (3.6)	39 (1.1)	<b>572</b> (4.0)
Slovenia	32 (0.9)	559 (2.6)	46 (1.0)	<b>517</b> (2.3)	22 (0.8)	<b>471</b> (3.0)
United States	35 (0.7)	583 (2.4)	41 (0.6)	<b>534</b> (2.5)	24 (0.6)	<b>492</b> (2.2)
<b>TIMSS</b>	<b>32 (0.1)</b>	<b>546 (0.5)</b>	<b>45 (0.1)</b>	<b>502 (0.5)</b>	<b>23 (0.1)</b>	<b>460 (0.6)</b>

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A4.9: Fourth grade students' scale scores on the measure of how confident they feel in learning mathematics by student gender with standard errors in parentheses– Ireland and TIMSS average (*Figure 4.3, tabulated*)

		<b>Mean (SE)</b>
Ireland	Girls	10.01 (0.1)
	Boys	10.30 (0.1)
TIMSS	Girls	9.79 (0.01)
	Boys	10.08 (0.01)

Table A4.10: Percentage of Eighth grade students endorsing various statements about their confidence in mathematics with standard errors in parentheses– Ireland and TIMSS average

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I usually do well in maths	IRL	29 (1.0)	45 (0.9)	18 (0.8)	8 (0.5)
	TIMSS	32 (0.2)	41 (0.1)	19 (0.1)	8 (0.1)
Maths is more difficult for me than for many of my classmates	IRL	15 (0.7)	24 (0.7)	34 (0.9)	26 (0.8)
	TIMSS	16 (0.1)	30 (0.1)	29 (0.1)	24 (0.1)
Maths is not one of my strengths	IRL	28 (0.8)	24 (0.7)	26 (0.7)	21 (0.8)
	TIMSS	23 (0.1)	29 (0.1)	24 (0.1)	24 (0.1)
I learn things quickly in maths	IRL	23 (0.9)	35 (0.8)	29 (0.8)	13 (0.5)
	TIMSS	26 (0.1)	37 (0.1)	26 (0.1)	11 (0.1)
Maths makes me nervous	IRL	11 (0.6)	24 (0.6)	31 (0.8)	34 (1.0)
	TIMSS	16 (0.1)	27 (0.1)	29 (0.1)	28 (0.1)
I am good at working out difficult maths problems	IRL	15 (0.7)	33 (0.8)	31 (0.8)	21 (0.8)
	TIMSS	17 (0.1)	35 (0.1)	31 (0.1)	18 (0.1)
My teacher tells me I am good at maths	IRL	19 (0.7)	38 (0.9)	27 (0.7)	16 (0.6)
	TIMSS	23 (0.1)	34 (0.1)	27 (0.1)	16 (0.1)
Maths is harder for me than any other subject	IRL	19 (0.8)	20 (0.6)	27 (0.6)	34 (1.0)
	TIMSS	22 (0.1)	25 (0.1)	26 (0.1)	27 (0.1)
Maths makes me confused	IRL	21 (0.8)	31 (0.8)	26 (0.7)	22 (0.6)
	TIMSS	20 (0.1)	28 (0.1)	27 (0.1)	26 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.11: Percentage of Eighth grade students by the extent to which they feel confident in learning mathematics and mean mathematics achievement with standard errors in parentheses – Ireland and comparison countries (Table 4.4)

	Very confident in maths (reference)		Confident in maths		Not confident in maths	
	%	Maths	%	Maths	%	Maths
Australia	15 (0.7)	580 (3.6)	42 (0.7)	<b>522</b> (3.4)	43 (0.9)	<b>465</b> (2.5)
England	15 (0.8)	578 (5.4)	50 (1.0)	<b>530</b> (4.2)	35 (1.4)	<b>479</b> (4.2)
Hong Kong SAR	10 (0.5)	660 (4.3)	36 (0.8)	<b>611</b> (5.4)	54 (0.9)	<b>571</b> (4.5)
Ireland	16 (0.8)	583 (4.0)	42 (0.9)	<b>534</b> (2.9)	43 (1.0)	<b>492</b> (3.2)
New Zealand	12 (0.6)	576 (4.6)	43 (0.7)	<b>509</b> (3.7)	44 (0.8)	<b>456</b> (3.2)
Rep. of Korea	8 (0.4)	687 (4.9)	38 (0.7)	<b>643</b> (2.8)	55 (0.8)	<b>569</b> (2.7)
Russian Fed.	12 (0.6)	602 (5.0)	42 (0.9)	<b>558</b> (5.2)	46 (1.1)	<b>503</b> (4.8)
Singapore	13 (0.5)	675 (3.0)	41 (0.7)	<b>642</b> (2.8)	46 (0.8)	<b>588</b> (4.0)
Slovenia	12 (0.5)	586 (3.7)	44 (0.9)	<b>535</b> (2.3)	44 (0.9)	<b>479</b> (2.6)
United States	21 (0.7)	573 (3.5)	40 (0.6)	<b>530</b> (3.0)	39 (0.9)	<b>480</b> (2.9)
TIMSS	14 (0.1)	554 (0.8)	43 (0.1)	<b>494</b> (0.6)	43 (0.2)	<b>449</b> (0.6)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold



Table A4.12: Eighth grade students' scale scores on the measure of how confident they feel in learning mathematics by student gender with standard errors in parentheses– Ireland and TIMSS average  
(Figure 4.4, tabulated)

		Mean (SE)
Ireland	Girls	9.79 (0.5)
	Boys	10.26 (0.7)
TIMSS	Girls	9.84 (0.01)
	Boys	10.17 (0.01)

Table A4.13: Percentage of Fourth grade students endorsing various statements about their views on engaging mathematics teaching with standard errors in parentheses – Ireland and TIMSS average

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I know what my teacher expects me to do	IRL	66 (1.1)	28 (1.0)	5 (0.4)	2 (0.3)
	TIMSS	59 (0.2)	29 (0.1)	7 (0.1)	5 (0.1)
My teacher is easy to understand	IRL	73 (1.2)	21 (0.8)	4 (0.5)	1 (0.3)
	TIMSS	63 (0.2)	29 (0.1)	6 (0.1)	3 (0.1)
I am interested in what my teacher says	IRL	62 (1.1)	29 (0.9)	7 (0.5)	2 (0.3)
	TIMSS	63 (0.2)	27 (0.1)	7 (0.1)	3 (0.1)
My teacher gives me interesting things to do	IRL	60 (1.2)	27 (0.9)	8 (0.7)	4 (0.3)
	TIMSS	58 (0.2)	28 (0.1)	9 (0.1)	5 (0.1)
My teacher has clear answers to my questions	IRL	71 (1.2)	22 (1.1)	5 (0.4)	2 (0.3)
	TIMSS	68 (0.2)	24 (0.1)	5 (0.1)	2 (0.04)
My teacher is good at explaining mathematics	IRL	80 (1.0)	16 (0.8)	2 (0.3)	1 (0.3)
	TIMSS	77 (0.2)	18 (0.1)	3 (0.1)	2 (0.04)
My teacher lets me show what I have learned	IRL	52 (1.2)	31 (0.8)	11 (0.7)	6 (0.6)
	TIMSS	59 (0.2)	28 (0.1)	8 (0.1)	4 (0.1)
My teacher does a variety of things to help us learn	IRL	79 (1.0)	17 (1.0)	3 (0.4)	1 (0.2)
	TIMSS	76 (0.1)	19 (0.1)	4 (0.1)	2 (0.04)
My teacher tells me how to do better when I make a mistake	IRL	79 (1.0)	16 (0.8)	3 (0.4)	2 (0.3)
	TIMSS	73 (0.2)	20 (0.1)	4 (0.1)	3 (0.05)
My teacher listens to what I have to say	IRL	76 (1.2)	18 (1.0)	4 (0.4)	2 (0.3)
	TIMSS	71 (0.2)	21 (0.1)	5 (0.1)	3 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.14: Percentage of Fourth grade students by their views on engaging mathematics teaching and mean mathematics achievement with standard errors in parentheses – Ireland and comparison countries (Table 4.5)

	Very engaging teaching ( <i>reference</i> )		Engaging teaching		Less than engaging teaching	
	%	Maths	%	Maths	%	Maths
Australia	63 (1.2)	519 (3.5)	31 (0.9)	520 (3.5)	6 (0.4)	<b>492</b> (6.8)
England	73 (1.3)	548 (3.3)	24 (1.2)	545 (3.7)	4 (0.4)	<b>527</b> (8.1)
Finland	58 (1.1)	540 (2.3)	37 (1.0)	<b>532</b> (2.8)	5 (0.5)	<b>516</b> (6.2)
Hong Kong SAR	50 (1.3)	621 (3.3)	38 (1.0)	<b>612</b> (3.5)	11 (0.8)	<b>591</b> (4.6)
Ireland	73 (1.3)	550 (2.2)	23 (1.1)	545 (4.0)	4 (0.4)	<b>525</b> (7.3)
New Zealand	63 (1.1)	489 (2.6)	31 (0.9)	<b>498</b> (3.2)	6 (0.4)	482 (6.6)
Northern Ireland	74 (1.2)	572 (3.4)	22 (1.0)	570 (4.7)	4 (0.5)	549 (13.0)
Rep. of Korea	28 (1.3)	620 (2.9)	55 (1.1)	<b>606</b> (2.4)	17 (1.3)	<b>597</b> (4.4)
Russian Fed.	77 (1.1)	566 (3.6)	21 (1.0)	560 (4.5)	2 (0.2)	--
Singapore	55 (1.0)	625 (4.0)	37 (0.7)	<b>613</b> (4.3)	7 (0.5)	<b>592</b> (6.7)
Slovenia	58 (1.4)	521 (2.3)	37 (1.1)	522 (2.3)	5 (0.7)	<b>503</b> (6.2)
United States	73 (0.7)	545 (2.3)	22 (0.6)	<b>535</b> (2.9)	5 (0.3)	<b>510</b> (4.7)
TIMSS	68 (0.2)	510 (0.4)	26 (0.1)	<b>498</b> (0.6)	5 (0.1)	<b>481</b> (1.2)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A4.15: Fourth grade students' views on engaging mathematics teaching scale scores by student gender with standard errors in parentheses– Ireland and TIMSS average (Figure 4.5, tabulated)

		Mean (SE)
Ireland	Girls	10.44 (0.1)
	Boys	9.95 (0.1)
TIMSS	Girls	10.08 (0.01)
	Boys	9.93 (0.01)

Table A4.16: Percentage of Eighth grade students endorsing various statements about their views on engaging mathematics teaching with standard errors in parentheses – Ireland and TIMSS average

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I know what my teacher expects me to do	IRL	51 (1.1)	38 (0.9)	8 (0.4)	3 (0.3)
	TIMSS	45 (0.2)	39 (0.1)	11 (0.1)	5 (0.1)
My teacher is easy to understand	IRL	45 (1.3)	30 (0.9)	16 (0.8)	8 (0.6)
	TIMSS	42 (0.2)	37 (0.1)	14 (0.1)	6 (0.1)
I am interested in what my teacher says	IRL	33 (1.2)	38 (0.8)	21 (0.9)	8 (0.5)
	TIMSS	42 (0.2)	36 (0.1)	16 (0.1)	6 (0.1)
My teacher gives me interesting things to do	IRL	21 (0.9)	33 (0.7)	32 (0.9)	13 (0.6)
	TIMSS	31 (0.2)	35 (0.1)	23 (0.1)	11 (0.1)
My teacher has clear answers to my questions	IRL	43 (1.3)	31 (0.8)	18 (0.9)	8 (0.6)
	TIMSS	48 (0.2)	34 (0.1)	13 (0.1)	6 (0.1)
My teacher is good at explaining mathematics	IRL	50 (1.4)	27 (0.9)	15 (0.9)	8 (0.6)
	TIMSS	54 (0.2)	30 (0.1)	10 (0.1)	6 (0.1)
My teacher lets me show what I have learned	IRL	26 (1.0)	37 (0.7)	25 (0.9)	12 (0.6)
	TIMSS	39 (0.2)	37 (0.1)	16 (0.1)	7 (0.1)
My teacher does a variety of things to help us learn	IRL	38 (1.2)	34 (0.8)	19 (0.9)	9 (0.6)
	TIMSS	49 (0.2)	33 (0.1)	12 (0.1)	6 (0.1)
My teacher tells me how to do better when I make a mistake	IRL	51 (1.1)	32 (0.8)	12 (0.6)	5 (0.4)
	TIMSS	52 (0.2)	32 (0.1)	10 (0.1)	5 (0.1)
My teacher listens to what I have to say	IRL	52 (1.3)	32 (0.8)	11 (0.7)	5 (0.4)
	TIMSS	50 (0.2)	33 (0.1)	11 (0.1)	6 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.17: Percentage of Eighth grade students by their views on engaging mathematics teaching and mean mathematics achievement with standard errors in parentheses – Ireland and comparison countries (*Table 4.6*)

	Very engaging teaching ( <i>reference</i> )		Engaging teaching		Less than engaging teaching	
	%	Maths	%	Maths	%	Maths
Australia	34 (1.3)	521 (3.7)	42 (0.7)	<b>506</b> (3.2)	24 (1.3)	<b>485</b> (4.6)
England	38 (1.7)	532 (5.4)	42 (1.0)	<b>518</b> (4.8)	20 (1.4)	<b>501</b> (6.0)
Hong Kong SAR	26 (1.3)	606 (4.9)	49 (0.9)	<b>595</b> (4.3)	24 (1.5)	<b>581</b> (8.1)
Ireland	37 (1.4)	528 (3.3)	41 (1.0)	523 (3.4)	22 (1.1)	<b>517</b> (3.8)
New Zealand	32 (1.5)	506 (4.9)	44 (0.9)	<b>495</b> (3.9)	24 (1.3)	<b>475</b> (3.5)
Rep. of Korea	8 (0.5)	642 (5.0)	52 (1.2)	<b>614</b> (3.2)	40 (1.4)	<b>589</b> (2.7)
Russian Fed.	44 (1.2)	548 (5.5)	46 (1.1)	<b>533</b> (4.7)	11 (0.8)	<b>519</b> (5.6)
Singapore	33 (1.0)	633 (3.6)	52 (0.8)	<b>620</b> (3.4)	16 (0.8)	<b>596</b> (6.3)
Slovenia	20 (1.0)	538 (4.8)	59 (1.3)	<b>515</b> (2.3)	21 (1.2)	<b>500</b> (3.1)
United States	43 (1.2)	530 (3.5)	36 (0.7)	<b>515</b> (3.3)	21 (1.0)	<b>504</b> (4.0)
TIMSS	43 (0.2)	494 (0.7)	41 (0.2)	<b>478</b> (0.6)	17 (0.2)	<b>464</b> (0.9)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A4.18: Eighth grade students' views on engaging mathematics teaching scale scores by student gender with standard errors in parentheses – Ireland and TIMSS average (Figure 4.6)

		Mean (SE)
Ireland	Girls	9.67 (0.1)
	Boys	9.68 (0.1)
TIMSS	Girls	10.02 (0.01)
	Boys	9.99 (0.01)

Table A4.19: Percentage of Eighth grade students endorsing various statements about the value they ascribe to mathematics with standard errors in parentheses – Ireland and TIMSS average

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I think learning maths will help me in my daily life	IRL	45 (0.8)	34 (0.7)	14 (0.6)	8 (0.4)
	TIMSS	52 (0.2)	33 (0.1)	10 (0.1)	6 (0.1)
I need maths to learn other school subjects	IRL	38 (0.9)	39 (0.8)	16 (0.6)	7 (0.4)
	TIMSS	41 (0.2)	39 (0.1)	15 (0.1)	6 (0.1)
I need to do well in maths to get into the college of my choice	IRL	61 (0.9)	27 (0.8)	8 (0.5)	4 (0.3)
	TIMSS	56 (0.1)	29 (0.1)	10 (0.1)	5 (0.1)
I need to do well in maths to get the job I want	IRL	52 (0.9)	27 (0.6)	13 (0.6)	8 (0.5)
	TIMSS	52 (0.1)	29 (0.1)	13 (0.1)	6 (0.1)
I would like a job that involves using maths	IRL	15 (0.7)	26 (0.8)	30 (0.7)	29 (0.9)
	TIMSS	24 (0.1)	28 (0.1)	27 (0.1)	21 (0.1)
It is important to learn about maths to get ahead in the world	IRL	41 (0.8)	37 (0.7)	15 (0.6)	7 (0.4)
	TIMSS	47 (0.2)	34 (0.1)	13 (0.1)	6 (0.1)
Learning maths will give me more job opportunities when I am an adult	IRL	64 (0.9)	27 (0.8)	6 (0.4)	3 (0.3)
	TIMSS	53 (0.1)	33 (0.1)	10 (0.1)	4 (0.1)
My parents think that it is important that I do well in maths	IRL	74 (0.8)	22 (0.6)	3 (0.3)	1 (0.2)
	TIMSS	59 (0.1)	29 (0.1)	8 (0.1)	3 (0.05)
It is important to do well in maths	IRL	68 (0.8)	25 (0.7)	5 (0.4)	2 (0.3)
	TIMSS	61 (0.1)	29 (0.1)	7 (0.1)	4 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.20: Percentage of Eighth grade students by the value they ascribe to mathematics and mean mathematics scores with standard errors in parentheses – Ireland and comparison countries (Table 4.7)

	<b>Strongly value maths (reference)</b>		<b>Value maths</b>		<b>Do not value maths</b>	
	<b>%</b>	<b>Maths</b>	<b>%</b>	<b>Maths</b>	<b>%</b>	<b>Maths</b>
Australia	43 (0.9)	524 (3.1)	46 (0.8)	<b>501</b> (3.3)	12 (0.7)	<b>464</b> (3.9)
England	46 (1.1)	526 (4.4)	46 (0.9)	<b>518</b> (4.5)	8 (0.6)	<b>490</b> (6.5)
Hong Kong SAR	19 (0.8)	617 (5.4)	52 (1.0)	<b>602</b> (4.3)	29 (1.0)	<b>567</b> (5.6)
<b>Ireland</b>	<b>41 (0.9)</b>	<b>534 (3.3)</b>	<b>48 (0.8)</b>	<b>520 (3.1)</b>	<b>11 (0.5)</b>	<b>501 (4.6)</b>
New Zealand	42 (0.8)	505 (4.1)	48 (0.8)	<b>491</b> (3.2)	10 (0.4)	<b>458</b> (5.3)
Rep. of Korea	13 (0.6)	656 (4.4)	63 (0.9)	<b>614</b> (2.8)	24 (0.8)	<b>557</b> (3.7)
Russian Fed.	31 (1.2)	547 (6.4)	52 (1.1)	538 (4.8)	17 (0.7)	<b>522</b> (5.2)
Singapore	34 (0.8)	629 (3.5)	58 (0.7)	<b>621</b> (3.4)	8 (0.4)	<b>590</b> (5.8)
Slovenia	19 (0.8)	532 (4.5)	64 (1.0)	<b>516</b> (2.3)	17 (0.8)	<b>499</b> (2.9)
United States	44 (0.8)	531 (3.6)	45 (0.6)	<b>516</b> (3.1)	11 (0.4)	<b>488</b> (3.8)
<b>TIMSS</b>	<b>42 (0.2)</b>	<b>498 (0.7)</b>	<b>45 (0.1)</b>	<b>477 (0.6)</b>	<b>13 (0.1)</b>	<b>449 (0.9)</b>

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table 4.21: Value Eighth grade students ascribe to mathematics scale scores by student gender with standard error in parentheses – Ireland and TIMSS average (Figure 4.7, tabulated)

		<b>Mean (SE)</b>
Ireland	Girls	9.64 (0.1)
	Boys	9.98 (0.1)
TIMSS	Girls	9.83 (0.01)
	Boys	9.99 (0.01)

Table A4.22: Percentage of Fourth grade students by students' reports of the number of books in their home with standard errors in parentheses – Ireland and TIMSS average

	<b>0-10</b>	<b>11-25</b>	<b>26-100</b>	<b>101-200</b>	<b>More than 200</b>
Ireland	9 (0.7)	20 (1.0)	33 (1.0)	21 (1.0)	16 (0.8)
TIMSS	16 (0.1)	26 (0.1)	31 (0.1)	14 (0.1)	12 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.23: Percentage of Fourth grade students by parent' reports of the number of children's books in their home with standard errors in parentheses – Ireland and TIMSS average

	<b>0-10</b>	<b>11-25</b>	<b>26-50</b>	<b>51-100</b>	<b>More than 100</b>
Ireland	7 (0.6)	14 (0.7)	26 (0.9)	26 (1.0)	27 (1.1)
TIMSS	22 (0.2)	21 (0.1)	25 (0.1)	18 (0.1)	14 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.24: Percentage of Fourth grade students by student' reports of the number of home study supports with standard errors in parentheses – Ireland and TIMSS average

		%
Internet Connection	IRL	92 (0.5)
	TIMSS	81 (0.1)
Your own bedroom	IRL	76 (0.9)
	TIMSS	65 (0.2)

Table A4.25: Percentage of Fourth grade students by parents' reports of the highest level of education of either parent with standard errors in parentheses– Ireland and TIMSS average

	Ireland	TIMSS
Finished some primary or lower secondary or did not go to school	3 (0.4)	7 (0.1)
Finished lower secondary	6 (0.6)	8 (0.1)
Finished upper secondary	13 (0.8)	25 (0.2)
Finished post-secondary education	36 (1.2)	21 (0.1)
Finished university or higher	42 (1.4)	38 (0.2)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.26: Percentage of Fourth grade students by parents' reports of the highest level of occupation of either parent with standard errors in parentheses– Ireland and TIMSS average

	Ireland	TIMSS
Professional	50 (1.4)	40 (0.2)
Small business owner	11 (0.7)	11 (0.1)
Clerical	22 (0.9)	23 (0.1)
Skilled worker	9 (0.7)	12 (0.1)
General worker	3 (0.4)	5 (0.1)
Never worked for pay	1 (0.2)	4 (0.1)
Not applicable	4 (0.4)	5 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.27: Percentage of Eighth grade students by students' reports of the number of books in their home with standard errors in parentheses – Ireland and TIMSS average

	0-10	11-25	26-100	101-200	More than 200
Ireland	15 (0.9)	22 (0.8)	29 (0.8)	19 (0.8)	15 (0.7)
TIMSS	20 (0.1)	28 (0.1)	26 (0.1)	13 (0.1)	12 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.28: Percentage of Eighth grade students by student' reports of the number of home study supports with standard errors in parentheses – Ireland and TIMSS average

		%
Internet Connection	IRL	98 (0.2)
	TIMSS	84 (0.1)
Your own bedroom	IRL	84 (0.8)
	TIMSS	69 (0.2)

Table A4.29: Percentage of Eighth grade students by parents' reports of the highest level of education of either parent with standard errors in parentheses– Ireland and TIMSS average

	Ireland	TIMSS
Don't know	23 (0.9)	21 (0.1)
Finished some primary or lower secondary or did not go to school	2 (0.3)	5 (0.1)
Finished lower secondary	4 (0.5)	9 (0.1)
Finished upper secondary	16 (0.7)	20 (0.1)
Finished post-secondary education	21 (0.7)	17 (0.1)
Finished university or higher	33 (1.1)	28 (0.2)

Note: Figures may not add exactly to 100% due to rounding.

Table A4.30: Correlations among scale scores measuring the extent to which Fourth Class students like learning mathematics (1), their views on engaging teaching in their mathematics lessons (2), their confidence in learning mathematics (3) and their home learning resources (4), with standard errors in parentheses (Table 4.8)

	1.	2.	3.	4.
1. Students like learning mathematics	--	0.43 (0.02)	0.60 (0.01)	0.03 (0.03)
2. Students' views on engaging teaching in their mathematics lessons		--	0.30 (0.02)	-0.05 (0.03)
3. Students' confidence in learning mathematics			--	0.19 (0.02)
4. Home learning resources				--

Note: All correlations are statistically significant at .05 level except for those shaded in grey.

Table A4.31: Correlations among scale scores measuring the extent to which Second Year students like learning mathematics (1), their views on their mathematics lessons (2), their confidence in learning mathematics (3), the value they ascribe to mathematics (4) and their home educational resources (5) with standard errors in parentheses (Table 4.9)

	1.	2.	3.	4.	5.
1. Students like learning mathematics	--	0.50 (0.01)	0.68 (0.01)	0.54 (0.01)	0.17 (0.02)
2. Students' views on engaging teaching in their mathematics lessons		--	0.35 (0.01)	0.38 (0.02)	0.06 (0.02)
3. Students' confidence in learning mathematics			--	0.39 (0.02)	0.16 (0.02)
4. Value students ascribe to mathematics				--	0.15 (0.02)
5. Home educational resources					--

Note: All correlations are statistically significant at the .05 level.

## Chapter 5 tables: Students' attitudes toward science and science lessons

Table A5.1: Percentage of Fourth grade students endorsing various statements about their attitudes to science with standard errors in parentheses– Ireland and TIMSS average

		<b>Agree a lot</b>	<b>Agree a little</b>	<b>Disagree a little</b>	<b>Disagree a lot</b>
I enjoy learning science	IRL	62 (1.3)	25 (0.9)	7 (0.6)	6 (0.5)
	TIMSS	62 (0.2)	25 (0.1)	7 (0.1)	6 (0.1)
I wish I did not have to study science	IRL	9 (0.6)	14 (0.7)	21 (0.7)	56 (1.2)
	TIMSS	12 (0.1)	11 (0.1)	19 (0.1)	57 (0.2)
Science is boring	IRL	7 (0.5)	12 (0.7)	20 (0.7)	61 (1.2)
	TIMSS	9 (0.1)	11 (0.1)	19 (0.1)	60 (0.2)
I learn many interesting things in science	IRL	74 (1.1)	17 (0.9)	5 (0.5)	4 (0.5)
	TIMSS	73 (0.1)	19 (0.1)	5 (0.1)	4 (0.1)
I like science	IRL	63 (1.4)	24 (1.0)	7 (0.6)	7 (0.6)
	TIMSS	63 (0.2)	23 (0.1)	8 (0.1)	6 (0.1)
I look forward to learning science in school	IRL	58 (1.5)	24 (0.9)	12 (0.8)	7 (0.6)
	TIMSS	55 (0.2)	25 (0.1)	12 (0.1)	8 (0.1)
Science teaches me how things in the world work	IRL	76 (1.1)	18 (0.9)	4 (0.4)	3 (0.4)
	TIMSS	72 (0.1)	21 (0.1)	4 (0.1)	3 (0.04)
I like to do science experiments	IRL	85 (0.9)	10 (0.7)	2 (0.3)	3 (0.4)
	TIMSS	77 (0.1)	15 (0.1)	4 (0.1)	3 (0.1)
Science is one of my favourite subjects	IRL	44 (1.3)	28 (0.9)	17 (0.8)	10 (0.8)
	TIMSS	51 (0.2)	25 (0.1)	14 (0.1)	10 (0.1)

Note: Figures may not add exactly to 100% due to rounding.



Table A5.2: Percentage of Fourth grade students by the extent to which they like learning science and mean science achievement with standard errors in parentheses – Ireland and comparison countries (*Table 5.1*)

	<b>Very much like learning science</b> <i>(reference)</i>		<b>Like learning science</b>		<b>Do not like learning science</b>	
	%	Science	%	Science	%	Science
Australia	54 (1.2)	531 (2.7)	34 (0.9)	<b>522</b> (3.6)	12 (0.6)	<b>505</b> (6.2)
England	49 (1.2)	542 (2.9)	34 (0.8)	<b>535</b> (3.1)	17 (0.9)	<b>523</b> (4.1)
Finland	38 (1.1)	558 (2.9)	44 (0.8)	555 (2.4)	19 (0.9)	<b>545</b> (3.9)
Hong Kong SAR	57 (1.0)	569 (3.4)	32 (0.9)	<b>543</b> (3.4)	11 (0.6)	<b>533</b> (4.9)
<b>Ireland</b>	<b>58 (1.5)</b>	<b>539 (2.4)</b>	<b>31 (1.1)</b>	<b>519 (3.7)</b>	<b>11 (0.8)</b>	<b>506 (6.0)</b>
New Zealand	58 (1.1)	514 (2.8)	32 (1.0)	<b>501</b> (3.4)	10 (0.6)	<b>480</b> (0.6)
Northern Ireland	59 (1.2)	526 (2.5)	32 (1.0)	<b>515</b> (3.6)	10 (0.8)	<b>500</b> (6.6)
Rep. of Korea	42 (1.2)	605 (2.4)	44 (1.0)	<b>582</b> (2.6)	14 (0.8)	<b>566</b> (3.3)
Russian Fed.	58 (1.2)	570 (3.2)	34 (1.1)	564 (3.8)	8 (0.5)	566 (9.2)
Singapore	56 (0.9)	600 (3.8)	33 (0.7)	<b>582</b> (4.2)	11 (0.5)	<b>567</b> (5.1)
Slovenia	43 (1.2)	551 (3.0)	40 (0.9)	<b>540</b> (2.9)	17 (1.0)	<b>531</b> (3.5)
United States	61 (0.9)	555 (2.3)	28 (0.6)	<b>540</b> (2.9)	11 (0.5)	<b>526</b> (3.9)
<b>TIMSS</b>	<b>56 (0.2)</b>	<b>518 (0.5)</b>	<b>33 (0.1)</b>	<b>492 (0.6)</b>	<b>11 (0.1)</b>	<b>483 (1.1)</b>

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A5.3: Fourth grade students' enjoyment of learning science scale scores by gender with standard errors in parentheses – Ireland and TIMSS average (*Figure 5.1, tabulated*)

		<b>Mean (SE)</b>
Ireland	Girls	10.04 (0.1)
	Boys	10.25 (0.1)
TIMSS	Girls	10.08 (0.01)
	Boys	10.07 (0.01)

Table A5.4: Percentage of Eighth grade students endorsing various statements about their attitudes to science with standard errors in parentheses– Ireland and TIMSS average

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I enjoy learning science	IRL	38 (1.2)	35 (0.8)	14 (0.7)	13 (0.9)
	TIMSS	46 (0.2)	34 (0.2)	12 (0.1)	7 (0.1)
I wish I did not have to study science	IRL	17 (0.9)	20 (0.7)	30 (0.8)	34 (1.1)
	TIMSS	14 (0.1)	21 (0.1)	27 (0.1)	38 (0.2)
Science is boring	IRL	15 (1.0)	21 (0.8)	32 (0.8)	32 (1.1)
	TIMSS	12 (0.1)	22 (0.1)	28 (0.1)	38 (0.2)
I learn many interesting things in science	IRL	54 (1.3)	31 (0.9)	9 (0.6)	7 (0.6)
	TIMSS	54 (0.2)	31 (0.1)	9 (0.1)	5 (0.1)
I like science	IRL	39 (1.3)	33 (1.0)	14 (0.8)	13 (0.9)
	TIMSS	45 (0.2)	32 (0.1)	14 (0.1)	9 (0.1)
I look forward to learning science	IRL	30 (1.1)	31 (0.7)	24 (0.8)	15 (0.9)
	TIMSS	37 (0.2)	31 (0.1)	22 (0.1)	11 (0.1)
Science teaches me how things in the world work	IRL	55 (1.2)	32 (0.8)	7 (0.6)	6 (0.5)
	TIMSS	56 (0.2)	32 (0.1)	8 (0.1)	4 (0.1)
I like to conduct science experiments	IRL	61 (1.2)	25 (0.8)	8 (0.4)	6 (0.5)
	TIMSS	60 (0.2)	27 (0.1)	8 (0.1)	5 (0.1)
Science is one of my favourite subjects	IRL	26 (1.0)	25 (0.8)	25 (0.7)	23 (1.0)
	TIMSS	39 (0.2)	28 (0.1)	20 (0.1)	13 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A5.5: Percentage of Eighth grade students by the extent to which they like learning science and mean science achievement with standard errors in parentheses – Ireland and comparison countries (Table 5.2)

	Very much like learning science (reference)		Like learning science		Do not like learning science	
	%	Science	%	Science	%	Science
Australia	28 (1.1)	550 (3.2)	43 (0.8)	<b>512</b> (2.6)	29 (1.0)	<b>482</b> (3.8)
England	31 (1.1)	569 (4.4)	44 (1.1)	<b>536</b> (3.9)	25 (1.2)	<b>504</b> (5.0)
Hong Kong SAR	30 (1.0)	574 (3.8)	51 (0.8)	<b>542</b> (4.2)	19 (1.1)	<b>512</b> (5.2)
Ireland	33 (1.3)	565 (3.2)	41 (0.9)	<b>534</b> (2.7)	26 (1.2)	<b>493</b> (4.2)
New Zealand	31 (1.3)	542 (4.2)	47 (0.8)	<b>509</b> (3.9)	22 (1.0)	<b>484</b> (3.6)
Rep. of Korea	10 (0.5)	622 (5.1)	41 (0.8)	<b>572</b> (2.5)	49 (1.1)	<b>528</b> (2.3)
Singapore	38 (0.8)	622 (3.8)	47 (0.8)	<b>588</b> (3.3)	15 (0.6)	<b>558</b> (4.5)
United States	36 (0.9)	556 (3.0)	42 (0.7)	<b>524</b> (3.0)	21 (0.8)	<b>504</b> (3.3)
TIMSS	37 (0.2)	516 (0.7)	44 (0.2)	<b>475</b> (0.7)	19 (0.2)	<b>453</b> (1.1)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A5.6: Eighth grade students' enjoyment of learning science scale scores by gender with standard error in parentheses – Ireland and TIMSS average (*Figure 5.2, tabulated*)

		<b>Mean (SE)</b>
Ireland	Girls	9.83 (0.1)
	Boys	9.78 (0.1)
TIMSS	Girls	10.08 (0.01)
	Boys	10.16 (0.01)

Table A5.7: Percentage of Fourth grade students endorsing various statements about their confidence in science with standard errors in parentheses – Ireland and TIMSS average

		<b>Agree a lot</b>	<b>Agree a little</b>	<b>Disagree a little</b>	<b>Disagree a lot</b>
I usually do well in science	IRL	41 (1.5)	45 (1.3)	9 (0.5)	5 (0.5)
	TIMSS	52 (0.2)	35 (0.1)	8 (0.1)	4 (0.1)
Science is harder for me than my classmates	IRL	8 (0.4)	15 (0.6)	27 (1.0)	50 (1.1)
	TIMSS	12 (0.1)	17 (0.1)	23 (0.1)	48 (0.2)
I am just not good at science	IRL	8 (0.6)	12 (0.8)	25 (0.9)	55 (1.3)
	TIMSS	11 (0.1)	15 (0.1)	22 (0.1)	53 (0.2)
I learn things quickly in science	IRL	43 (1.3)	37 (1.0)	13 (0.8)	7 (0.5)
	TIMSS	51 (0.2)	32 (0.1)	12 (0.1)	5 (0.1)
My teacher tells me I am good at science	IRL	32 (1.3)	38 (1.0)	19 (0.9)	11 (0.7)
	TIMSS	40 (0.2)	35 (0.1)	17 (0.1)	8 (0.1)
Science is harder for me than any other subject	IRL	8 (0.5)	12 (0.7)	22 (0.9)	57 (1.2)
	TIMSS	12 (0.1)	14 (0.1)	21 (0.1)	53 (0.2)
Science makes me confused	IRL	8 (0.5)	16 (0.9)	21 (0.9)	55 (1.3)
	TIMSS	11 (0.1)	13 (0.1)	19 (0.1)	56 (0.2)

Note: Figures may not add exactly to 100% due to rounding.

Table A5.8: Percentage of Fourth grade students by their confidence level in science and mean science achievement with standard errors in parentheses – Ireland and comparison countries (*Table 5.3*)

	<b>Very confident in science</b> ( <i>reference</i> )		<b>Confident in science</b>		<b>Not confident in science</b>	
	%	Science	%	Science	%	Science
Australia	35 (0.9)	542 (3.5)	45 (0.8)	<b>525</b> (2.7)	20 (0.8)	<b>494</b> (4.2)
England	33 (1.0)	556 (3.0)	42 (0.8)	<b>537</b> (2.6)	25 (0.9)	<b>510</b> (3.7)
Finland	34 (1.0)	573 (2.9)	52 (0.9)	<b>552</b> (2.5)	14 (0.7)	<b>519</b> (3.9)
Hong Kong SAR	25 (1.2)	588 (3.9)	48 (1.0)	<b>558</b> (3.2)	27 (0.9)	<b>526</b> (3.3)
<b>Ireland</b>	<b>38 (1.4)</b>	<b>546 (2.9)</b>	<b>45 (1.2)</b>	<b>530</b> (2.9)	<b>16 (0.7)</b>	<b>492 (4.0)</b>
New Zealand	24 (0.9)	537 (3.3)	51 (1.0)	<b>510</b> (3.0)	25 (0.8)	<b>470</b> (3.7)
Northern Ireland	36 (1.2)	534 (3.1)	45 (1.1)	<b>521</b> (2.7)	19 (0.8)	<b>492</b> (4.5)
Rep. of Korea	20 (0.7)	622 (2.6)	57 (1.0)	<b>592</b> (2.2)	24 (1.1)	<b>556</b> (2.9)
Russian Fed.	40 (1.1)	582 (3.3)	41 (0.7)	<b>566</b> (3.8)	19 (1.0)	<b>543</b> (6.5)
Singapore	26 (0.6)	621 (3.7)	43 (0.7)	<b>596</b> (3.9)	31 (0.7)	<b>559</b> (4.6)
Slovenia	35 (1.0)	566 (2.9)	47 (0.8)	<b>543</b> (2.6)	18 (0.8)	<b>497</b> (4.5)
United States	44 (0.8)	569 (2.1)	38 (0.7)	<b>542</b> (2.2)	17 (0.6)	<b>506</b> (3.6)
<b>TIMSS</b>	<b>40 (0.2)</b>	<b>532 (0.5)</b>	<b>42 (0.1)</b>	<b>501</b> (0.5)	<b>18 (0.1)</b>	<b>464 (0.8)</b>

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A5.9: Fourth grade students' confidence in science scale scores by gender with standard errors in parentheses – Ireland and TIMSS average (*Figure 5.3, tabulated*)

		<b>Mean (SE)</b>
Ireland	Girls	9.78 (0.1)
	Boys	9.81 (0.1)
TIMSS	Girls	9.95 (0.01)
	Boys	9.90 (0.01)

Table A5.10: Percentage of Eighth grade students endorsing various statements about their confidence in science with standard errors in parentheses – Ireland and TIMSS average

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I usually do well in science	IRL	36 (1.0)	38 (0.9)	17 (0.8)	9 (0.7)
	TIMSS	37 (0.2)	39 (0.2)	16 (0.1)	8 (0.1)
Science is more difficult for me than for many of my classmates	IRL	11 (0.7)	18 (0.7)	36 (0.8)	36 (0.9)
	TIMSS	13 (0.1)	28 (0.1)	29 (0.1)	31 (0.2)
Science is not one of my strengths	IRL	19 (0.8)	26 (0.9)	28 (0.8)	27 (1.0)
	TIMSS	18 (0.1)	29 (0.1)	26 (0.1)	28 (0.2)
I learn things quickly in science	IRL	29 (1.1)	35 (1.0)	26 (0.8)	11 (0.8)
	TIMSS	33 (0.2)	35 (0.1)	23 (0.1)	9 (0.1)
I am good at working out difficult science problems	IRL	20 (0.8)	32 (0.9)	31 (0.8)	17 (0.9)
	TIMSS	25 (0.2)	34 (0.1)	29 (0.1)	13 (0.1)
My teacher tells me I am good at science	IRL	26 (0.9)	33 (1.0)	26 (0.9)	15 (0.8)
	TIMSS	28 (0.2)	32 (0.1)	26 (0.1)	13 (0.1)
Science is harder for me than any other subject	IRL	11 (0.7)	16 (0.6)	32 (0.9)	41 (1.2)
	TIMSS	14 (0.1)	24 (0.1)	29 (0.1)	33 (0.2)
Science makes me confused	IRL	14 (0.8)	23 (0.7)	31 (0.9)	33 (0.9)
	TIMSS	15 (0.1)	25 (0.1)	27 (0.1)	33 (0.2)

Note: Figures may not add exactly to 100% due to rounding.

Table A5.11: Percentage of Eighth grade students by their confidence level in science and mean science achievement with standard errors in parentheses – Ireland and comparison countries (Table 5.4)

	Very confident in science (reference)		Confident in science		Not confident in science	
	%	Science	%	Science	%	Science
Australia	17 (0.8)	571 (3.1)	37 (0.8)	<b>526</b> (3.2)	45 (1.2)	<b>482</b> (3.0)
England	21 (0.9)	585 (4.7)	41 (0.9)	<b>547</b> (3.5)	38 (1.2)	<b>503</b> (4.3)
Hong Kong SAR	13 (0.6)	592 (4.4)	38 (1.1)	<b>560</b> (3.8)	49 (1.2)	<b>523</b> (4.8)
Ireland	26 (1.0)	585 (3.2)	36 (0.9)	<b>543</b> (2.3)	38 (1.3)	<b>492</b> (3.4)
New Zealand	16 (0.7)	572 (4.3)	39 (0.9)	<b>528</b> (3.7)	45 (1.1)	<b>482</b> (3.1)
Rep. of Korea	7 (0.5)	642 (4.5)	23 (0.7)	<b>599</b> (3.0)	70 (0.9)	<b>532</b> (1.9)
Singapore	17 (0.6)	633 (4.7)	40 (0.6)	<b>608</b> (3.5)	44 (0.9)	<b>572</b> (3.5)
United States	30 (0.9)	568 (3.0)	39 (0.5)	<b>533</b> (3.0)	30 (0.9)	<b>495</b> (3.3)
TIMSS	22 (0.2)	538 (0.8)	39 (0.2)	<b>490</b> (0.7)	40 (0.2)	<b>452</b> (0.8)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A5.12: Eighth grade students' confidence in science scale scores by gender with standard errors in parentheses– Ireland and TIMSS average (*Figure 5.4, tabulated*)

		<b>Mean (SE)</b>
Ireland	Girls	9.92 (0.1)
	Boys	10.18 (0.1)
TIMSS	Girls	9.93 (0.01)
	Boys	10.08 (0.01)

Table A5.13: Percentage of Fourth grade students endorsing various statements about their views on engaging science teaching with standard errors in parentheses – Ireland and TIMSS average

		<b>Agree a lot</b>	<b>Agree a little</b>	<b>Disagree a little</b>	<b>Disagree a lot</b>
I know what my teacher expects me to do	IRL	58 (1.1)	31 (1.0)	8 (0.5)	3 (0.4)
	TIMSS	59 (0.2)	28 (0.1)	8 (0.1)	5 (0.1)
My teacher is easy to understand	IRL	72 (1.1)	22 (0.9)	4 (0.4)	2 (0.4)
	TIMSS	67 (0.2)	25 (0.1)	5 (0.1)	3 (0.1)
I am interested in what my teacher says	IRL	70 (1.2)	22 (1.0)	5 (0.4)	3 (0.3)
	TIMSS	70 (0.2)	21 (0.1)	6 (0.1)	3 (0.1)
My teacher gives me interesting things to do	IRL	71 (1.2)	20 (0.8)	6 (0.5)	3 (0.5)
	TIMSS	65 (0.2)	24 (0.1)	8 (0.1)	4 (0.1)
My teacher has clear answers to my questions	IRL	71 (1.2)	22 (1.0)	5 (0.4)	2 (0.3)
	TIMSS	71 (0.2)	22 (0.1)	5 (0.1)	2 (0.04)
My teacher is good at explaining science	IRL	75 (1.1)	19 (0.9)	4 (0.4)	2 (0.3)
	TIMSS	76 (0.2)	19 (0.1)	4 (0.1)	2 (0.04)
My teacher lets me show what I have learned	IRL	53 (1.2)	28 (0.9)	12 (0.7)	6 (0.6)
	TIMSS	60 (0.2)	27 (0.1)	9 (0.1)	5 (0.1)
My teacher does a variety of things to help us learn	IRL	75 (1.1)	19 (0.9)	4 (0.3)	2 (0.3)
	TIMSS	74 (0.1)	20 (0.1)	4 (0.1)	2 (0.05)
My teacher tells me how to do better when I make a mistake	IRL	73 (1.2)	19 (0.9)	5 (0.4)	3 (0.3)
	TIMSS	70 (0.2)	21 (0.1)	5 (0.1)	3 (0.1)
My teacher listens to what I have to say	IRL	74 (1.2)	18 (1.0)	5 (0.5)	3 (0.4)
	TIMSS	71 (0.2)	21 (0.1)	5 (0.1)	3 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A5.14: Percentage of Fourth grade students by their views on engaging science teaching and mean science achievement with standard errors in parentheses – Ireland and comparison countries (*Table 5.5*)

	<b>Very engaging teaching (<i>reference</i>)</b>		<b>Engaging teaching</b>		<b>Less than engaging</b>	
	<b>%</b>	<b>Science</b>	<b>%</b>	<b>Science</b>	<b>%</b>	<b>Science</b>
Australia	63 (1.0)	524 (3.2)	29 (0.8)	528 (3.6)	8 (0.5)	517 (5.5)
England	70 (1.3)	534 (2.5)	24 (0.9)	<b>544</b> (3.9)	6 (0.6)	535 (6.6)
Finland	60 (1.2)	556 (2.7)	34 (1.1)	554 (2.7)	6 (0.5)	<b>532</b> (5.5)
Hong Kong SAR	55 (1.2)	562 (3.6)	33 (0.9)	<b>553</b> (3.0)	12 (0.8)	<b>544</b> (4.8)
<b>Ireland</b>	<b>71 (1.3)</b>	<b>529 (2.7)</b>	<b>24 (1.2)</b>	<b>533 (3.9)</b>	<b>5 (0.4)</b>	<b>520 (6.6)</b>
New Zealand	61 (1.0)	504 (3.4)	31 (1.0)	<b>514</b> (2.8)	8 (0.5)	499 (6.1)
Northern Ireland	72 (1.2)	519 (2.7)	23 (0.9)	522 (3.3)	6 (0.8)	526 (7.4)
Rep. of Korea	33 (1.4)	597 (2.3)	50 (0.9)	<b>587</b> (2.3)	17 (1.2)	<b>583</b> (3.7)
Russian Fed.	80 (0.9)	567 (3.0)	18 (0.8)	568 (4.7)	2 (0.3)	--
Singapore	56 (0.9)	595 (3.9)	35 (0.7)	<b>587</b> (4.2)	9 (0.6)	<b>577</b> (5.8)
Slovenia	62 (1.0)	545 (2.8)	33 (1.0)	544 (3.0)	5 (0.5)	<b>522</b> (6.5)
United States	75 (0.7)	551 (2.2)	19 (0.5)	<b>543</b> (3.2)	6 (0.4)	<b>526</b> (4.8)
<b>TIMSS</b>	<b>69 (0.2)</b>	<b>510 (0.5)</b>	<b>25 (0.1)</b>	<b>500 (0.7)</b>	<b>6 (0.1)</b>	<b>489 (1.3)</b>

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A5.15: Fourth Class students' views on engaging science teaching scale by student gender with standard errors in parentheses – Ireland and TIMSS average (*Figure 5.5, tabulated*)

		Mean (SE)
Ireland	Girls	10.18 (0.1)
	Boys	9.93 (0.1)
TIMSS	Girls	10.06 (0.01)
	Boys	9.94 (0.01)

Table A5.16: Percentage of Eighth grade students endorsing various statements about their views on engaging science teaching with standard errors in parentheses – Ireland and TIMSS average

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I know what my teacher expects me to do	IRL	50 (1.2)	35 (0.9)	10 (0.7)	5 (0.6)
	TIMSS	46 (0.2)	37 (0.2)	12 (0.1)	5 (0.1)
My teacher is easy to understand	IRL	49 (1.5)	29 (0.9)	14 (0.8)	8 (0.8)
	TIMSS	47 (0.2)	34 (0.2)	13 (0.1)	6 (0.1)
I am interested in what my teacher says	IRL	44 (1.3)	32 (0.9)	15 (0.7)	9 (0.8)
	TIMSS	50 (0.2)	31 (0.2)	13 (0.1)	6 (0.1)
My teacher gives me interesting things to do	IRL	42 (1.3)	31 (0.8)	18 (0.8)	10 (0.8)
	TIMSS	42 (0.2)	32 (0.2)	17 (0.1)	8 (0.1)
My teacher has clear answers to my questions	IRL	50 (1.4)	29 (0.7)	13 (0.7)	8 (0.9)
	TIMSS	50 (0.2)	32 (0.2)	12 (0.1)	6 (0.1)
My teacher is good at explaining science	IRL	54 (1.5)	27 (0.8)	11 (0.7)	8 (0.9)
	TIMSS	55 (0.2)	29 (0.2)	10 (0.1)	5 (0.1)
My teacher lets me show what I have learned	IRL	33 (1.0)	35 (0.8)	22 (0.9)	10 (0.8)
	TIMSS	41 (0.2)	34 (0.1)	18 (0.1)	7 (0.1)
My teacher does a variety of things to help us learn	IRL	46 (1.4)	32 (1.0)	15 (0.8)	7 (0.7)
	TIMSS	51 (0.2)	32 (0.2)	12 (0.1)	6 (0.1)
My teacher tells me how to do better when I make a mistake	IRL	44 (1.2)	33 (0.9)	16 (0.7)	8 (0.7)
	TIMSS	49 (0.2)	32 (0.2)	13 (0.1)	6 (0.1)
My teacher listens to what I have to say	IRL	51 (1.2)	31 (0.9)	11 (0.7)	6 (0.6)
	TIMSS	50 (0.2)	32 (0.1)	12 (0.1)	6 (0.1)

Note: Figures may not add exactly to 100% due to rounding.



Table A5.17: Percentage of Eighth grade students by their views on engaging science teaching and mean science achievement with standard errors in parentheses – Ireland and comparison countries (*Table 5.6*)

	<b>Very engaging teaching</b> ( <i>reference</i> )		<b>Engaging teaching</b>		<b>Less than engaging</b>	
	%	Science	%	Science	%	Science
Australia	38 (1.3)	534 (2.9)	39 (0.9)	<b>507</b> (2.9)	22 (1.0)	<b>490</b> (4.9)
England	38 (1.3)	545 (4.1)	42 (0.8)	540 (4.3)	20 (1.1)	<b>522</b> (5.9)
Hong Kong SAR	34 (1.5)	557 (3.9)	48 (0.9)	<b>545</b> (4.4)	17 (1.3)	<b>526</b> (7.2)
<b>Ireland</b>	<b>45 (1.4)</b>	<b>545 (2.9)</b>	<b>34 (0.9)</b>	<b>535 (3.3)</b>	<b>21 (1.3)</b>	<b>509 (4.6)</b>
New Zealand	42 (1.4)	527 (3.5)	40 (0.8)	<b>509</b> (3.6)	18 (0.9)	<b>492</b> (5.4)
Rep. of Korea	10 (0.6)	604 (5.0)	47 (1.2)	<b>567</b> (2.3)	43 (1.5)	<b>533</b> (2.8)
Singapore	35 (0.9)	606 (4.1)	52 (0.7)	<b>595</b> (3.3)	13 (0.8)	<b>578</b> (5.2)
United States	51 (1.0)	539 (2.9)	32 (0.7)	<b>529</b> (3.2)	17 (0.9)	<b>515</b> (4.5)
<b>TIMSS</b>	<b>47 (0.2)</b>	<b>498 (0.7)</b>	<b>36 (0.2)</b>	<b>480 (0.8)</b>	<b>17 (0.2)</b>	<b>464 (1.2)</b>

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A5.18: Eighth grade students' views on engaging science teaching scale by student gender with standard errors in parentheses – Ireland and TIMSS average (*Figure 5.6, tabulated*)

		<b>Mean (SE)</b>
Ireland	Girls	9.84 (0.1)
	Boys	9.83 (0.1)
TIMSS	Girls	10.01 (0.01)
	Boys	10.00 (0.01)

Table A5.19: Percentage of Eighth grade students endorsing various statements about the value they ascribe to science with standard errors in parentheses – Ireland and TIMSS average

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
I think learning science will help me in my daily life	IRL	38 (1.0)	38 (0.8)	15 (0.6)	9 (0.6)
	TIMSS	52 (0.2)	34 (0.1)	10 (0.1)	5 (0.1)
I need science to learn other school subjects	IRL	25 (0.8)	33 (0.9)	29 (0.9)	13 (0.8)
	TIMSS	39 (0.2)	34 (0.1)	20 (0.1)	7 (0.1)
I need to do well in science to get into the college of my choice	IRL	38 (1.0)	29 (0.8)	21 (0.6)	12 (0.7)
	TIMSS	47 (0.2)	30 (0.1)	16 (0.1)	7 (0.1)
I need to do well in science to get the job I want	IRL	35 (0.9)	24 (0.8)	26 (0.8)	15 (0.8)
	TIMSS	44 (0.2)	28 (0.1)	19 (0.1)	9 (0.1)
I would like a job that involves using science	IRL	26 (0.9)	23 (0.7)	26 (0.8)	25 (0.9)
	TIMSS	34 (0.1)	25 (0.1)	25 (0.1)	15 (0.1)
It is important to learn about science to get ahead in the world	IRL	37 (0.8)	35 (0.8)	18 (0.6)	10 (0.7)
	TIMSS	44 (0.2)	34 (0.1)	16 (0.1)	7 (0.1)
Learning science will give me more job opportunities when I am an adult	IRL	45 (1.0)	31 (0.9)	15 (0.6)	9 (0.6)
	TIMSS	46 (0.2)	32 (0.1)	15 (0.1)	7 (0.1)
My parents think that it is important that I do well in science	IRL	46 (1.1)	34 (0.9)	14 (0.7)	6 (0.5)
	TIMSS	47 (0.2)	33 (0.1)	14 (0.1)	5 (0.1)
It is important to do well in science	IRL	50 (1.1)	33 (0.9)	11 (0.6)	6 (0.6)
	TIMSS	54 (0.2)	32 (0.1)	10 (0.1)	5 (0.1)

Note: Figures may not add exactly to 100% due to rounding.

Table A5.20: Percentage of Eighth grade students by the value they ascribe to science and mean science scores with standard errors in parentheses – Ireland and comparison countries (Table 5.7)

	Strongly value science (reference)		Value science		Do not value science	
	%	Science	%	Science	%	Science
Australia	27 (0.9)	547 (3.2)	41 (0.6)	<b>517</b> (2.7)	32 (0.8)	<b>482</b> (3.4)
England	39 (1.1)	558 (4.1)	43 (0.8)	<b>536</b> (3.9)	18 (0.9)	<b>502</b> (4.5)
Hong Kong SAR	24 (1.0)	565 (5.0)	46 (1.0)	<b>549</b> (4.2)	31 (1.2)	<b>528</b> (4.3)
Ireland	30 (0.9)	557 (3.4)	43 (0.8)	<b>540</b> (3.0)	27 (1.0)	<b>501</b> (3.8)
New Zealand	30 (0.8)	537 (4.1)	46 (0.7)	<b>514</b> (3.4)	24 (0.9)	<b>486</b> (3.2)
Rep. of Korea	13 (0.6)	605 (4.2)	51 (0.9)	<b>566</b> (1.9)	36 (0.9)	<b>522</b> (2.5)
Russian Fed.	38 (1.4)	544 (5.2)	48 (1.2)	545 (4.1)	14 (0.6)	543 (5.9)
Singapore	37 (0.8)	621 (3.4)	53 (0.7)	<b>589</b> (3.4)	10 (0.5)	<b>548</b> (4.7)
Slovenia	20 (0.8)	577 (4.2)	52 (0.9)	<b>556</b> (2.9)	28 (1.0)	<b>525</b> (3.2)
United States	38 (0.8)	550 (3.2)	42 (0.7)	<b>529</b> (2.8)	19 (0.6)	<b>501</b> (3.1)
TIMSS	40 (0.2)	506 (0.7)	41 (0.1)	<b>482</b> (0.6)	19 (0.1)	<b>460</b> (0.9)

Note: Figures may not add exactly to 100% due to rounding.

Significant differences, in relation to the reference category, are highlighted in bold.

Table A5.21: Value Eighth grade students ascribe to science (scale) by student gender with standard errors in parentheses – Ireland and TIMSS average (*Figure 5.7, tabulated*)

		Mean (SE)
Ireland	Girls	9.69 (0.1)
	Boys	9.49 (0.1)
TIMSS	Girls	10.14 (0.01)
	Boys	10.13 (0.01)

Table A5.22: Correlations among scale scores measuring the extent to which Fourth Class students like learning science (1), their views on engaging teaching in their science lessons (2), their confidence in learning science (3) and their home learning resources (4) with standard errors in parentheses (*Table 5.8*)

	1.	2.	3.	4.
1. Students like learning science	--	0.42 (0.02)	0.62 (0.01)	0.05 (0.02)
2. Students' views on engaging teaching in their science lessons		--	0.40 (0.02)	-0.07 (0.02)
3. Students' confidence in learning science			--	0.14 (0.02)
4. Home learning resources				--

Note: All correlations are statistically significant at the .05 level.

Table A5.23: Correlations among scale scores measuring the extent to which Second Year students like learning science (1), their views on their science lessons (2), their confidence in learning science (3), the value they ascribe to science (4) and their home educational resources (5) with standard errors in parentheses (*Table 5.9*)

	1.	2.	3.	4.	5.
1. Students like learning science	--	0.65 (0.01)	0.72 (0.01)	0.63 (0.01)	0.24 (0.02)
2. Students' views on engaging teaching in their science lessons		--	0.51 (0.01)	0.49 (0.02)	0.13 (0.02)
3. Students' confidence in learning science			--	0.50 (0.01)	0.28 (0.02)
4. Value students ascribe to science				--	0.24 (0.02)
5. Home educational resources					--

Note: All correlations are statistically significant at the .05 level.