

PISA 2006: E-appendix

Introduction

This e-appendix is designed as a companion to the main national report on the 2006 cycle of the Programme for International Student Assessment [Ready for Tomorrow's World? The competencies of Ireland's 15-year-olds in PISA 2006 – Eivers, Shiel & Cunningham (2008)]. It contains additional detail for some of the data presented in Chapter 6 (Student Characteristics) and Chapter 8 (School and Classroom Characteristics) in the main report.

Although the tables presented in the main report contain considerable detail, some readers may require additional statistical information. Three main types of additional information are presented here. Firstly, the multiple comparisons shown in the main PISA report do not contain information on Bonferroni Confidence Intervals, or on the standard errors of differences between means: such data are available only in the e-appendix. Secondly, the relationship between achievement and a small number of variables have not been presented in tabular format in the main report, but are available here. Thirdly, in Chapters 6 and 8 of the main report the focus is on science, and data for mathematics and reading achievement are, for the most part, not included. Therefore, the tables in this e-appendix contain information on all three PISA domains.

The data presented here follow a similar layout to the main report. For example, the tables from Chapter 6 can be found under the heading 'Chapter 6: Tables', and tables are presented in the same sequence as in the equivalent chapter in the main report. Additional tables (data referred to only in text in the main report) are presented at the end of each chapter section, in the order in which they are referenced in the main report (e.g., Table 6.A1, Table 6.A2, etc).

Understanding the Analyses in This E-Appendix

Many of the tables in the e-appendix are concerned with describing student achievement in science, mathematics and reading, with reference to relevant context variables. To do so, multiple mean achievement scores (e.g., mean scores for those who were in Second Year, Third Year, Transition Year or Fifth Year in school) are compared to see if they differ significantly from each other. The multiple comparison tables presented in the e-appendix represent a more detailed version of the summary multiple comparison tables in the main report. Inset 1 explains how to interpret these tables.

Inset 1: Interpreting Tables of Differences in Mean Achievement

Throughout this e-appendix, you will see tables showing differences between the mean achievement scores of different groups of students. The % **Total** column shows the percentages of students in a particular group, including those for whom only achievement data are available. In the example below, number of TVs in the home is unknown for 2.3% of students. The % **Avail.** column is equivalent to the valid percentage in each category – that is, the percentages of those for whom all information is available. Thus, while 17.2% of our total sample are known to have two TVs at home, 17.6% of those for whom we have information on TV ownership have two TVs at home. For some variables (e.g., grade level), information is available for all students. In such cases, there is a % Total column in the table, but no % Avail. column.

Mean shows the average score on the PISA scales of scientific, mathematical and reading literacy for students in each group. In the example below, 78.3% of students for whom data were available had three or more TVs, and these students obtained mean PISA science, mathematics and reading scores of 504.4, 499.6 and 515.2, respectively. The **SE** columns show standard errors corresponding to the adjacent mean scores (e.g., the standard error of the mean science score of students with three or more TVs is 3.04). The SE of a mean score is an estimate of the extent to which the score may be expected to vary about the ‘true’ mean, and, as such, is a measure of the accuracy of mean scores derived from a sample.

EXAMPLE: Mean scores of Irish students on all domains, by number of TVs in the home

	Frequencies		Science		Maths		Reading	
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE
None	0.3	0.3	495.7	27.07	486.8	24.96	477.7	28.49
One	3.7	3.8	535.8	11.81	513.6	11.78	535.5	12.32
Two	17.2	17.6	527.3	4.84	514.1	4.42	532.7	5.07
Three plus	76.5	78.3	504.4	3.04	499.6	2.71	515.2	3.34
Missing	2.3	0.0	452.6	10.89	451.7	10.81	447.7	12.49

Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
None – three+	-8.7	27.48	-78.9	61.5	-12.8	25.03	-76.7	51.2	8.6	25.30	-56.0	73.2
One – three+	31.4	11.01	3.3	59.5	14.0	11.09	-14.3	42.3	-90.4	20.86	-143.7	-37.1
Two – three+	22.9	4.05	12.6	33.3	14.6	4.10	4.1	25.1	-22.0	9.36	-45.9	1.9
Missing – three+	-51.9	11.02	-80.0	-23.7	-47.9	10.98	-75.9	-19.8	-59.1	18.12	-105.4	-12.8

Significant differences in bold.

The bottom part of each table compares the various mean scores. In the example, there are four comparisons within each domain. The second (**One-three+**) compares the mean scores of pupils who had one television in their home with scores of those who had three or more. On scientific literacy, for example, the difference (**Diff**) between these means is 31.4 points, and the standard error of the difference (**SED**) for this comparison is 11.01. The SED is used to construct a *confidence interval* around the mean score difference such that, if the sampling procedure were repeated, and multiple mean score differences were obtained, the mean score difference in the population would fall into this interval 95% of the time. The **95%BCI** (95% Bonferroni Confidence Interval) around the mean score difference of 31.4 is 3.3 to 59.5. In the table, these numbers are in bold, indicating that the difference between the mean scores is statistically significant. Differences are significant only when the upper and lower bounds of the confidence interval are both below or both above zero. The term ‘Bonferroni’ in 95%BCI indicates that an adjustment for multiple comparisons has been made.

In the comparisons above, students with three or more televisions in the home constitute the reference category, as the performance of students in this category is compared to the performance of those in each of the other categories.

Chapter 6: Tables

Table 6.1: Mean scores of Irish students on all domains, by nationality

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Native	91.5	94.4	510.4	2.99	503.7	2.73	520.0	3.42				
2 nd Generation	1.0	1.1	498.0	14.91	488.0	12.78	501.8	14.0				
1 st Generation	4.4	4.5	500.4	14.56	485.2	11.97	505.8	15.51				
Missing	3.1	0.0	461.9	10.27	462.4	9.51	460.7	11.27				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
2 nd Gen – Native	-12.5	14.71	-48.4	23.5	-15.7	12.80	-47.0	15.6	-18.2	14.13	-52.8	16.3
1 st Gen – Native	-10.1	13.98	-44.2	23.1	-18.6	11.82	-47.5	10.3	-14.2	15.30	-51.6	23.2
Missing – Native	-48.5	9.70	-72.2	-24.8	-41.4	9.26	-64.0	-18.7	-59.3	10.66	-85.4	-33.3

Significant differences in bold.

Table 6.2: Mean scores of Irish students on all domains, by language spoken at home

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Irish/English	95.7	98.0	510.8	3.08	503.6	2.71	520.3	3.41				
Other language	2.0	2.0	449.6	22.14	455.1	21.45	463.8	25.60				
Missing	2.4	0.0	455.3	12.03	453.8	11.59	440.5	13.43				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Other – Irish/Eng	-61.3	21.76	-111.0	-11.6	-48.5	21.32	-97.2	0.2	-56.5	25.30	-114.3	1.3
Missing – Irish/Eng	-55.5	12.00	-82.9	-28.1	-49.8	11.52	-76.1	-23.5	-79.7	13.28	-110.1	-49.4

Significant differences in bold.

Table 6.3: Mean scores of Irish students on all domains, by number of siblings

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
None	4.0	4.1	519.9	7.42	507.4	6.34	529.8	8.06				
One	24.1	24.6	522.5	3.77	512.2	3.33	534.0	4.16				
Two	30.2	30.8	515.8	3.79	509.3	3.34	525.5	4.09				
Three	21.5	21.9	505.5	4.28	499.7	3.82	513.6	4.50				
Four or more	18.1	18.5	483.8	4.69	480.1	4.02	491.5	4.72				
Missing	2.1	0.0	454.1	12.61	455.7	11.99	443.5	13.65				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
None – one	-2.6	7.31	-21.9	16.7	-4.8	6.73	-22.6	12.9	-4.1	8.08	-25.5	17.2
Two – one	-6.7	3.74	-16.6	3.1	-3.0	3.31	-11.7	5.8	-8.5	3.80	-18.5	1.5
Three – one	-17.0	4.10	-27.8	-6.2	-12.5	3.74	-22.4	-2.6	-20.4	4.12	-31.2	-9.5
≥ Four – one	-38.7	4.84	-51.5	-25.9	-32.1	4.22	-43.2	-21.0	-42.5	5.34	-56.6	-28.5
Missing – one	-68.5	13.18	-103.3	-33.7	-56.5	12.33	-89.1	-24.0	-90.5	13.72	-126.7	-54.3

Significant differences in bold.

Table 6.4: Mean scores of Irish students on all domains, by parental occupation

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Low	31.5	32.9	480.7	4.09	476.0	3.38	490.2	4.31				
Medium	32.9	34.4	512.8	2.93	505.0	2.57	522.4	3.26				
High	31.3	32.7	542.3	3.38	532.8	3.37	551.2	3.48				
Missing	4.2	0.0	428.7	9.19	432.6	9.00	429.7	10.11				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Low – high	-61.5	4.24	-71.9	-51.2	-56.7	4.11	-66.8	-46.7	-61.0	3.97	-70.7	-51.3
Medium – high	-29.4	3.45	-37.9	-21.0	-27.8	3.44	-36.2	-19.4	-28.7	3.31	-36.8	-20.6
Missing – high	-113.6	9.23	-136.1	-91.0	-100.2	8.92	-122.0	-78.4	-121.5	9.90	-145.7	-97.3

Significant differences in bold.

Table 6.5: Mean scores of Irish students on all domains, by parental education

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
None/primary	2.9	3.0	440.2	8.95	446.0	8.72	460.1	10.96				
Junior cycle	8.1	8.3	476.6	5.78	469.4	5.27	484.4	6.76				
Senior cycle	41.5	42.7	497.4	3.27	492.5	2.98	508.0	3.57				
3 rd level cert/diploma	20.9	21.4	519.9	4.05	510.4	3.20	530.2	3.87				
3 rd level degree/postgrad	23.9	24.5	544.1	4.29	533.5	3.94	550.2	4.33				
Missing	2.7	0.0	441.0	11.65	443.6	10.75	432.0	12.60				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
None/prim – snr cycle	-57.2	8.23	-78.9	-35.5	-46.6	8.10	-67.9	-25.2	-47.9	10.57	-75.8	-20.1
Junior cycle – snr cycle	-20.8	5.25	-34.7	-7.0	-23.2	4.91	-36.1	-10.2	-23.7	5.87	-39.2	-8.2
3 rd L cert/dip – snr cycle	22.5	4.39	10.9	34.1	17.9	3.66	8.2	27.6	22.1	3.68	12.4	31.9
3 rd L deg/PG – snr cycle	46.7	4.59	34.5	58.8	40.9	4.20	29.8	52.0	42.1	4.23	31.0	53.3
Missing	-56.3	11.89	-87.7	-25.0	-49.0	10.97	-77.9	-20.0	-76.0	12.83	-109.9	-42.2

Significant differences in bold.

Table 6.6: Mean scores of Irish students on all domains, by economic, social and cultural status

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Low	32.9	33.5	472.8	4.38	469.8	3.77	483.2	4.68				
Medium	32.6	33.2	507.8	3.04	500.5	2.57	518.2	3.37				
High	32.6	33.3	548.1	3.43	537.4	3.18	555.5	3.58				
Missing	1.9	0.0	447.4	13.82	447.6	13.11	434.9	14.91				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Low – high	-75.3	5.00	-87.5	-63.1	-67.7	4.58	-78.8	-56.5	-72.3	4.99	-84.5	-60.1
Medium – high	-40.3	3.80	-49.6	-31.0	-36.9	3.45	-45.3	-28.5	-37.3	3.44	-45.7	-28.8
Missing – high	-100.7	13.99	-134.9	-66.5	-89.9	13.29	-122.4	-57.4	-120.6	14.92	-157.1	-84.1

Significant differences in bold.

Table 6.7: Mean scores of Irish students on all domains, by level of cultural possessions

	Frequencies		Science		Maths		Reading	
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE
Very low	22.8	23.4	481.5	4.46	482.7	3.84	491.6	4.71
Low	27.6	28.3	498.1	3.26	494.5	2.84	509.0	3.26
High	22.4	22.9	507.9	3.86	499.7	3.62	519.5	4.49
Very high	24.7	25.3	551.1	3.82	533.5	3.49	556.5	3.82
Missing	2.5	0.0	447.1	11.08	448.9	10.22	437.6	11.38

Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V low – v high	-69.5	4.84	-81.9	-57.2	-50.8	4.45	-62.1	-39.4	-65.0	4.49	-76.5	-53.5
Low – v high	-53.0	4.30	-64.0	-42.0	-38.9	3.53	-48.0	-29.9	-47.6	3.87	-57.5	-37.7
High – v high	-43.2	4.32	-54.2	-32.1	-33.7	3.94	-43.8	-23.7	-37.1	4.14	-47.7	-26.5
Missing – v high	-104.0	11.51	-133.4	-74.5	-84.5	10.61	-111.6	-57.4	-119.0	11.54	-148.5	-89.5

Significant differences in bold.

Table 6.8: Mean scores of Irish students on all domains, by number of TVs in the home

	Frequencies		Science		Maths		Reading	
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE
None	0.3	0.3	495.7	27.70	486.8	24.96	477.7	28.49
One	3.7	3.8	535.8	11.81	513.6	11.78	535.5	12.32
Two	17.2	17.6	527.3	4.84	514.1	4.42	532.7	5.07
Three plus	76.5	78.3	504.4	3.04	499.6	2.71	515.2	3.34
Missing	2.3	0.0	452.6	10.89	451.7	10.81	447.7	12.49

Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
None – three+	-8.7	27.48	-78.9	61.5	-12.8	25.03	-76.7	51.2	8.6	25.30	-56.0	73.2
One – three+	31.4	11.01	3.3	59.5	14.0	11.09	-14.3	42.3	-90.4	20.86	-143.7	-37.1
Two – three+	22.9	4.05	12.6	33.3	14.6	4.10	4.1	25.1	-22.0	9.36	-45.9	1.9
Missing – three+	-51.9	11.02	-80.0	-23.7	-47.9	10.98	-75.9	-19.8	-59.1	18.12	-105.4	-12.8

Significant differences in bold.

Table 6.9: Mean scores of Irish students on all domains, by number of books in the home

	Frequencies		Science		Maths		Reading	
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE
0 to 10	10.0	10.3	434.3	5.73	440.1	5.29	477.6	6.20
11 to 25	15.4	15.8	466.3	4.41	466.1	3.99	479.9	5.02
26 to 100	28.7	29.4	503.0	3.50	499.2	2.88	515.3	3.65
101 to 200	19.8	20.3	535.2	3.53	519.1	3.00	541.0	3.97
201 to 500	15.4	15.8	558.3	3.71	543.3	3.79	562.9	4.29
Over 500	8.3	8.5	551.3	6.14	543.0	5.81	554.7	7.05
Missing	2.4	0.0	460.5	11.35	455.8	11.06	455.8	13.41

Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
0 to 10 – 26 to 100	-68.7	6.03	-85.0	-52.4	-59.1	5.38	-73.6	-44.5	-67.7	6.42	-85.1	-50.3
11 to 25 – 26 to 100	-36.7	4.42	-48.6	-24.7	-33.1	4.02	-44.0	-22.2	-35.4	4.50	-47.6	-23.2
101 to 200 – 26 to 100	32.2	4.40	20.3	44.1	19.9	3.76	9.8	30.1	25.7	4.28	14.1	37.3
201 to 500 – 26 to 100	55.3	4.57	42.9	67.6	44.1	4.50	32.0	56.3	47.6	4.75	34.7	60.4
Over 500 – 26 to 100	48.3	6.68	30.3	66.4	43.8	5.89	27.9	59.8	39.4	7.50	19.1	59.7
Missing – 26 to 100	-42.5	11.43	-73.4	-11.6	-43.3	10.98	-73.0	-13.6	-59.5	13.67	-96.5	-22.5

Significant differences in bold.

Table 6.11: Mean scores of Irish students on all domains, by level of parental interaction

	Frequencies		Science		Maths		Reading	
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE
Low	300.6	33.2	490.8	4.07	488.7	3.35	498.3	4.36
Medium	30.6	33.2	518.8	3.24	510.2	3.14	527.4	3.34
High	31.0	33.6	531.6	3.54	518.8	3.12	542.9	3.52
Missing	7.7	0.0	442.6	8.54	447.9	8.11	449.7	10.69

Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Low – high	-40.8	3.73	-50.0	-31.7	-30.1	3.37	-38.3	-21.8	-44.5	3.39	-52.8	-36.2
Medium – high	-12.8	3.44	-21.2	-4.4	-8.6	3.13	-16.3	-1.0	-15.4	3.18	-23.2	-7.7
Missing – high	-89.0	8.77	-110.5	-67.6	-70.9	7.99	-90.5	-51.4	-93.2	10.21	-118.2	-68.2

Significant differences in bold.

Table 6.12: Correlations between hours worked and mean scores on all domains, by gender

		Science		Maths		Reading	
		r	SE	r	SE	r	SE
Paid work	Overall	-0.15	0.02	-0.15	0.02	-0.15	0.02
	Females	-0.11	0.02	-0.10	0.02	-0.10	0.02
	Males	-0.19	0.02	-0.18	0.02	-0.21	0.02
Unpaid work	Overall	-0.01	0.02	-0.01	0.02	-0.04	0.02
	Females	0.01	0.02	0.01	0.02	0.01	0.02
	Males	-0.04	0.02	-0.04	0.03	-0.06	0.03
Total work	Overall	-0.12	0.02	-0.12	0.02	-0.12	0.02
	Females	-0.08	0.02	-0.08	0.02	-0.09	0.02
	Males	-0.15	0.02	-0.15	0.02	-0.17	0.02

Significant correlations in bold.

The t-values for the non-significant correlations are as follows: Science: 0.58, -1.48, -0.80, respectively; Maths: -0.81, 0.46, -1.74, respectively; Reading: 0.23.

Table 6.13: Mean scores of Irish students on all domains, by grade level*

	Frequencies		Science		Maths		Reading					
	%Total		Mean	SE	Mean	SE	Mean	SE				
2 nd year	2.7		408.5	11.01	414.9	9.54	420.2	13.06				
3 rd year	58.6		499.3	3.50	492.3	2.95	506.9	3.85				
Transition year	21.2		537.1	4.33	530.1	4.30	547.8	4.70				
5 th year	17.5		519.6	4.34	511.5	4.18	530.9	4.56				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
2 nd year – TY	-128.7	11.73	-157.4	-100.0	-115.2	9.93	-139.5	-90.9	-127.6	13.48	-160.5	-94.6
3 rd year – TY	-37.8	4.50	-48.8	-26.8	-37.9	3.71	-46.9	-28.8	-40.9	4.46	-51.8	-30.0
5 th year – TY	-17.5	5.77	-31.6	-3.4	-18.6	5.84	-32.9	-4.3	-16.9	5.68	-30.8	-3.0

Significant differences in bold.

*Data for two First year students who participated in PISA are not included in this table.

Table 6.14: Mean scores of Irish students on all domains, by study programme

	Frequencies		Science		Maths		Reading		
	%Total		Mean	SE	Mean	SE	Mean	SE	
Junior Certificate	61.3		495.1	3.65	488.7	3.07	502.9	3.99	
Transition Year	21.2		537.1	4.33	530.1	4.30	547.8	4.70	
LC Applied	1.3		425.2	14.93	442.4	12.42	456.5	12.40	
LC Established	12.6		530.2	5.17	522.6	4.81	539.1	5.54	
LC Vocational	3.6		515.8	8.18	496.9	7.29	528.4	9.60	
Comparisons	Science			Maths			Reading		
	Diff	SED	95% BCI	Diff	SED	95% BCI	Diff	SED	95% BCI
JC – TY	-42.0	4.69	-54.0 -30.0	-41.4	3.82	-51.2 -31.6	-44.9	4.66	-56.8 -33.0
LCA – TY	-112.0	14.60	-149.3 -74.7	-87.7	12.37	-119.3 -56.1	-91.3	12.24	-112.5 -60.0
LC – TY	-6.9	6.79	-24.3 10.4	-7.5	6.52	-24.2 9.2	-8.7	6.79	-26.1 8.6
LCV – TY	-21.3	8.62	-43.3 0.7	-33.2	8.12	-54.0 -12.5	-19.4	9.96	-44.8 6.1

Significant differences in bold.

Table 6.17a: Mean science scores of Third year Irish science students, by uptake of out-of-school science lessons

	Frequencies		Science	
	%Total	%Avail.	Mean	SE
No out-of-school lessons	71.5	73.5	516.3	3.8
Out-of-school lessons	25.8	26.5	486.5	4.3
Missing	2.7	0.0	446.0	13.8
Comparisons	Science			
	Diff	SED	95% BCI	
No lessons – lessons	29.8	4.49	19.5	40.0
Missing – lessons	-40.5	12.98	-70.1	-10.9

Significant differences in bold.

Table 6.17b: Mean maths scores of Third year Irish students, by uptake of out-of-school maths lessons

	Frequencies		Maths	
	%Total	%Avail.	Mean	SE
No out-of-school lessons	51.6	53.4	507.0	3.48
Out-of-school lessons	45.1	46.6	479.2	3.31
Missing	3.4	0.0	441.3	11.94
Comparisons	Maths			
	Diff	SED	95% BCI	
No lessons – lessons	27.9	3.70	19.4	36.3
Missing – lessons	-37.9	11.44	-64.0	-11.8

Significant differences in bold.

Table 6.17c: Mean reading scores of Third year Irish students, by uptake of out-of-school English lessons

	Frequencies		Reading	
	%Total	%Avail.	Mean	SE
No out-of-school lessons	64.1	66.1	526.8	4.03
Out-of-school lessons	32.8	33.9	474.9	4.25
Missing	3.1	0.0	433.8	13.99
Comparisons	Reading			
	Diff	SED	95% BCI	
No lessons – lessons	51.9	4.11	42.5	61.3
Missing – lessons	-41.1	14.42	-74.0	-8.1

Significant differences in bold.

Table 6.18: Mean scores of Irish students on all domains, by absences from school (last two weeks)

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
None	54.1	56.5	521.7	3.29	512.4	2.92	528.8	3.45				
1 or 2	30.7	32.0	508.6	3.62	501.8	3.15	519.9	3.96				
3 or 4	6.2	6.5	470.3	6.48	469.1	6.32	485.7	7.16				
5 plus	4.7	4.9	462.7	8.09	463.6	6.29	478.2	8.37				
Missing	4.3	0.0	442.9	10.53	449.8	9.67	442.2	10.92				
Comparisons	Science			Maths			Reading					
	Diff	SED	95% BCI	Diff	SED	95% BCI	Diff	SED	95% BCI			
1 or 2 – None	-13.1	3.51	-22.1	-4.2	-10.6	3.05	-18.4	-2.7	-8.8	3.59	-18.0	0.3
3 or 4 – None	-51.4	6.43	-67.8	-35.0	-43.3	6.03	-58.7	-27.9	-43.1	6.81	-60.5	-25.7
5 plus – None	-58.9	7.41	-77.9	-40.0	-48.8	6.06	-64.3	-33.3	-50.5	7.26	-69.1	-32.0
Missing – None	-78.8	10.22	-104.9	-52.6	-62.5	9.37	-86.5	-38.6	-86.6	10.34	-113.0	-60.2

Significant differences in bold.

Table 6.19: Mean scores of Irish students on all domains, by early school leaving intent

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
No	87.9	89.8	518.2	2.85	509.4	2.63	527.8	3.26				
Unsure	8.2	8.3	436.9	7.20	446.2	5.78	442.9	7.31				
Yes	1.9	1.9	413.8	11.20	424.9	8.69	426.7	10.43				
Missing	2.1	0.0	458.5	13.15	453.3	11.72	447.3	13.97				
Comparisons	Science			Maths			Reading					
	Diff	SED	95% BCI	Diff	SED	95% BCI	Diff	SED	95% BCI			
Unsure – No	-81.2	7.17	-98.7	-63.7	-63.2	5.92	-77.6	-48.7	-84.9	7.24	-102.6	-67.2
Yes – No	-104.3	10.83	-130.8	-77.8	-84.5	8.57	-105.5	-63.5	-101.1	10.05	-125.7	-76.5
Missing – No	-59.7	13.20	-91.9	-27.4	-56.0	11.86	-85.0	-27.0	-80.6	13.85	-114.4	-46.7

Significant differences in bold.

Table 6.20: Mean scores of Irish students on all domains, by number of types of bullying experienced in the current term

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
None	50.6	56.6	522.4	3.28	515.4	2.82	532.2	3.57				
One	17.1	19.1	511.3	4.65	501.6	4.10	520.0	4.72				
Two	9.3	10.4	510.5	5.64	501.3	5.25	519.8	5.94				
Three	6.0	6.7	491.3	5.92	485.1	5.69	500.1	7.10				
Four or more	6.5	7.2	479.6	6.45	473.4	6.18	488.3	7.32				
Missing	10.6	0.0	461.4	6.74	461.2	5.97	467.0	7.18				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
One – None	-11.1	4.73	-23.6	1.4	-13.7	4.11	-24.6	-2.9	-12.2	4.80	-24.9	0.5
Two – None	-11.9	5.52	-26.5	2.7	-14.1	5.33	-28.1	0.0	-12.4	6.07	-28.4	3.7
Three – None	-31.1	6.39	-48.0	-14.3	-30.2	5.76	-45.4	-15.0	-32.1	7.10	-50.9	-13.4
Four or more – None	-42.9	6.61	-60.3	-25.4	-42.0	6.51	-59.1	-24.8	-43.9	7.2	-62.8	-24.9
Missing – None	-61.0	6.23	-77.5	-44.6	-54.1	5.62	-69.0	-39.3	-65.3	6.26	-81.8	-48.7

Significant differences in bold.

Chapter 6: Additional Tables

Table 6.A1: Mean scores of Irish students on all domains, by availability of a study desk in the home

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Yes	84.3	86.3	514.3	3.0	506.9	2.71	524.0	3.33				
No	13.4	13.7	482.3	5.7	477.5	4.71	489.6	5.91				
Missing	2.3	0.0	443.1	12.3	443.8	11.90	435.8	12.21				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
No – yes	-32.0	4.86	-43.1	-20.9	-29.3	4.33	-39.2	-19.4	-30.7	5.00	-42.1	-19.3
Missing – yes	-71.2	12.17	-99.0	-43.4	-63.0	11.73	-89.8	-36.3	-83.1	11.77	-110.0	-56.2

Significant differences in bold.

Table 6.A2: Mean scores of Irish students on all domains, by availability of a computer for school work in the home

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Yes	85.9	87.9	516.2	2.88	508.6	2.54	525.9	3.22				
No	11.9	12.1	463.5	6.28	460.6	4.97	470.0	6.52				
Missing	2.3	0.0	446.3	12.14	446.0	11.68	440.9	12.77				
Comparisons	Science			Maths			Reading					
	Diff	SED	95% BCI	Diff	SED	95% BCI	Diff	SED	95% BCI			
No – yes	-52.7	5.45	-65.2	-40.3	-48.0	4.28	-57.7	-38.2	-55.9	5.60	-68.7	-43.1
Missing – yes	-69.9	11.96	-97.2	-42.6	-62.6	11.46	-88.8	-36.4	-85.0	12.68	-114.0	-56.1

Significant differences in bold.

Table 6.A3: Mean scores of Irish students on all domains, by number of computers in the home

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
None	7.7	0.50	456.3	6.9	452.8	5.65	464.2	7.46				
One	61.3	0.73	511.3	3.1	503.1	2.71	521.4	3.62				
Two	21.0	0.67	519.5	3.9	514.0	3.65	528.9	3.88				
Three plus	7.4	0.40	528.9	7.2	523.6	6.30	532.6	6.87				
Missing	2.6	0.35	444.0	10.5	443.5	10.27	442.0	11.76				
Comparisons	Science			Maths			Reading					
	Diff	SED	95% BCI	Diff	SED	95% BCI	Diff	SED	95% BCI			
None – three+	-72.6	8.71	-94.8	-50.4	-70.7	7.55	-90.0	-51.4	-68.4	8.54	-90.2	-46.6
One – three+	-17.6	6.75	-34.9	-0.4	-20.5	6.16	-36.2	-4.7	-11.2	6.34	-27.4	5.0
Two – three+	-9.5	6.64	-26.4	7.5	-9.5	6.21	-25.4	6.4	-3.7	6.66	-20.7	13.3
Missing – three+	-85.0	12.15	-116.0	-53.9	-80.0	11.70	-109.9	-50.1	-90.6	12.82	-123.4	-57.9

Significant differences in bold.

Table 6.A4: Mean scores of Irish students on all domains, by availability of a premium cable TV package in the home

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Yes	60.6	62.2	498.9	3.48	494.4	2.89	510.4	3.77				
No	36.9	37.8	527.5	3.40	516.4	3.11	533.3	3.63				
Missing	2.5	0.0	455.7	11.39	453.6	11.04	449.4	11.44				
Comparisons	Science			Maths			Reading					
	Diff	SED	95% BCI	Diff	SED	95% BCI	Diff	SED	95% BCI			
No – yes	28.6	3.06	21.6	35.6	22.0	2.55	16.2	27.8	22.8	2.97	16.1	29.6
Missing – yes	-43.2	11.40	-69.2	-17.1	-40.8	11.16	-66.3	-15.3	-61.0	11.23	-86.6	-35.4

Significant differences in bold.

Table 6.A5: Mean scores of Irish students on all domains, by frequency of discussing politics or social issues with parents

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Never/hardly ever	31.9	34.0	484.3	3.88	482.7	3.25	496.6	4.22				
Few times a year	19.2	20.4	505.2	3.61	499.7	3.08	514.1	3.79				
Once a month	14.1	15.0	521.6	4.57	511.4	4.19	531.8	4.79				
Several times a month	18.1	19.3	543.7	3.55	529.9	3.31	548.2	3.65				
Several times a week	10.6	11.3	547.2	5.31	529.9	5.06	553.7	5.99				
Missing	6.1	0.0	441.1	9.93	448.8	9.25	447.7	12.44				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Never/hardly – sev wk	-62.9	5.39	-77.1	-48.7	-47.2	4.82	-60.0	-34.5	-57.2	5.13	-70.7	-43.6
Few year – sev wk	-42.1	5.36	-56.2	-27.9	-30.2	4.59	-42.3	-18.1	-39.6	5.84	-55.0	-24.2
Once month – sev wk	-25.7	5.87	-41.1	-10.2	-18.5	5.21	-32.3	-4.8	-21.9	6.52	-39.1	-4.7
Sev month – sev wk	-3.5	5.14	-17.1	10.0	0.0	5.25	-13.8	13.9	-5.6	5.80	-20.9	9.8
Missing – sev wk	-106.2	10.98	-135.1	-77.2	-81.1	10.14	-107.8	-54.3	-106.0	13.33	-141.2	-70.8

Significant differences in bold.

Table 6.A6: Mean scores of Irish female students on all domains, by level of parental interaction

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Low	26.5	28.4	494.2	4.90	483.1	4.76	520.8	4.94				
Medium	30.1	32.2	514.3	4.03	501.7	3.89	540.1	4.09				
High	36.8	39.4	527.4	3.71	511.0	3.61	552.9	4.00				
Missing	6.5	0.0	433.6	9.18	434.6	8.48	453.0	12.00				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Low – high	-33.2	5.11	-45.7	-20.7	-27.9	4.82	-39.7	-16.2	-32.1	4.59	-43.3	-20.9
Medium – high	-13.1	4.73	-24.7	-1.5	-9.4	4.37	-20.0	1.3	-12.8	4.26	-23.2	-2.4
Missing – high	-93.8	9.78	-117.7	-69.9	-76.5	8.87	-98.2	-54.8	-100.0	12.52	-130.6	-69.4

Significant differences in bold.

Table 6.A7: Mean scores of Irish male students on all domains, by level of parental interaction

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Low	34.8	38.2	488.1	5.32	493.1	4.20	480.8	5.60				
Medium	31.1	34.2	523.3	4.58	518.6	4.49	514.9	4.74				
High	25.1	27.6	537.9	6.05	530.5	5.14	527.8	5.63				
Missing	8.9	0.0	449.3	11.73	457.8	10.52	447.2	13.10				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Low – high	-49.8	5.17	-62.5	-37.2	-37.4	4.75	-49.0	-25.7	-47.0	5.17	-59.7	-34.4
Medium – high	-14.6	6.02	-29.3	-0.1	-11.9	5.53	-25.4	1.7	-12.9	5.27	-25.8	-0.0
Missing – high	-88.6	12.2	-118.5	-58.7	-72.6	10.08	-97.2	-48.0	-80.6	12.08	-110.1	-51.0

Significant differences in bold.

Table 6.A8: Mean scores of Irish female students on all domains, by number of types of bullying experienced in the current term

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
None	51.1	55.8	523.4	3.79	510.3	3.68	549.4	3.89				
One	18.4	20.1	507.8	5.37	493.8	4.62	530.8	5.65				
Two	9.5	10.3	502.6	6.81	489.3	6.60	529.9	7.06				
Three	6.5	7.1	483.1	7.59	474.8	7.20	510.2	7.97				
Four or more	6.1	6.7	480.1	8.30	465.8	8.25	509.8	9.79				
Missing	8.4	0.0	466.7	8.96	457.7	7.75	488.1	10.21				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
One – none	-15.6	6.08	-31.7	0.4	-16.5	5.01	-29.7	-3.2	-18.5	5.97	-34.3	-2.8
Two – none	-20.8	7.05	-39.4	-2.2	-20.9	6.79	-38.9	-3.0	-19.4	7.47	-39.1	0.3
Three – none	-40.3	7.66	-60.6	-20.1	-35.5	6.56	-52.8	-18.2	-39.1	7.58	-59.2	-19.1
≥ Four – none	-43.3	8.24	-65.1	-21.6	-44.5	8.55	-67.0	-21.9	-39.5	9.18	-63.7	-15.3
Missing – none	-56.8	8.71	-79.7	-33.8	-52.5	7.59	-72.6	-32.5	-61.2	9.04	-85.1	-37.3

Significant differences in bold.

Table 6.A9: Mean scores of Irish male students on all domains, by number of types of bullying experienced in the current term

	Frequencies		Science		Maths		Reading	
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE
None	50.1	57.5	521.4	4.64	520.7	3.79	514.3	4.87
One	15.7	18.0	515.6	6.50	511.1	5.64	506.9	6.18
Two	9.1	10.5	518.9	9.27	514.0	8.40	509.1	8.89
Three	5.4	6.2	501.4	9.58	497.8	9.35	487.6	10.88
Four or more	6.8	7.8	479.1	9.18	480.4	7.94	468.6	8.35
Missing	12.8	0.0	457.9	8.74	463.6	7.80	452.7	8.95

Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
One – none	-5.8	6.80	-23.8	12.1	-9.6	6.02	-25.4	6.3	-7.4	6.53	-24.6	9.8
Two – none	-2.5	9.63	-27.9	22.9	-6.7	8.45	-29.0	15.6	-5.2	9.02	-29.0	18.6
Three – none	-20.0	10.29	-47.1	7.2	-22.8	10.00	-49.2	3.6	-26.7	11.50	-57.0	3.7
≥ Four – none	-42.3	9.61	-67.7	-17.0	-40.3	8.30	-62.2	-18.4	-45.7	8.57	-68.3	-23.1
Missing – none	-63.5	7.91	-84.4	-42.6	-57.1	7.09	-75.8	-38.4	-61.6	7.75	-82.1	-41.1

Significant differences in bold.

Chapter 8: Tables

Table 8.2: Mean scores of Irish students on all domains, by school-level ESCS

	Frequencies		Science		Maths		Reading					
	%Total		Mean	SE	Mean	SE	Mean	SE				
Low	33.6		474.5	5.91	471.0	5.35	479.2	6.49				
Medium	32.9		511.6	3.31	506.1	2.41	520.0	3.39				
High	33.5		539.1	3.81	527.5	4.46	552.9	4.42				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Low – high	-64.6	6.55	-79.6	-49.7	-56.5	6.80	-72.0	-40.9	-73.8	7.58	-91.1	-56.5
Medium – high	-27.5	4.92	-38.7	-16.3	-21.4	5.12	-33.1	-9.7	-33.0	5.30	-45.1	-20.9

Significant differences in bold.

Table 8.3: Mean scores of low ESCS Irish students on all domains, by school-level ESCS

	Frequencies		Science		Maths		Reading					
	%Total		Mean	SE	Mean	SE	Mean	SE				
Low	52.0		457.3	6.91	454.9	5.82	464.3	7.25				
Medium	31.7		486.0	4.59	485.4	3.96	497.2	4.26				
High	16.3		496.8	6.25	487.1	5.49	516.6	7.40				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Medium – low	28.7	8.12	10.2	47.3	30.5	6.77	15.0	45.9	32.9	7.86	14.9	50.9
High – low	39.5	9.18	18.5	60.4	32.2	7.92	14.1	50.3	52.3	10.01	29.4	75.1

Significant differences in bold.

Table 8.4: Mean scores of Irish students on all domains, by school disadvantaged status

	Frequencies		Science		Maths		Reading					
	%Total		Mean	SE	Mean	SE	Mean	SE				
Not disadvantaged	74.8		517.9	3.09	510.5	2.81	527.1	3.53				
Disadvantaged	25.2		479.8	6.94	474.7	6.12	488.2	7.79				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Not disad. – disad.	-38.2	7.34	-52.8	-23.6	-35.8	6.67	-49.0	-22.5	-38.9	8.31	-55.5	-22.4

Significant differences in bold.

Table 8.6: Mean scores of Irish students on all domains, by school sector

	Frequencies		Science		Maths		Reading					
	%Total		Mean	SE	Mean	SE	Mean	SE				
Comm./comp.	16.8		501.3	6.47	493.7	6.15	507.5	7.42				
Secondary	59.6		521.3	3.69	513.3	3.21	531.7	4.29				
Vocational	23.6		480.7	7.09	477.1	6.73	488.0	6.74				
Comparisons	Science			Maths			Reading					
	Diff	SED	95% BCI	Diff	SED	95% BCI	Diff	SED	95% BCI			
Comm./comp. – sec.	-20.0	7.25	-36.6	-3.4	-19.6	6.87	-35.2	-3.9	-24.3	8.25	-43.1	-5.4
Voc. – sec.	-40.5	7.88	-58.5	-22.5	-36.2	7.46	-53.2	-19.1	-43.8	7.82	-61.6	-25.9

Significant differences in bold.

Table 8.7: Mean scores of Irish students on all domains, by school size

	Frequencies		Science		Maths		Reading					
	%Total		Mean	SE	Mean	SE	Mean	SE				
Small	6.2		471.3	19.98	470.0	18.05	481.0	24.40				
Medium	25.7		488.9	5.79	484.9	4.90	500.0	6.55				
Large	68.1		519.0	3.53	510.6	3.19	527.2	3.81				
Comparisons	Science			Maths			Reading					
	Diff	SED	95% BCI	Diff	SED	95% BCI	Diff	SED	95% BCI			
Small – large	-47.7	19.96	-93.3	-2.1	-40.6	18.27	-82.3	1.2	-46.2	24.34	-101.8	9.4
Medium – large	-30.1	6.74	-45.5	-14.7	-25.7	5.82	-39.0	-12.4	-27.2	7.59	-44.6	-9.9

Significant differences in bold.

Table 8.8: Mean scores of Irish students on all domains, by school gender composition

	Frequencies		Science		Maths		Reading					
	%Total		Mean	SE	Mean	SE	Mean	SE				
All boys	18.7		522.0	8.61	521.7	7.78	516.5	9.15				
All girls	23.2		522.0	4.88	506.4	4.84	550.1	5.64				
Mixed	58.1		498.4	4.18	493.0	3.56	504.4	4.08				
Comparisons	Science			Maths			Reading					
	Diff	SED	95% BCI	Diff	SED	95% BCI	Diff	SED	95% BCI			
All boys – mixed	23.6	9.64	1.6	45.6	28.8	8.55	9.2	48.3	12.1	9.80	-10.3	34.5
All girls – mixed	23.6	6.38	9.0	38.2	13.5	5.99	-0.2	27.2	45.7	6.77	30.2	61.1

Significant differences in bold.

Table 8.12: Mean scores of Irish students on all domains, by level of school activities to promote the learning of science among Third years

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Low	39.1	39.8	499.5	5.56	495.7	4.55	510.1	5.82				
Medium	23.8	24.2	499.6	6.22	493.8	5.63	506.8	6.54				
High	35.3	36.0	523.2	4.53	512.9	4.63	531.2	5.65				
Missing	1.8	0.0	524.0	24.61	504.1	24.53	540.5	23.77				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Low – high	-23.7	6.94	-40.6	-6.7	-17.2	6.61	-33.3	-1.0	-21.1	8.08	-40.9	-1.3
Medium – high	-23.5	7.47	-41.8	-5.3	-19.1	7.22	-36.8	-1.5	-24.4	8.90	-46.1	-2.6
Missing – high	0.9	25.24	-60.9	62.6	-8.8	25.13	-70.2	52.7	9.3	24.38	-50.3	68.9

Significant differences in bold.

Table 8.13: Mean scores of Irish students on all domains, by level of school activities for learning environmental topics

	Frequencies		Science		Maths		Reading					
	%Total	%Avail.	Mean	SE	Mean	SE	Mean	SE				
Low	34.6	35.5	515.6	6.43	510.8	5.42	522.4	7.05				
Medium	31.8	32.6	503.6	5.59	495.3	4.11	515.0	6.21				
High	31.1	31.9	504.3	6.29	497.0	6.05	512.3	7.09				
Missing	2.5	0.0	518.5	19.18	507.6	18.66	539.8	17.97				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Low – high	11.3	9.34	-11.5	34.2	13.8	8.51	-7.0	34.5	10.2	10.48	-15.5	35.8
Medium – high	-0.7	9.20	-23.2	21.8	-1.7	7.42	-19.9	16.4	2.7	9.99	-21.7	27.1
Missing – high	14.2	20.23	-35.3	63.6	10.6	19.69	-37.6	58.7	27.5	19.03	-19.0	74.1

Significant differences in bold.

Chapter 8: Additional Tables

Table 8.A1: Student:computer ratio among Irish students, by school disadvantaged status

	Frequencies		Student:computer ratio	
	%Total		Mean	SE
Not disadvantaged	74.8		0.092	0.00
Disadvantaged	25.2		0.118	0.01
Comparisons	Student:computer ratio			
	Diff	SED	95% BCI	
Not disad – disad	0.027	0.01	0.005	0.048

Significant differences in bold.

Table 8.A2: Correlations between the perceived adequacy of school resources and mean scores of Irish students in all domains

	r	SE
Science	0.016	0.05
Maths	-0.023	0.04
Reading	-0.013	0.05

Significant correlations are shown in bold.

The t-values for these non-significant correlations are 0.35, -0.53 and -0.25, respectively.

Table 8.A3: Correlations between the teacher shortage index and mean scores of Irish students in all domains

	r	SE
Science	0.007	0.04
Maths	0.031	0.04
Reading	-0.003	0.04

Significant correlations are shown in bold.

The t-values for these non-significant correlations are 0.18, 0.75 and -0.07, respectively.

Table 8.A4: Mean scores of Irish students on all domains, by whether Junior Certificate science is compulsory in school

	Frequencies		Science		Maths		Reading					
	%Total		Mean	SE	Mean	SE	Mean	SE				
Optional	12.1		506.7	6.06	497.6	5.81	530.2	9.02				
Compulsory	63.2		514.4	4.20	507.9	3.71	519.8	4.50				
Ambiguous	24.7		493.5	6.91	486.9	6.06	504.6	8.25				
Comparisons	Science				Maths				Reading			
	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Opt – compulsory	-7.7	7.44	-24.7	9.3	-10.3	7.06	-26.4	5.9	10.4	10.01	-12.4	33.3
Amb. – compulsory	-20.9	8.13	-39.5	-2.4	-21.0	7.18	-37.4	-4.6	-15.2	9.45	-36.8	6.4

Significant differences in bold.

Table 8.A5: Mean science scores of Irish students*, by availability of 'taster' science courses in school

	Frequencies		Science	
	%Total		Mean	SE
Yes, to all students	46.2		503.7	6.07
No	53.8		509.4	10.30
Comparisons	Science			
	Diff	SED	95% BCI	
No – yes	5.7	12.63	-19.5	30.8

Significant differences in bold.

* Includes only students in schools where science is optional (n = 554).

Table 8.A6: Mean science scores of Irish students, by availability of science clubs in school for Third year students

	Frequencies		Science	
	%Total	% Avail.	Mean	SE
Yes	19.5	20.9	522.0	5.51
No	73.6	79.1	504.1	3.61
Missing	6.9	0.0	515.3	14.45
Comparisons	Science			
	Diff	SED	95% BCI	
No – yes	-17.9	6.21	-32.1	-3.7
Missing – yes	-6.6	15.42	-41.9	28.6

Significant differences in bold.

Table 8.A7: Mean science scores of Irish students, by school engagement in science competitions for Third Years

	Frequencies		Science	
	%Total	% Avail.	Mean	SE
Yes	52.0	54.1	518.7	3.78
No	44.5	45.9	494.2	5.32
Missing	3.5	0.0	533.4	14.42
Comparisons	Science			
	Diff	SED	95% BCI	
No – yes	-24.5	6.48	-39.3	-9.7
Missing – yes	14.7	14.90	-19.4	48.7

Significant differences in bold.