

## **PISA 2018: Analysis of implications for the UK**

**Report prepared by the Gregson Family Foundation, March 2020**

### **1. Background**

Our August 2019 report argued strongly for the introduction of a second measure in the monitoring, evaluation and improvement of the education system in the UK. It argued that:

- (i) The UK performs poorly against international benchmarks on both educational attainment and on wellbeing.
- (ii) Other countries are increasingly giving weight to the wellbeing of children. Nevertheless, the UK continues to focus heavily, if not solely, on academic attainment
- (iii) However, in a changing world, we need to change too, to ensure that our children are educated effectively to become fulfilled and productive citizens.

Our Report referred to other trends in the UK (including but not limited to mental health issues) and called for an annual wellbeing survey in every school in the country to enable informed policy decisions to be made on the basis of how our nation's children, and their teachers, are feeling and what they are experiencing. It argued that only by putting the welfare of the nation's children, and their teachers, at the heart of their education could we have any prospect of reversing these trends.

### **2. PISA 2018**

The PISA 2018 Report (the OECD's Programme for International Student Assessment) was published in December 2019. PISA measures 15-year-olds' ability to use their reading, maths and science knowledge and skills to meet real-life challenges. It looks at both the academic attainment and wellbeing of students across the world. This latest assessment offers an opportunity to take a fresh, evidence-based look at our original recommendation.

On the two elements of assessment highlighted in PISA 2018:

- (i) Regarding academic attainment, PISA indicates that progress has been made in reading across the UK; improvements in maths have been achieved in England, but not elsewhere in the UK; and continuing falls in science have been evidenced across the UK, albeit with a slower decline in England.
- (ii) As for wellbeing, two key conclusions from PISA 2018 stand out for the UK:

- The UK came second bottom of the 37 countries in the OECD for the life satisfaction (cognitive wellbeing) of its students, and fourth bottom across all 79 countries.
- The UK suffered the steepest decline in life satisfaction between 2015 and 2018 of all countries in the PISA sample.

Significant gains have been achieved in the last three years relating to academic attainment (despite the continuing falls in science); these are likely to be the result of the significant education sector reforms introduced by the current Government over the last decade or so. Significant credit must go to the many people who have worked tirelessly to bring about this improvement.

Nevertheless, there cannot be, and must not be, any hiding from the stark reality of the wellbeing of the Nation's children.

We reaffirm with even greater conviction than before that we must put the welfare and wellbeing of both students and their teachers at the heart of our child welfare and education systems. Academic attainment and wellbeing are complementary, not mutually exclusive. Other countries are able to achieve according to both measures. The UK must do the same.

Now is the time to gather evidence on the wellbeing of both our children and their teachers to support our Nation's focus on attainment. Only in this way will we be able to make the necessary policy changes, informed by evidence.

Our children are nowhere near satisfied enough with their lives. They, and our Nation, will be left behind unless we do something about it. There is absolutely no excuse not to.

### **3. Academic attainment**

With regard to PISA's assessment of the UK's performance in reading, maths and science:

- (i) The UK is now ranked as above average in reading;
- (ii) Average maths attainment improved by some 10% across England, but not across the rest of the UK;
- (iii) There has been a small fall in England in science attainment, with sustained falls across the rest of the UK over the last twelve years.

FFT Datalab has completed an initial summary of academic attainment over time and this is attached in Appendix 1.1.

Our own further analysis of the academic attainment data in PISA 2018 in Appendix 1.2 shows the following:

- (i) The UK's ranking rose from 23<sup>rd</sup> in 2015 to 13<sup>th</sup> in 2018.
- (ii) This reflected the 12<sup>th</sup> best improvement in PISA scores across all countries in the 3-year period
- (iii) The UK's score increased by 0.8%. This compares with the top two ranked countries, China and Turkey, which improved their scores by 12.5% and 9% respectively.
- (iv) Only seventeen countries increased their PISA scores between 2015 and 2018. The UK's increase in ranking therefore was related at least in part to other countries' scores declining.

#### **4. Life satisfaction and Meaning in Life (Cognitive subjective wellbeing)**

- (i) The UK has the second lowest life satisfaction in the OECD behind Turkey; and the fourth lowest overall (only Brunei and Macao lower in addition to Turkey) (Appendix 2.1)
- (ii) The UK suffered the largest decline in life satisfaction of any country since 2015 overall; with the biggest reduction of any country in the proportion who were satisfied and the biggest increase in the proportion who were dissatisfied (Appendix 2.2);
- (iii) UK students have the second lowest sense of meaning in life in the OECD, with only Japan lower (Appendix 2.3)

It should be noted that the UK appears to have similar differences in life satisfaction levels to other countries as between girls and boys; advantaged and disadvantaged; and immigrant and non-immigrant students. The latter is noteworthy (and impressive) given that the percentage of students from immigrant backgrounds increased from 11% to 20% between 2009 and 2018 (Appendix 2.4).

#### **5. Student feelings (Affective subjective wellbeing)**

- (i) In six (three positive, three negative) of the nine stated feelings (five positive, four negative) UK students were in the bottom quartile of OECD countries: feeling proud, joyful, cheerful, scared, miserable and sad (Appendix 3.1)
- (ii) Our own ranking analysis on PISA data shows that the UK ranked second bottom in the OECD for both positive feelings (only Slovenia lower); and also for negative feelings (only Japan lower) (Appendix 3.2)
- (iii) There are nine stated predictors for these feelings but no real conclusions could be drawn for the UK from this analysis (Appendix 3.3)

## 6. Student self-efficacy and fear of failure

PISA 2018 set out eight factors relating to self-efficacy (5) and fear of failure (3) (Appendix 4). UK students ranked:

- (i) 31<sup>st</sup> out of 36 countries for self-efficacy
- (ii) 34<sup>th</sup> out of 35 countries for the greatest fear of failure.

## 7. PISA correlations

### 7.1 Reading performance

PISA 2018 draws out four factors that may have some correlation with reading performance. Two positive factors have a weak or low positive correlation ( $0.3 < R^2 < 0.5$ ): attendance levels, and growth mindset. The UK has better than average attendance rates; and, encouragingly, the ninth highest Growth mindset in the OECD.

Two other factors had very little correlation with reading ability ( $R^2 < 0.3$ ): life satisfaction (negative), and fear of failure (positive). The UK has low relative life satisfaction levels and high relative fear of failure (see above).

Further background on these four (weak or very weak) linkages is set out in Appendix 5.1.

### 7.2 Life Satisfaction scores

- (i) PISA seeks to link student life satisfaction with seven school climate factors (of which six have comparative data). Given the UK's mixed - three good, three less good - OECD rankings in each of these factors, it seems that UK students' (low) life satisfaction levels are not likely to be linked solely to school climate (Appendix 5.2.1)
- (ii) PISA also seeks to link student life satisfaction with fear of failure. This correlation is more compelling. Students' high fear of failure appears to be reflected in low life satisfaction scores, with the UK link particularly striking (Appendix 5.2.2)

It should be noted that PISA 2015 set out the six factors (four positive, two negative) affecting student life satisfaction. On the positive side, positive social context; more physical activity; good teacher support; and good parental support; and on the negative side anxiety with schoolwork; and high internet usage. (Appendix 5.2.3)

### 7.3 Student feelings

Students in nine countries (excluding the UK) completed analyses as to the factors affecting their feelings. The four most significant factors were:

- The way they look
- Their life at school
- How they use their time
- Their relationship with parents or guardians

More work will need to be done in the UK to understand the relevance of these and other factors in a UK context (Appendix 5.3)

## **8. International wellbeing comparisons**

PISA provides data on life satisfaction, meaning of life, positive feelings, negative feelings, self-efficacy and fear of failure. Each of these six measures has been ranked and a ranking of rankings undertaken in Appendix 6. Only Japan ranked worse across all six measures. The UK was ranked second bottom in five of the six measures and sixth bottom in the other one (self-efficacy).

Any such simplistic aggregation analysis should be treated with caution. Nevertheless, at the very least we need to seek to understand why the UK scores so poorly across the board, with lessons that can be learnt from both better performing countries and also others that are ranked similarly poorly, notably Japan.

## **9. Academic attainment and life satisfaction**

Four countries stand out as being able to combine, at different levels, both academic attainment and student wellbeing – Estonia, Finland, Switzerland and The Netherlands:

- (i) These four countries achieve very good rankings in life satisfaction, whilst maintaining upper level attainment performance (Appendix 7.1)
- (ii) Of the top 15 countries ranked by student attainment, only the same four were also in the top 15 for life satisfaction (Appendix 7.2)
- (iii) The top eighteen countries ranked by life satisfaction were all ranked worse than 25<sup>th</sup> in attainment apart from these same four countries (Appendix 7.3)

Nevertheless, there is only a weak, negative correlation between attainment and life satisfaction suggesting on the basis of this analysis that the two measures are complementary, not causally linked (Appendix 7.4)

## **10. Other socioeconomic factors**

According to two international comparisons of both socioeconomic data (HBSC), and obesity (World Obesity Federation):

- (i) The top three countries in the HBSC ranking of rankings are Switzerland, Finland and The Netherlands – three of the four countries that manage to achieve in both student attainment and life satisfaction. The fourth of those countries, Estonia, is ninth. The UK was 18<sup>th</sup> out of 24 (Appendix 8.1);
- (ii) The four countries which achieve in both student attainment and life satisfaction have comparably good obesity records, with all four (Estonia, Switzerland, Netherlands and Finland) being in the top 10, and the top three (Estonia, Switzerland and Netherlands) being in the top six. The UK came 17<sup>th</sup> out of 31 (Appendix 8.2)

There is some evidence that would need to be assessed more carefully that these four countries (albeit somewhat smaller and possibly simpler than the UK) consider at attainment, wellbeing and socio-economic factors holistically. Further analysis of how these countries operate will be important to understand better.

## **11. Conclusion**

We made a strong case for measuring the wellbeing of children across the UK in August 2018, prior to the publication of the PISA 2018 results. The case to do so is now, in our opinion, unanswerable:

- The UK has the second worst ranking across six life satisfaction (cognitive wellbeing) and related measures, ahead of only Japan;
- The UK's life satisfaction levels have declined faster than any other country in the last three years
- UK children suffer from high fear of failure, low self-efficacy, and low meaning in life

The reasons behind the UK's low international standing in the above areas will be complex and varied. However, there will be lessons to be learnt from other countries; and from asking the children and their teachers.

It is surely the obligation of any country to ensure the wellbeing of its citizens, and most particularly its children. It is delinquent of us to delay still further. We must now focus on getting the evidence we need to ensure that we can improve our children's lives, and thereby our Nation's future.

**The Gregson Family Foundation**  
**March 2020**

## Appendix 1.1

### FFT Datalab summary of the PISA 2018 UK Academic attainment results

#### Nine key findings from PISA 2018

By John Jerrim | 3rd December 2019 | International studies

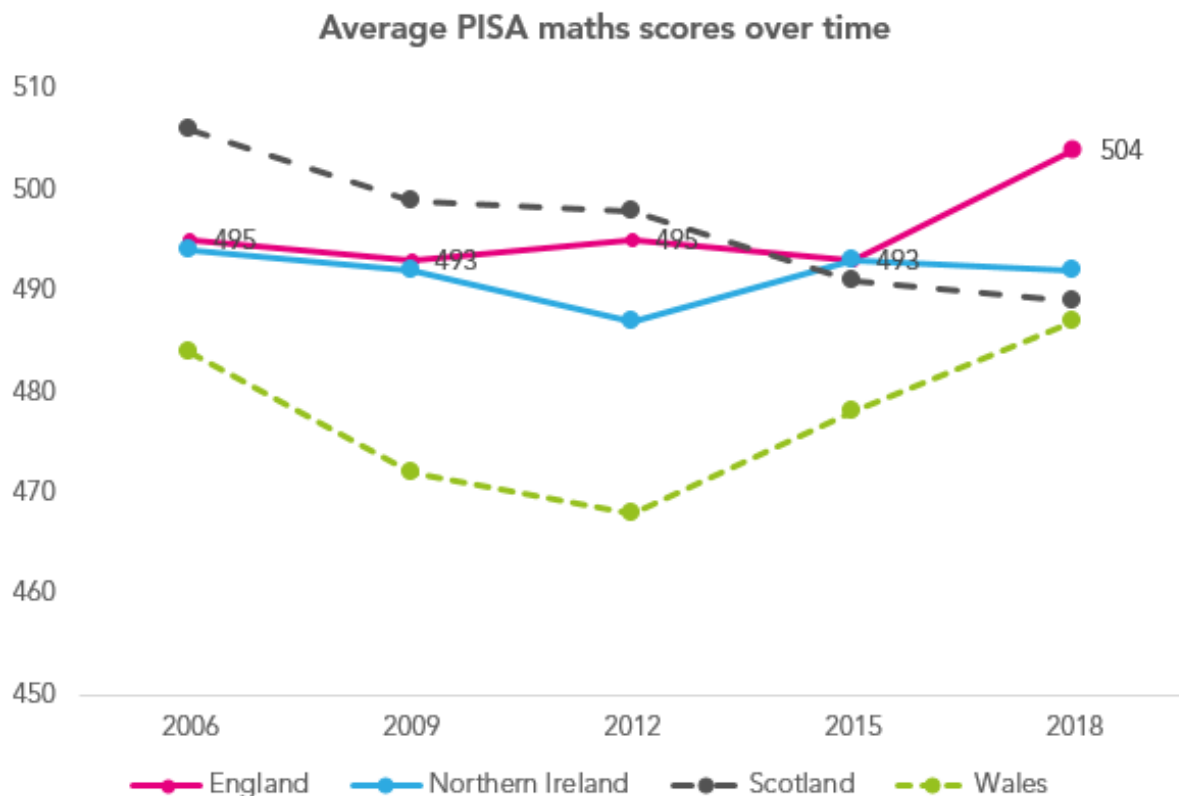
Results from the PISA 2018 study have just been released. This is the triennial update of how the UK has performed on these closely scrutinised (and highly politicised) tests.

#### 1. The uptick for maths in England will no doubt get all the headlines...but let's not get carried away!

No doubt this is what will take all the headlines. In PISA 2018, average maths scores for England rose by around 10 points from previous cycles, or around four months of schooling on the OECD's scale. And, as the chart below shows, this did not happen across the rest of the UK.

But hold your horses before getting too excited! One good set of results is NOT a trend! And a swing of this size in PISA can simply be a result of changes in methodology.

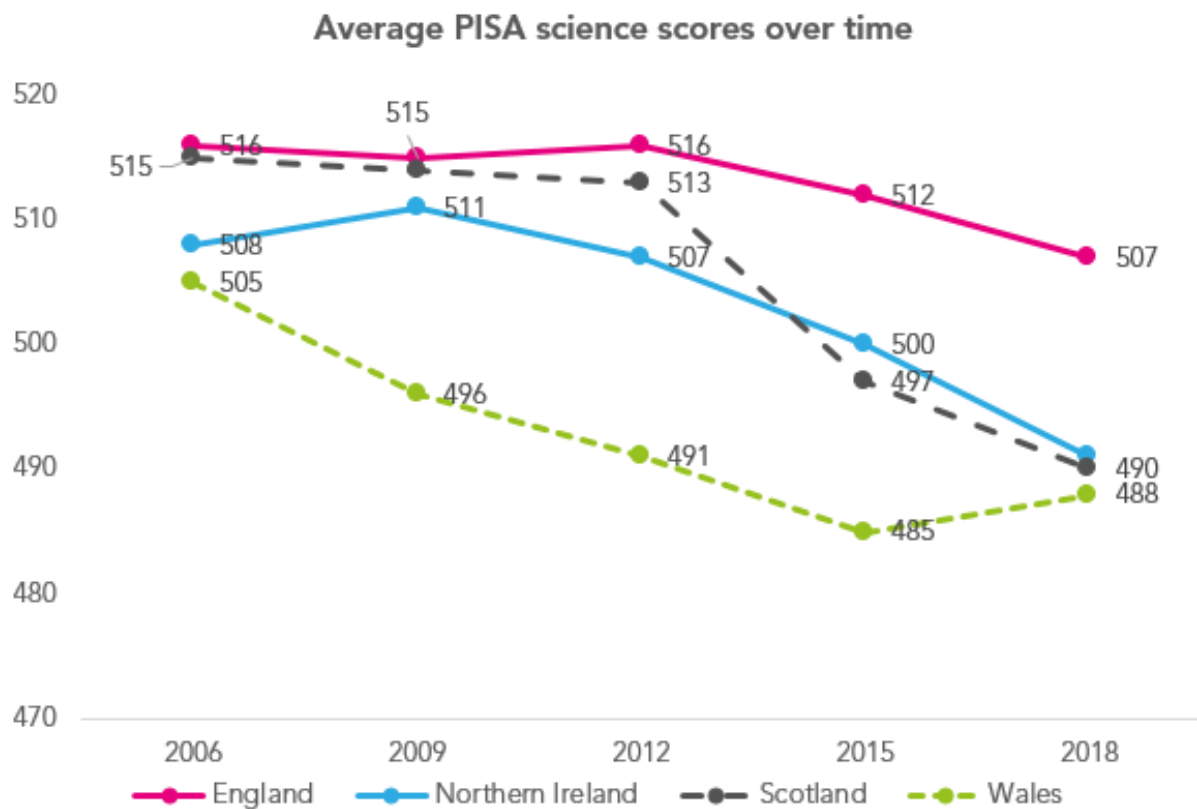
We need to wait until the next PISA results in 2021 before we can start to say anything concrete.



## 2. The real story is the UK's long-run decline in science (particularly outside England)...

Actually, to my mind, the more robust and interesting finding is the UK's long-running decline in PISA science scores.

Although there has been a small fall in England over time, the bigger worry is science performance in Scotland, Wales and Northern Ireland. In these three countries, there has been a sustained fall over the last 12 years.

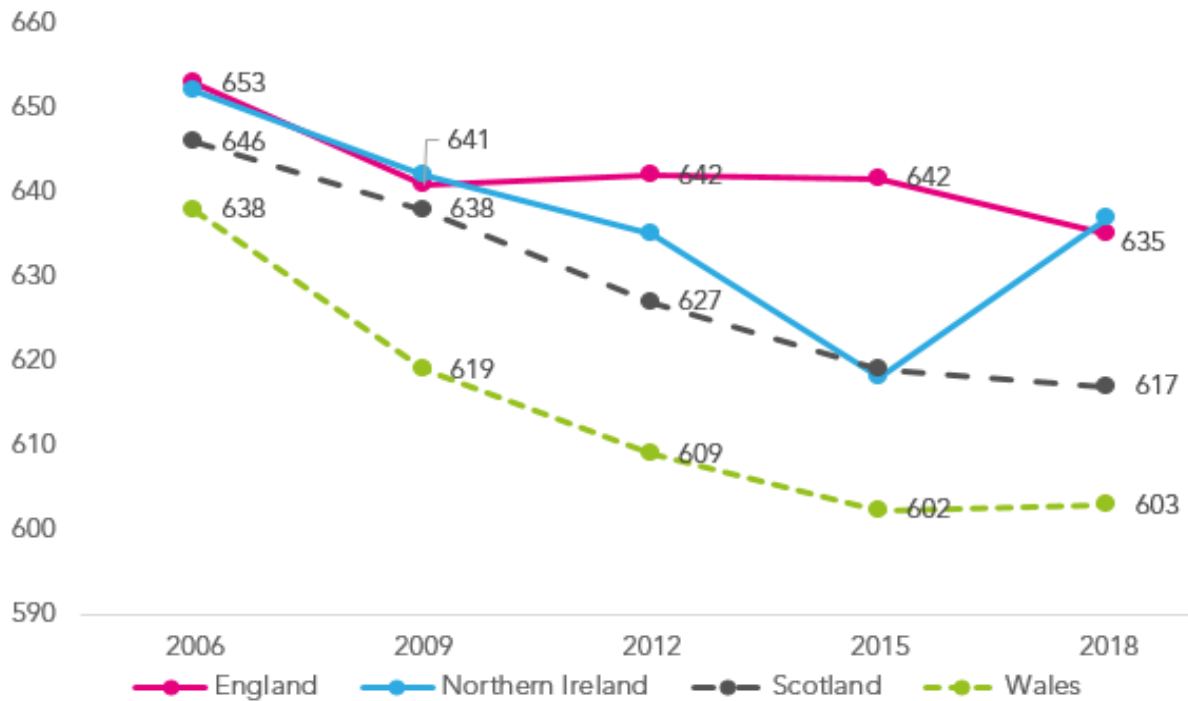


## 3. ...and particularly the decline in the science scores of the highest achievers

And, as the chart following shows, it is the science scores of the highest achieving pupils in the UK that seem to be in the greatest decline.



The 90th percentile of PISA science achievement across the UK

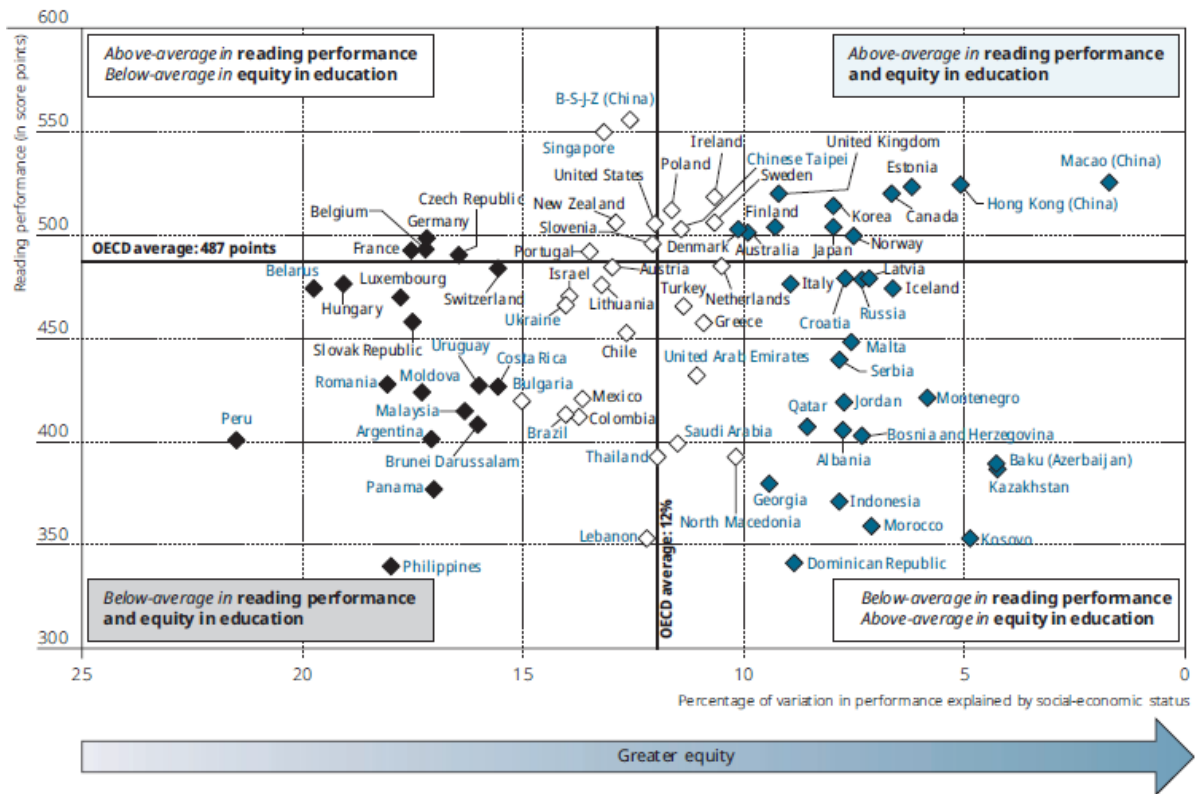


Again, there has been a fall in England, where the score needed to get into the top 10% of PISA science performers has dropped from 653 in 2006 to 635 in 2018. But this is dwarfed by some other parts of the UK, like Scotland and Wales – where there has been a very clear drop in the PISA scores of the top 10% since 2006.

**4. For reading, the OECD are describing the UK as “above average”-performing and “equitable”...**

Going against conventional wisdom, the UK is now “above average” in reading, and with a comparatively narrow socio-economic gap – see the chart below. The UK appears in the top-right hand quadrant which indicates that UK reading scores are above the OECD average, while we also have above average levels of equity.

The relationship between performance and equity in PISA reading scores



Note: Socio-economic status is measured by the PISA index of economic, social and cultural status.

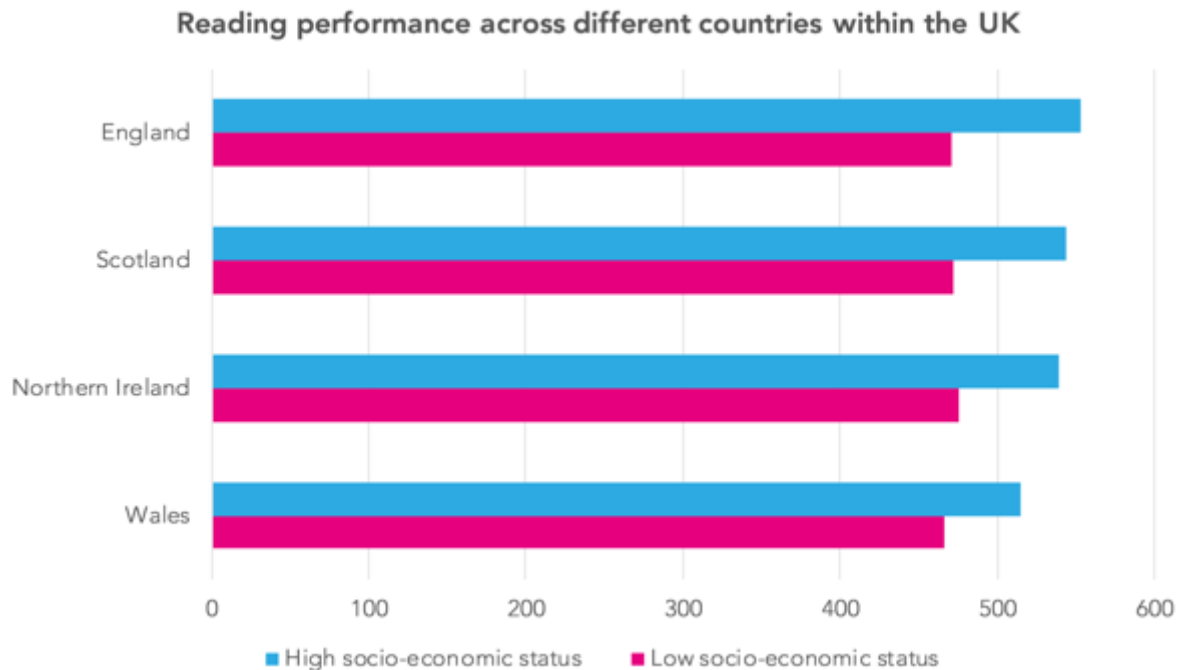
Source: OECD PISA 2018 report. Volume II, p338.

The OECD also reports that the UK has one of the highest levels of “resilience” (meaning poor kids who perform highly in PISA reading) anywhere in the world: 14%, compared to an OECD average of 11%.

5. ....but “equity” in reading scores looks very different across the four parts of the UK

Equity in educational achievement does however look rather different across the UK. The chart below illustrates how the poorest 25% of children in England, Wales, Northern Ireland and Scotland actually get pretty similar PISA reading scores (around 470 points).

Where the four countries of the UK differ is in the achievement of pupils of high socio-economic status. For young people from affluent backgrounds, England stands out from Scotland, Northern Ireland and (particularly) Wales.



In addition, FFT Datalab covered four comments on life satisfaction, fear of failure and growth mindset dealt with elsewhere in this report.

## Appendix 1.2

### Aggregate maths, reading and science scores for both 2015 and 2018

A summary of PISA 2018 academic attainment data for both 2015 and 2018 is shown in the table below for the 35 countries that have both attainment and life satisfaction scores. From this it can be seen that:

- (i) The UK's ranking rose from 23<sup>rd</sup> in 2015 to 13<sup>th</sup> in 2018.
- (ii) This reflected the 12<sup>th</sup> best improvement in PISA scores in the 3 year period
- (iii) The UK's score increased by 0.8%. This compares with the top two ranked countries, China and Turkey, which improved their scores by 12.5% and 9% respectively.
- (iv) Only seventeen countries increased their PISA scores between 2015 and 2018. The UK's increase in ranking therefore was related at least in part to other countries' scores declining.

Aggregate maths, reading and science scores									
	MATHS	READING	SCIENCE	Total	Total	Rank	Rank	% Change	Rank
	2018	2018	2018	2018	2015	2018	2015	2015-18	Change 15-18
<b>For those 35 countries with both 2015-2018 attainment and life satisfaction scores</b>									
Argentina	379	402	404	1185	1406	48	40	-15.7	46
Austria	499	484	490	1473	1477	28	27	-0.3	18
Chile	417	452	444	1313	1329	46	44	-1.2	34
China (Beijing, Shanghai, Jiangsu, Zhejiang)	591	555	590	1736	1543	1	10	12.5	1
Croatia	464	479	472	1415	1426	37	36	-0.8	27
Czechia	499	490	497	1486	1472	24	30	1.0	10
Estonia	523	523	530	1576	1573	5	5	0.2	13
Finland	507	520	522	1549	1568	10	8	-1.2	35
France	495	493	493	1481	1487	26	25	-0.4	22
Germany	500	498	503	1501	1524	19	13	-1.5	40
Greece	451	457	452	1360	1376	43	43	-1.2	33
Hong Kong/China	551	524	517	1592	1598	4	2	-0.4	21
Hungary	481	476	481	1438	1424	33	38	1.0	8
Iceland	495	474	475	1444	1443	31	35	0.1	17
Ireland	500	518	496	1514	1528	12	11	-0.9	28
Italy	487	476	468	1431	1456	34	33	-1.7	44
Japan	527	504	529	1560	1586	6	3	-1.6	42
Latvia	496	479	487	1462	1460	29	32	0.1	14
Lithuania	481	476	482	1439	1425	32	37	1.0	9
Luxembourg	483	470	477	1430	1450	35	34	-1.4	38
Macao	558	525	544	1627	1582	3	4	2.8	3
Malta	472	448	457	1377	1391	42	41	-1.0	30
Netherlands	519	485	503	1507	1524	16	13	-1.1	32
Poland	516	512	511	1539	1511	11	19	1.9	4
Portugal	492	492	492	1476	1491	27	24	-1.0	29
Russia	488	479	478	1445	1476	30	28	-2.1	45
Slovakia	486	458	464	1408	1389	38	42	1.4	6
Slovenia	509	495	507	1511	1528	13	11	-1.1	31
South Korea (09_06 Korea)	526	514	519	1559	1557	7	9	0.1	15
Spain	481	m	483	964	1475	49	29	-34.6	47
Sweden	502	506	499	1507	1487	16	25	1.3	7
Switzerland	515	484	495	1494	1519	22	15	-1.6	43
Turkey	454	466	468	1388	1273	40	46	9.0	2
United Kingdom	502	504	505	1511	1499	13	23	0.8	12
United States	478	505	502	1485	1463	25	31	1.5	5

Spain's data met PISA 2018 Technical Standards. However, some data show implausible response

## Appendix 2

### PISA 2018 life satisfaction and meaning in life tables

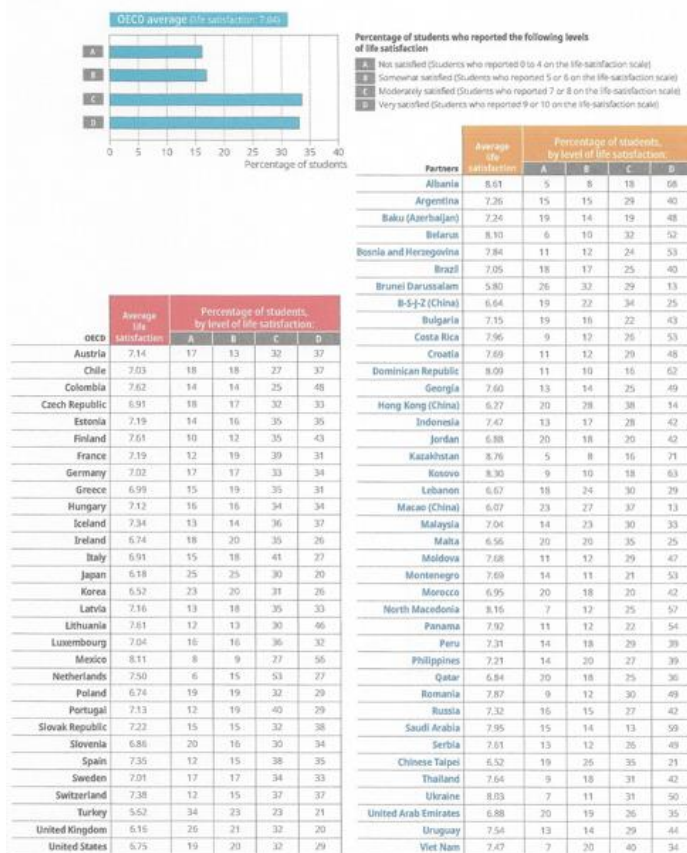
Asking students to report on their well-being is one way to measure the positive development of young people. PISA 2018 defines subjective well-being as a multidimensional construct that reflects the extent to which individuals believe (cognitive element) and feel (affective element) that their lives are desirable, fulfilling and rewarding. This Appendix 2 presents the cognitive element of subjective well-being, which refers to “life evaluation” – what a person thinks about his or her life satisfaction in global terms (life as a whole) – and “eudaemonia” – a sense of meaning and purpose in life.

The affective element of 15-year-olds’ subjective well-being is examined in Appendix 3.

**Appendix 2.1 Life satisfaction.** The UK has the second lowest life satisfaction in the OECD behind Turkey; and the fourth lowest overall (only Brunei and Macao lower in addition to Turkey) (Figure III.11.1). In addition, UK students have the sixth worst exposure to schools where less than 10% of the students report not being satisfied with life (Figure III.11.4):

Figure III.11.1 Students' life satisfaction

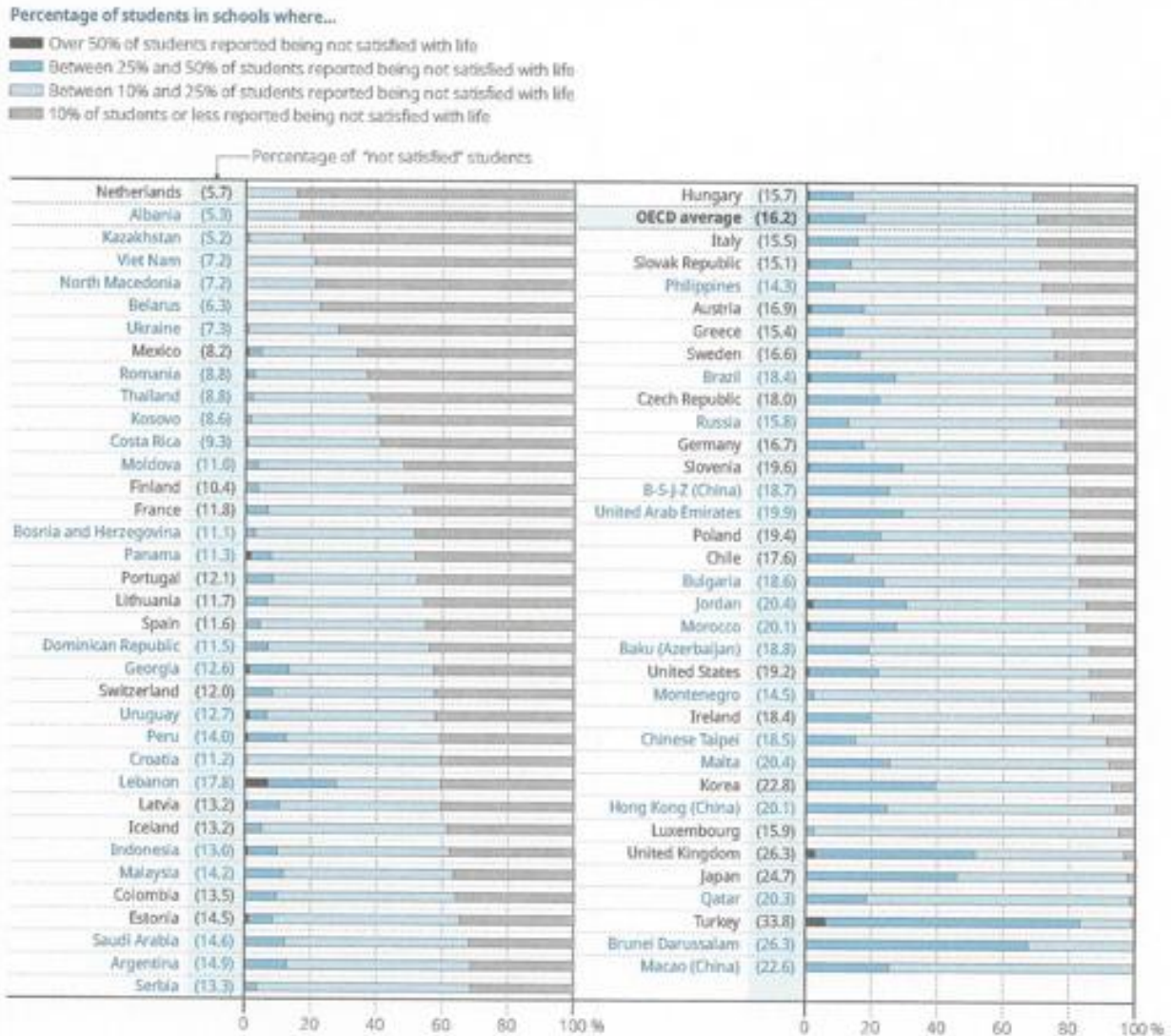
Based on students' self-reports



Source: OECD, PISA 2018 Database, Table III.B1.11.1.  
StatLink <http://dx.doi.org/10.1787/888934030230>

Taken from Figure III.11.1  
 Students' life satisfaction, ranked by country  
 Based on students' self-reports

Figure III.11.4 Prevalence of students who are not satisfied with life



Note: A student is classified as "not satisfied" with life if he or she reported between 0 and 4 on the life-satisfaction scale. The life-satisfaction scale ranges from 0 to 10.

Countries and economies are ranked in descending order of the percentage of students in schools where 10% of students or less reported being not satisfied with life.

Source: OECD, PISA 2018 Database, Table III.91.11.3.

StatLink <http://dx.doi.org/10.1787/888934030287>

	Average life satisfaction	
	Mean	Rank
<b>OECD (30 countries, 7 m's)</b>		
OECD average	7.04	
Mexico	8.11	1
Colombia	7.62	2
Finland	7.61	3
Lithuania	7.61	4
Netherlands	7.50	5
Switzerland	7.38	6
Spain	7.35	7
Iceland	7.34	8
Slovak Republic	7.22	9
Estonia	7.19	10
France	7.19	11
Latvia	7.16	12
Austria	7.14	13
Portugal	7.13	14
Hungary	7.12	15
Luxembourg	7.04	16
Chile	7.03	17
Germany	7.02	18
Sweden	7.01	19
Greece	6.99	20
Czech Republic	6.91	21
Italy	6.91	22
Slovenia	6.86	23
United States	6.75	24
Poland	6.74	25
Ireland	6.74	26
Korea	6.52	27
Japan	6.18	28
United Kingdom	6.16	29
Turkey	5.62	30
<b>Australia</b>	m	m
Belgium (Flemish)	m	m
Canada	m	m
Denmark	m	m
Israel	m	m
New Zealand	m	m
Norway	m	m



**Appendix 2.2 Change in life satisfaction.** Almost all countries have suffered a decline in life satisfaction since 2015. However the UK suffered the largest decline overall; and with the biggest reduction of any country in the number who were satisfied and the biggest increase in the number who were dissatisfied (Figure III.11.3):

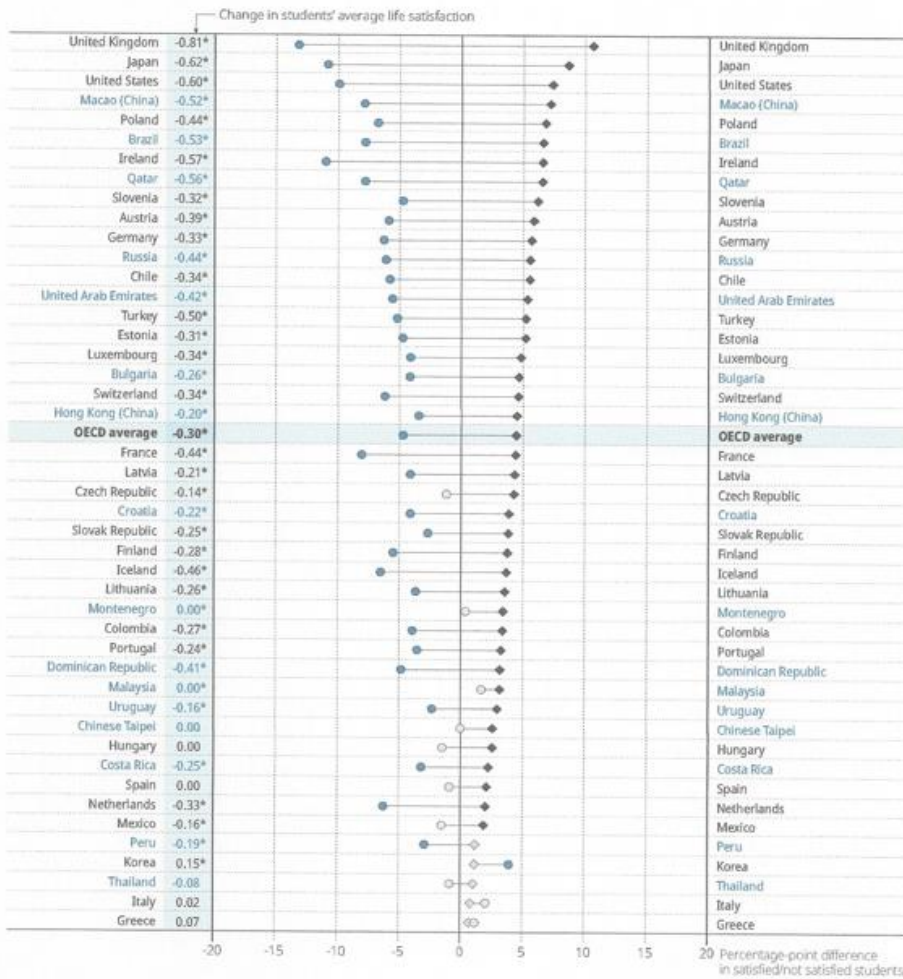
Figure III.11.3 Change between 2015 and 2018 in students' satisfaction with life

Based on students' self-reports

Change in the percentage of students who are:

○ Satisfied (Students who reported 7 to 10 on the life-satisfaction scale)

◆ Not satisfied (Students who reported 0 to 4 on the life-satisfaction scale)



**Notes:** Statistically significant changes between 2015 and 2018 in students' satisfaction with life are shown in darker tones. Changes in students' average life satisfaction that are statistically significant are marked with an asterisk next to the country/economy name (see Annex A3). Countries and economies are ranked in descending order of the percentage-point difference between 2015 and 2018 (PISA 2018 - PISA 2015) in the share of students who reported they are "not satisfied" with their lives.

**Source:** OECD, PISA 2018 Database, Table III.B1.11.2.

StatLink <http://dx.doi.org/10.1787/888934030268>



Source: Taken from Figure III.11.1  
 Students' life satisfaction, ranked by country  
 Based on students' self-reports

Life satisfaction for those countries with attainment scores						
	2018	2018 Rank (these countries)	2018 Rank (all countries)	2015	% change 2015-18	
<b>For those 35 countries with both 2015-2018 attainment and life satisfaction scores</b>						
United Kingdom	6.16	33	33	6.98	-11.67	
Japan	6.18	32	32	6.80	-9.10	
United States	6.75	25	25	7.36	-8.20	
Turkey	5.62	35	35	6.12	-8.13	
Ireland	6.74	27	27	7.30	-7.79	
Poland	6.74	26	26	7.18	-6.16	
Iceland	7.34	7	7	7.80	-5.86	
France	7.19	12	12	7.63	-5.80	
Austria	7.14	14	14	7.52	-5.13	
Luxembourg	7.04	17	17	7.38	-4.65	
Chile	7.03	18	18	7.37	-4.57	
Germany	7.02	19	19	7.35	-4.54	
Slovenia	6.86	24	24	7.17	-4.42	
Switzerland	7.38	5	5	7.72	-4.40	
Estonia	7.19	11	11	7.50	-4.19	
Netherlands	7.50	4	4	7.83	-4.16	
Finland	7.61	2	2	7.89	-3.49	
Lithuania	7.61	3	3	7.86	-3.26	
Portugal	7.13	15	15	7.36	-3.20	
Latvia	7.16	13	13	7.37	-2.86	
Czechia	6.91	22	22	7.05	-1.98	
Spain	7.35	6	6	7.42	-0.98	
Hungary	7.12	16	16	7.17	-0.78	
Italy	6.91	23	23	6.89	0.31	
South Korea (09_06 Korea)	6.52	30	30	6.36	2.41	

### Appendix 2.3 Sense of meaning in life.

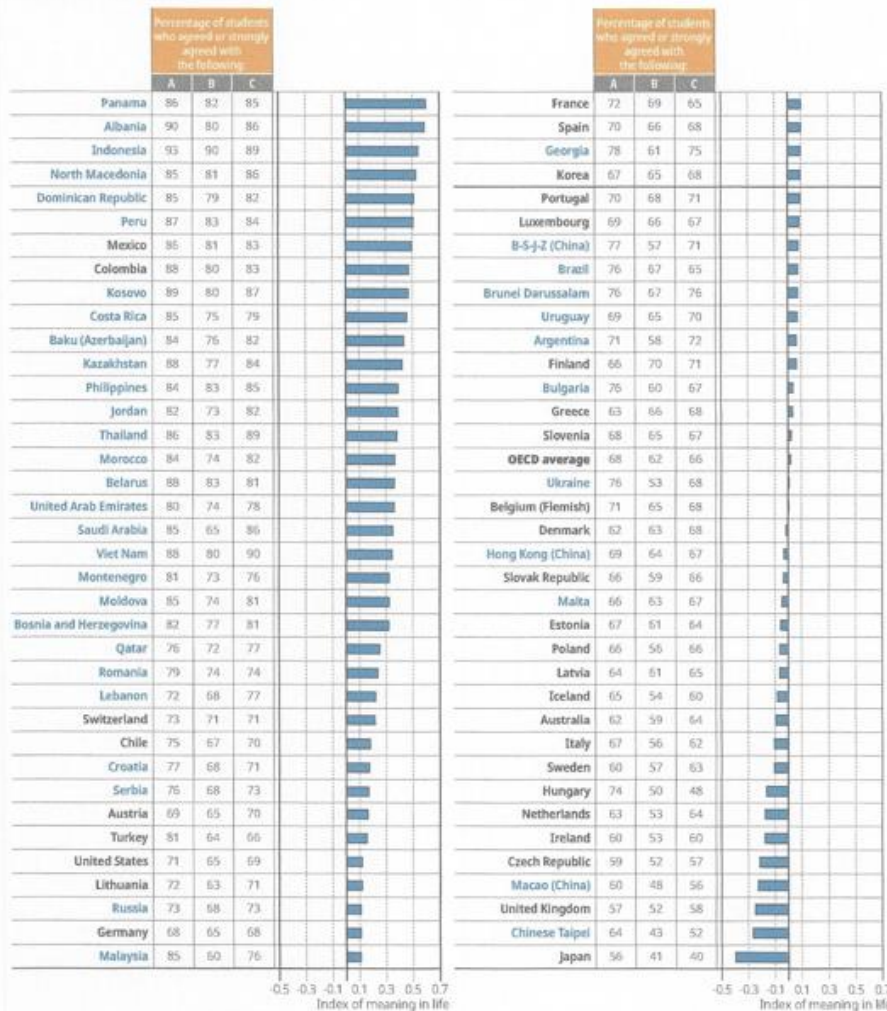
PISA 2018 suggests that finding a coherent meaning in life is considered to be an important protective factor for 15-year-olds, especially because having a sense of purpose in life is necessary for achieving meaningful goals and living a fulfilling life. In addition, a sense of meaning provides the impetus to set goals that steer people in positive directions. PISA 2018 defines meaning in life as the extent to which 15-year-olds comprehend, make sense of, or find significance in their lives.

UK students have the third lowest sense of meaning in life, with only Chinese Taipei and Japan lower.

Figure III.11.9 Students' sense of meaning in life

Based on students' reports

- A. My life has clear meaning or purpose
- B. I have discovered a satisfactory meaning in life
- C. I have a clear sense of what gives meaning to my life



Countries and economies are ranked in descending order of the index of meaning in life.

Source: OECD, PISA 2018 Database, Table III.B1.11.14.

StatLink <http://dx.doi.org/10.1787/888934030382>

Table III.B1.11.14<sup>(1)(4)</sup> **Students' sense of meaning in life**  
Based on students' reports

	Index of meaning in life				Percentage of students who reported the following:								
	Average		Variability		My life has clear meaning or purpose								
	Mean index	S.E.	S.D.	S.E.	Strongly disagree		Disagree		Agree		Strongly agree		
					%	S.E.	%	S.E.	%	S.E.	%	S.E.	
<b>OECD</b>													
Australia	-0.09	(0.01)	1.04	(0.01)	10.2	(0.4)	27.9	(0.4)	44.4	(0.6)	17.5	(0.4)	
Austria	0.16	(0.02)	1.08	(0.01)	9.7	(0.4)	21.1	(0.6)	39.3	(0.7)	29.8	(0.6)	
Belgium (Flemish)	0.00	(0.02)	0.91	(0.01)	5.4	(0.3)	24.0	(0.6)	54.4	(0.8)	16.2	(0.6)	
Canada	m	m	m	m	m	m	m	m	m	m	m	m	
Chile	0.18	(0.02)	1.06	(0.01)	7.1	(0.3)	18.3	(0.6)	46.6	(0.6)	27.9	(0.7)	
Colombia	0.47	(0.01)	0.93	(0.01)	4.0	(0.3)	8.3	(0.5)	51.5	(0.9)	36.2	(0.8)	
Czech Republic	-0.22	(0.01)	0.95	(0.01)	8.8	(0.4)	32.2	(0.8)	43.1	(0.7)	15.9	(0.5)	
Denmark	-0.02	(0.01)	0.96	(0.01)	8.1	(0.4)	29.9	(0.8)	44.5	(0.8)	17.5	(0.7)	
Estonia	-0.06	(0.01)	0.93	(0.01)	6.7	(0.4)	26.6	(0.6)	49.3	(0.7)	17.4	(0.5)	
Finland	0.06	(0.02)	0.94	(0.01)	7.3	(0.4)	26.5	(0.6)	48.5	(0.6)	17.7	(0.6)	
France	0.10	(0.01)	0.98	(0.01)	7.2	(0.4)	21.2	(0.6)	48.3	(0.7)	23.2	(0.7)	
Germany	0.11	(0.02) †	1.03	(0.01) †	8.3	(0.4)	24.1	(0.8)	41.1	(0.9)	26.4	(0.8)	
Greece	0.03	(0.01)	0.93	(0.01)	7.0	(0.4)	30.0	(0.7)	45.1	(0.7)	17.9	(0.6)	
Hungary	-0.17	(0.02)	0.97	(0.01)	4.8	(0.3)	21.2	(0.6)	48.8	(0.7)	25.2	(0.6)	
Iceland	-0.08	(0.02)	1.11	(0.01)	10.3	(0.5)	25.0	(0.7)	41.6	(0.8)	23.0	(0.7)	
Ireland	-0.18	(0.01)	0.94	(0.01)	8.3	(0.4)	31.7	(0.6)	44.3	(0.7)	15.7	(0.6)	
Israel	m	m	m	m	m	m	m	m	m	m	m	m	
Italy	-0.11	(0.01)	0.94	(0.01)	8.0	(0.3)	25.3	(0.6)	47.1	(0.7)	19.5	(0.6)	
Japan	-0.40	(0.02)	0.98	(0.01)	9.7	(0.5)	34.5	(0.7)	39.7	(0.7)	16.1	(0.6)	
Korea	0.09	(0.01)	0.97	(0.01)	4.5	(0.3)	28.6	(0.7)	46.1	(0.6)	20.7	(0.6)	
Latvia	-0.07	(0.01)	0.94	(0.01)	7.5	(0.4)	28.5	(0.7)	47.9	(0.8)	16.0	(0.6)	
Lithuania	0.12	(0.01)	1.09	(0.01)	8.6	(0.4)	19.7	(0.5)	44.9	(0.5)	26.8	(0.5)	
Luxembourg	0.09	(0.02)	1.03	(0.01)	8.7	(0.4)	22.7	(0.6)	44.1	(0.6)	24.5	(0.5)	
Mexico	0.49	(0.02)	0.95	(0.01)	4.0	(0.4)	10.3	(0.5)	50.4	(0.7)	35.3	(0.7)	
Netherlands*	-0.18	(0.02)	0.86	(0.01)	6.5	(0.4)	30.0	(0.9)	50.6	(1.0)	12.8	(0.6)	
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m	
Norway	m	m	m	m	m	m	m	m	m	m	m	m	
Poland	-0.07	(0.02)	0.97	(0.01)	7.7	(0.3)	26.1	(0.6)	48.6	(0.7)	17.6	(0.6)	
Portugal*	0.09	(0.02)	0.93	(0.01)	5.7	(0.4)	24.4	(0.7)	50.7	(0.8)	19.2	(0.6)	
Slovak Republic	-0.04	(0.01)	0.94	(0.01)	7.7	(0.4)	26.0	(0.7)	47.7	(0.7)	18.6	(0.6)	
Slovenia	0.03	(0.02)	0.98	(0.01)	7.4	(0.4)	24.1	(0.7)	49.5	(0.8)	19.0	(0.6)	
Spain	0.10	(0.01)	0.97	(0.01)	6.1	(0.2)	23.6	(0.4)	48.0	(0.5)	22.4	(0.4)	
Sweden	-0.11	(0.02)	1.03	(0.01)	9.8	(0.4)	30.4	(0.8)	42.1	(0.8)	17.7	(0.6)	
Switzerland	0.22	(0.02)	1.01	(0.01)	7.6	(0.4)	19.7	(0.7)	44.5	(0.9)	28.2	(0.7)	
Turkey	0.15	(0.01)	1.01	(0.01)	6.9	(0.3)	12.3	(0.4)	49.2	(0.7)	31.6	(0.6)	
United Kingdom	-0.25	(0.02)	1.01	(0.01)	12.0	(0.5)	30.8	(0.8)	42.8	(0.7)	14.3	(0.5)	
United States*	0.12	(0.02)	1.04	(0.01)	7.0	(0.4)	21.8	(0.8)	45.9	(0.9)	25.4	(0.7)	
<b>OECD average</b>	0.02	(0.00)	0.96	(0.00)	7.5	(0.1)	24.5	(0.1)	46.4	(0.1)	21.6	(0.1)	

\*Data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

**Note:** Information regarding the proportion of the sample covered is shown next to the standard error. No symbol means at least 75% of the population was covered; one dagger (†) means at least 50% but less than 75%; and one double-dagger (‡) means less than 50% was covered. For comparisons across cycles, the coverage information corresponds to the cycle with the lowest sample coverage.

StatLink  <http://dx.doi.org/10.1787/888934031047>

Table III.B1.11.14  
 Students' sense of meaning in life, ranked by country  
 Based on students' reports

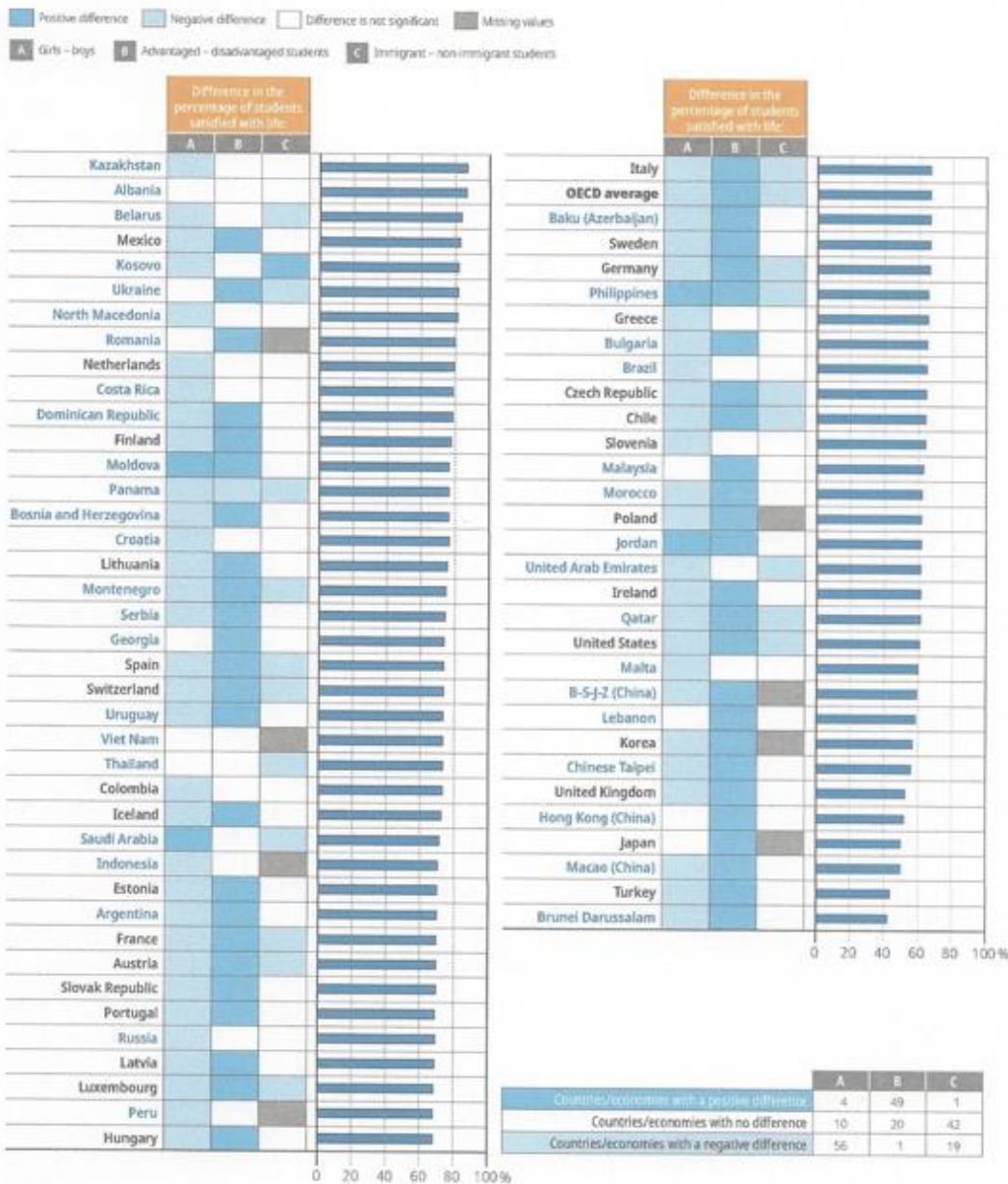
	Index of meaning in life				Rank
	Average		Variability		
	Mean index	S.E.	S.D.	S.E.	
Mexico	0.49	(0.02)	0.95	(0.01)	1
Colombia	0.47	(0.01)	0.93	(0.01)	2
Switzerland	0.22	(0.02)	1.01	(0.01)	3
Chile	0.18	(0.02)	1.06	(0.01)	4
Austria	0.16	(0.02)	1.08	(0.01)	5
Turkey	0.15	(0.01)	1.01	(0.01)	6
United States*	0.12	(0.02)	1.04	(0.01)	7
Lithuania	0.12	(0.01)	1.09	(0.01)	8
Germany	0.11	(0.02)	1.03	(0.01)	9
France	0.10	(0.01)	0.98	(0.01)	10
Spain	0.10	(0.01)	0.97	(0.01)	11
Korea	0.09	(0.01)	0.97	(0.01)	12
Portugal*	0.09	(0.02)	0.93	(0.01)	13
Luxembourg	0.09	(0.02)	1.03	(0.01)	14
Finland	0.06	(0.02)	0.94	(0.01)	15
Greece	0.03	(0.01)	0.93	(0.01)	16
Slovenia	0.03	(0.02)	0.98	(0.01)	17
Belgium (Flemish)	0.00	(0.02)	0.91	(0.01)	18
Denmark	-0.02	(0.01)	0.96	(0.01)	19
Slovak Republic	-0.04	(0.01)	0.94	(0.01)	20
Estonia	-0.06	(0.01)	0.93	(0.01)	21
Poland	-0.07	(0.02)	0.97	(0.01)	22
Latvia	-0.07	(0.01)	0.94	(0.01)	23
Iceland	-0.08	(0.02)	1.11	(0.01)	24
Australia	-0.09	(0.01)	1.04	(0.01)	25
Italy	-0.11	(0.01)	0.94	(0.01)	26
Sweden	-0.11	(0.02)	1.03	(0.01)	27
Hungary	-0.17	(0.02)	0.97	(0.01)	28
Netherlands*	-0.18	(0.02)	0.86	(0.01)	29
Ireland	-0.18	(0.01)	0.94	(0.01)	30
Czech Republic	-0.22	(0.01)	0.95	(0.01)	31
United Kingdom	-0.25	(0.02)	1.01	(0.01)	32
Japan	-0.40	(0.02)	0.98	(0.01)	33
Canada	m	m	m	m	m
Israel	m	m	m	m	m
New Zealand	m	m	m	m	m
Norway	m	m	m	m	m
<b>OECD (37 countries)</b>					

**Appendix 2.4 Life satisfaction by student characteristics.**

The UK appears to have similar differences to other countries in life satisfaction levels as between girls and boys; advantaged and disadvantaged; and immigrant and non-immigrant students. The latter is noteworthy given that the percentage of students from immigrant backgrounds increased from 11% to 20% between 2009 and 2018 (Figure III.11.2):

Figure III.11.2 Satisfied with life, by student characteristics

Based on students' reports



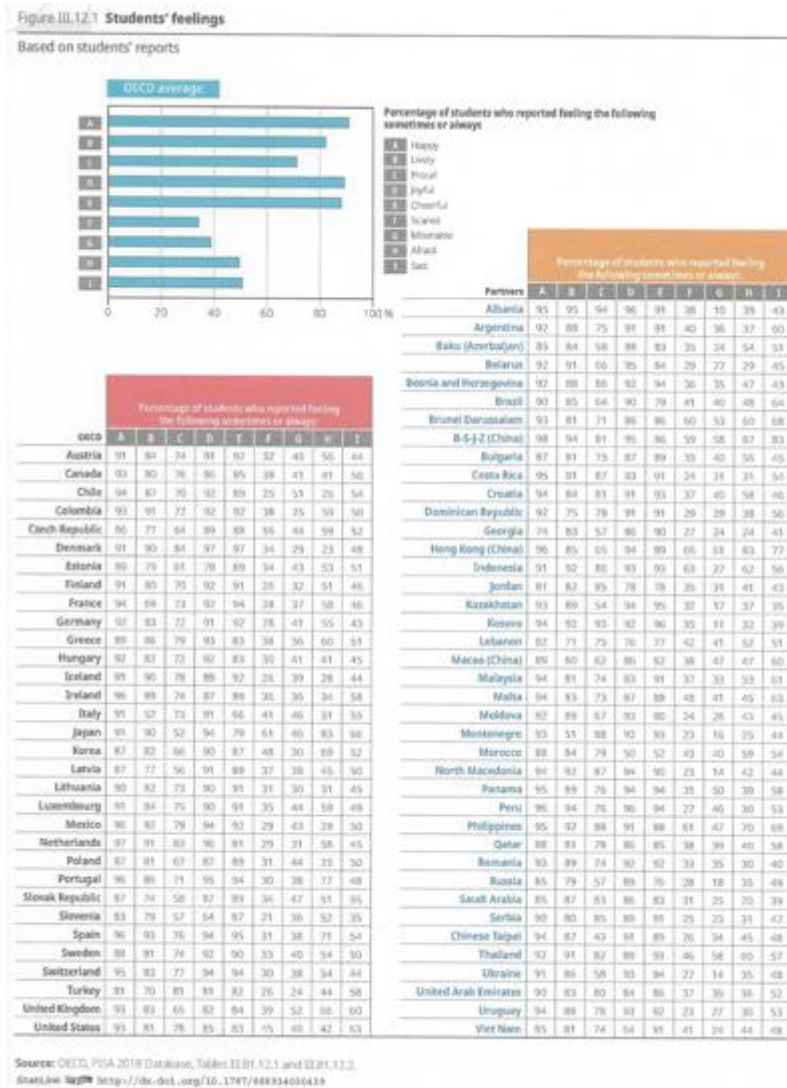
Note: A student is classified as "satisfied" with life if he or she reported between 7 and 10 on the life-satisfaction scale. The life-satisfaction scale ranges from 0 to 10. Countries and economies are ranked in descending order of the percentage of students who are classified as "satisfied" with life.  
 Source: OECD, PISA 2018 Database, Tables III.B1.11.1 and III.B1.11.4.  
 StatLink <http://dx.doi.org/10.1787/888934030230>



### Appendix 3 Student feelings

Student feelings are considered to be the affective element of subjective wellbeing (see Appendix 2 for explanation).

#### 3.1 PISA ranks countries according to five positive, and four negative, feelings (Figure III.12.1).



In six of the nine categories, the UK was in the OECD bottom quartile:

- 7<sup>th</sup> lowest for pride
- 4<sup>th</sup> lowest for being joyful
- 8<sup>th</sup> lowest for being cheerful
- 6<sup>th</sup> lowest for being scared
- 5<sup>th</sup> lowest for being miserable
- 3<sup>rd</sup> lowest for being sad

## Appendix 3.2 Student Positive Feelings

## Appendix 3.2.1 Positive Feelings Table from PISA Report, and then ranked


Table III.B1.12.1 [1/6] **Students' positive feelings**

Based on students' reports

	Index of positive feelings <sup>1</sup>			
	Average		Variability	
	Mean index	S.E.	S.D.	S.E.
<b>OECD</b>				
Australia	m	m	m	m
Austria	0.11	(0.02)	1.00	(0.01)
Belgium	m	m	m	m
Canada	-0.06	(0.01)	1.02	(0.00)
Chile	0.17	(0.02)	0.98	(0.01)
Colombia	0.25	(0.01)	0.98	(0.01)
Czech Republic	-0.13	(0.02)	1.00	(0.01)
Denmark	0.24	(0.01)	0.88	(0.01)
Estonia	-0.18	(0.02)	1.02	(0.01)
Finland	-0.12	(0.01)	0.93	(0.01)
France	0.27	(0.01)	0.95	(0.01)
Germany	0.07	(0.02) †	0.96	(0.01) †
Greece	-0.05	(0.01)	0.93	(0.01)
Hungary	0.19	(0.02)	1.03	(0.01)
Iceland	-0.09	(0.02)	1.00	(0.01)
Ireland	-0.09	(0.01)	0.91	(0.01)
Israel	m	m	m	m
Italy	m	m	m	m
Japan	-0.13	(0.02)	0.96	(0.01)
Korea	0.03	(0.01)	1.05	(0.01)
Latvia	0.03	(0.02)	1.00	(0.01)
Lithuania	0.08	(0.01)	1.01	(0.01)
Luxembourg	0.07	(0.01)	1.01	(0.01)
Mexico	0.36	(0.01) †	0.92	(0.01) †
Netherlands*	0.08	(0.02)	0.87	(0.01)
New Zealand	m	m	m	m
Norway	m	m	m	m
Poland	-0.08	(0.02)	1.04	(0.01)
Portugal*	0.22	(0.02)	0.92	(0.01)
Slovak Republic	-0.02	(0.02)	1.05	(0.01)
Slovenia	-0.61	(0.01)	0.90	(0.01)
Spain	0.30	(0.01)	0.95	(0.01)
Sweden	-0.05	(0.02)	0.98	(0.01)
Switzerland	0.22	(0.02)	0.93	(0.01)
Turkey	-0.26	(0.02)	1.12	(0.01)
United Kingdom	-0.29	(0.01)	0.97	(0.01)
United States*	-0.13	(0.02)	1.01	(0.01)
<b>OECD average</b>	0.01	(0.00)	0.98	(0.00)

\*Data did not meet the PISA technical standards but were accepted as target 1. The index of positive feelings is based on three items: "happy", "joyful" and

**Note:** Information regarding the proportion of the sample covered is shown. One dagger (†) means at least 50% but less than 75%; and one double-dagger (‡) corresponds to the cycle with the lowest sample coverage.

StatLink  <http://dx.doi.org/10.1787/888934031066>

Taken from Table III.B1.12.1

Students' positive feelings, ranked by country, most positive to least positive

Based on students' reports

OECD (37 countries)

	Index of positive feelings <sup>1</sup>				Rank
	Average		Variability		
	Mean index	S.E.	S.D.	S.E.	
Mexico	0.36	(0.01) †	0.92	(0.01) †	1
Spain	0.30	(0.01)	0.95	(0.01)	2
France	0.27	(0.01)	0.95	(0.01)	3
Colombia	0.25	(0.01)	0.98	(0.01)	4
Denmark	0.24	(0.01)	0.88	(0.01)	5
Portugal*	0.22	(0.02)	0.92	(0.01)	6
Switzerland	0.22	(0.02)	0.93	(0.01)	7
Hungary	0.19	(0.02)	1.03	(0.01)	8
Chile	0.17	(0.02)	0.98	(0.01)	9
Austria	0.11	(0.02)	1.00	(0.01)	10
Netherlands*	0.08	(0.02)	0.87	(0.01)	11
Lithuania	0.08	(0.01)	1.01	(0.01)	12
Germany	0.07	(0.02) †	0.96	(0.01) †	13
Luxembourg	0.07	(0.01)	1.01	(0.01)	14
Latvia	0.03	(0.02)	1.00	(0.01)	15
Korea	0.03	(0.01)	1.05	(0.01)	16
Slovak Republic	-0.02	(0.02)	1.05	(0.01)	17
Greece	-0.05	(0.01)	0.93	(0.01)	18
Sweden	-0.05	(0.02)	0.98	(0.01)	19
Canada	-0.06	(0.01)	1.02	(0.00)	20
Poland	-0.08	(0.02)	1.04	(0.01)	21
Iceland	-0.09	(0.02)	1.00	(0.01)	22
Ireland	-0.09	(0.01)	0.91	(0.01)	23
Finland	-0.12	(0.01)	0.93	(0.01)	24
Japan	-0.13	(0.02)	0.96	(0.01)	25
United States*	-0.13	(0.02)	1.01	(0.01)	26
Czech Republic	-0.13	(0.02)	1.00	(0.01)	27
Estonia	-0.18	(0.02)	1.02	(0.01)	28
Turkey	-0.26	(0.02)	1.12	(0.01)	29
United Kingdom	-0.29	(0.01)	0.97	(0.01)	30
Slovenia	-0.61	(0.01)	0.90	(0.01)	31
Australia	m	m	m	m	m
Belgium	m	m	m	m	m
Israel	m	m	m	m	m
Italy	m	m	m	m	m
New Zealand	m	m	m	m	m
Norway	m	m	m	m	m



### Appendix 3.2.2

(all figures taken from Figure III.12.1)

#### Students' feelings

Based on students' reports

Students' feelings, after computing Negative Feelings index, ranked by country from least negative to most negative

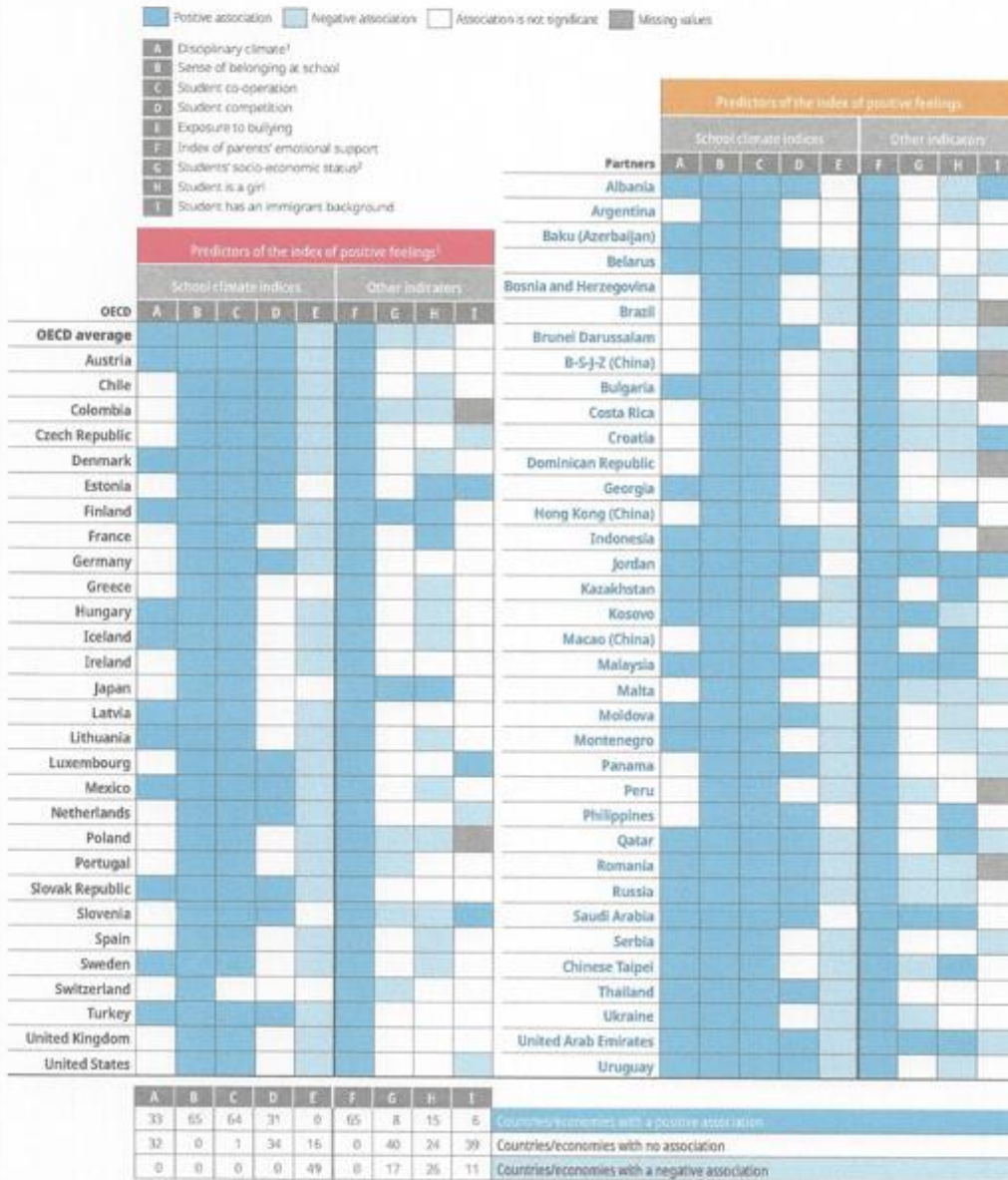
	Sometimes or always				Avge negative feelings	Rank negative feelings OECD
	Scared	Miserable	Afraid	Sad		
	%	%	%	%		
<b>OECD (32 countries; 5 m's)</b>						
OECD average	34	39	50	51	43	
Denmark	34	29	23	48	33	1
Lithuania	31	30	31	45	34	2
Iceland	26	39	28	44	35	3
Slovenia	21	36	52	35	36	4
Poland	31	44	25	50	38	5
Mexico	29	43	29	50	38	6
Turkey	26	24	44	58	38	7
Finland	26	32	51	46	39	8
Chile	25	51	26	54	39	9
Hungary	30	41	41	45	39	10
Netherlands	29	31	58	45	41	11
Ireland	36	36	34	58	41	12
Switzerland	30	38	54	44	41	13
Germany	28	41	55	43	42	14
France	28	37	58	46	42	15
Latvia	37	38	45	50	42	16
Colombia	38	25	59	50	43	17
Austria	32	40	56	44	43	18
Italy	41	46	31	55	43	19
Sweden	33	40	54	50	44	20
Canada	38	41	41	56	44	21
Estonia	34	43	53	51	45	22
Greece	38	36	60	51	46	23
Slovak Republic	34	47	51	55	47	24
Luxembourg	35	44	59	49	47	25
United States	45	40	42	63	48	26
Portugal	30	38	77	48	48	27
Spain	31	38	71	54	49	28
Korea	48	30	69	52	50	29
Czech Republic	55	44	59	52	52	30
United Kingdom	39	52	66	60	54	31
Japan	61	46	83	66	64	32
<b>Australia</b>	m	m	m	m	m	m
Belgium (Flemish)	m	m	m	m	m	m
Israel	m	m	m	m	m	m
New Zealand	m	m	m	m	m	m
Norway	m	m	m	m	m	m

Note: The average of each of the four negative feelings (scared, miserable, afraid, sad) was calculated and the resultant average was then ranked – best to worst

**Appendix 3.3 Predictors of positive feelings and sadness.** PISA 2018 sets out nine elements that they believe could be predictors (Figures III.12.5 and 6 below) but there are no real conclusions that can be drawn for the UK as to why its students feel so unhappy.

Figure III.12.5 Predictors of positive feelings

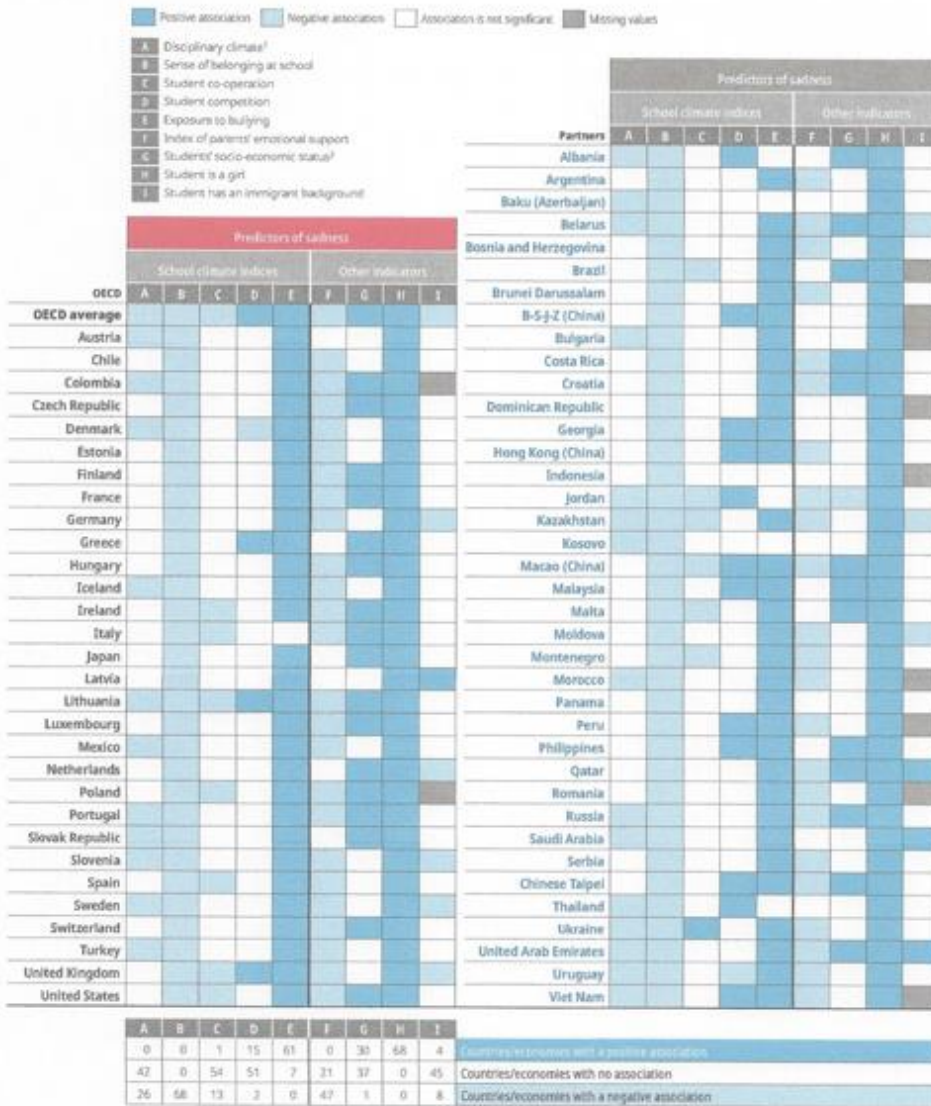
Based on students' reports



1. Higher values indicate a more positive disciplinary climate.  
 2. The socio-economic status of students is measured by the PISA Index of Economic, Social and Cultural Status (ESCS).  
 3. The index of positive feelings is based on three items: "happy", "joyful" and "cheerful".  
**Note:** All predictors were included in the same linear regression model.  
**Source:** OECD, PISA 2018 Database, Table III.B1.12.19.  
**StatLink** <http://dx.doi.org/10.1787/888934030515>

Figure III.12.6 Predictors of sadness

Based on students' reports



1. Higher values indicate a more positive disciplinary climate.

2. The socio-economic status of students is measured by the PISA index of economic, social and cultural status (ESCS).

Note: All predictors were included in the same logit regression model.

Source: OECD, PISA 2018 Database, Table III.B1.12.20.

StatLink <http://dx.doi.org/10.1787/888934030534>

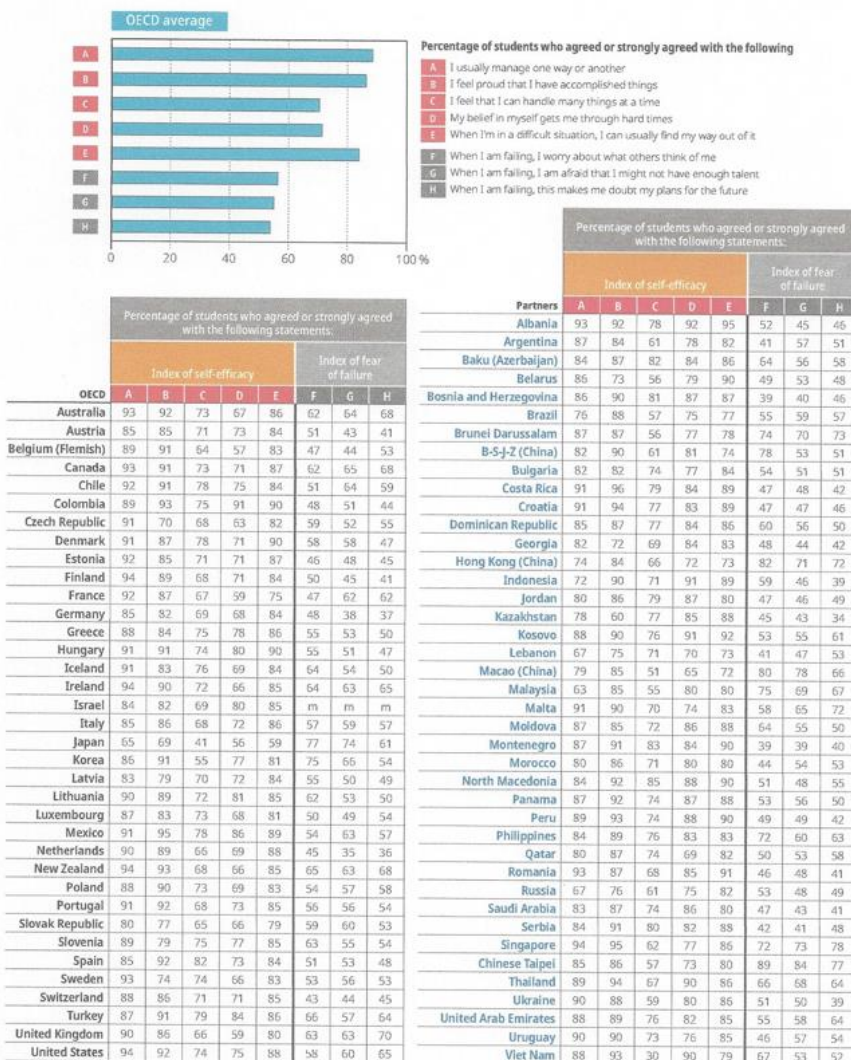
## Appendix 4 Self-efficacy and fear of failure

PISA 2018 set out eight factors relating to self-efficacy (5) and fear of failure (3). UK students' views diverged significantly (in each case negatively) from the average in six of these:

- 5<sup>th</sup> worst (I feel I can handle many things at a time)
- 3<sup>rd</sup> worst (my belief in myself gets me through hard times)
- 4<sup>th</sup> worst (When I'm in a difficult situation, I can usually find my way out of it)
- 7<sup>th</sup> worst (I worry what others think of me when I am failing)
- 6<sup>th</sup> worst (I am afraid that I might not have enough talent when I am failing)
- Worst (I doubt my plans for the future when I am failing)

Figure III.13.1 Student self-efficacy and fear of failure

Based on students' reports



Source: OECD, PISA 2018 Database, Tables III.B1.13.1 and III.B1.13.2.  
StatLink <http://dx.doi.org/10.1787/888934030591>




Table III.B1.13.1 (1/6) **Students' self-efficacy**

Based on students' reports

	Index of self-efficacy				Percentage of students who reported the following:								
	Average		Variability		I usually manage one way or another								
	Mean index	S.E.	S.D.	S.E.	Strongly disagree		Disagree		Agree		Strongly agree		
					%	S.E.	%	S.E.	%	S.E.	%	S.E.	
<b>OECD</b>													
Australia	0.03	(0.01)	0.96	(0.01)	1.3	(0.1)	5.4	(0.3)	72.4	(0.5)	20.9	(0.4)	
Austria	0.08	(0.02)	1.04	(0.01)	3.4	(0.3)	12.1	(0.5)	64.2	(0.7)	20.3	(0.6)	
Belgium (Flemish)	-0.21	(0.02)	0.82	(0.01)	1.8	(0.2)	9.3	(0.4)	70.8	(0.6)	18.1	(0.6)	
Canada	0.13	(0.01)	1.01	(0.01)	1.5	(0.1)	5.5	(0.2)	66.8	(0.5)	26.3	(0.4)	
Chile	0.29	(0.02)	1.13	(0.01)	2.2	(0.3)	5.6	(0.3)	61.2	(0.7)	31.0	(0.7)	
Colombia	0.30	(0.02)	0.99	(0.01)	2.5	(0.3)	8.2	(0.4)	70.3	(0.8)	19.0	(0.7)	
Czech Republic	-0.28	(0.01)	0.88	(0.01)	2.1	(0.3)	6.6	(0.4)	75.0	(0.7)	16.2	(0.6)	
Denmark	0.05	(0.02)	0.92	(0.01)	1.6	(0.2)	7.5	(0.4)	69.2	(0.7)	21.7	(0.7)	
Estonia	-0.03	(0.02)	0.94	(0.01)	2.4	(0.2)	5.7	(0.3)	70.2	(0.7)	21.7	(0.6)	
Finland	-0.03	(0.02)	0.95	(0.01)	1.6	(0.2)	4.9	(0.3)	68.3	(0.7)	25.2	(0.7)	
France	-0.10	(0.01)	1.00	(0.01)	2.0	(0.2)	5.6	(0.4)	63.3	(0.7)	29.1	(0.7)	
Germany	-0.02	(0.02) †	0.95	(0.02) †	3.0	(0.3) †	12.2	(0.6) †	66.3	(0.9) †	18.5	(0.6) †	
Greece	0.05	(0.02)	0.95	(0.01)	3.4	(0.4)	8.1	(0.4)	70.9	(0.7)	17.5	(0.6)	
Hungary	0.17	(0.01)	0.95	(0.01)	2.1	(0.3)	6.7	(0.3)	71.4	(0.8)	19.8	(0.6)	
Iceland	0.10	(0.02)	1.17	(0.02)	2.5	(0.3)	6.3	(0.4)	60.2	(0.7)	31.0	(0.7)	
Ireland	-0.04	(0.01)	0.88	(0.01)	0.9	(0.1)	5.4	(0.2)	76.8	(0.6)	16.9	(0.5)	
Israel	0.17	(0.02)	1.14	(0.01)	6.4	(0.4)	9.5	(0.5)	58.8	(0.8)	25.4	(0.7)	
Italy	-0.03	(0.01)	0.94	(0.01)	4.2	(0.3)	11.2	(0.5)	66.8	(0.7)	17.7	(0.6)	
Japan	-0.61	(0.01)	0.95	(0.01)	5.1	(0.3)	30.1	(0.6)	52.0	(0.8)	12.9	(0.5)	
Korea	-0.04	(0.02)	1.00	(0.01)	1.4	(0.2)	13.0	(0.5)	69.7	(0.6)	15.9	(0.5)	
Latvia	-0.19	(0.01)	0.87	(0.01)	3.4	(0.3)	14.0	(0.5)	70.6	(0.7)	12.1	(0.4)	
Lithuania	0.23	(0.01)	1.05	(0.01)	3.2	(0.3)	7.2	(0.4)	64.5	(0.7)	25.1	(0.6)	
Luxembourg	-0.01	(0.02)	1.06	(0.01)	4.0	(0.3)	9.4	(0.4)	62.5	(0.8)	24.1	(0.6)	
Mexico	0.36	(0.01) †	1.02	(0.01) †	1.9	(0.3) †	6.9	(0.4) †	65.4	(0.8) †	25.8	(0.7) †	
Netherlands*	-0.11	(0.02)	0.84	(0.02)	1.2	(0.2)	8.7	(0.5)	73.6	(0.8)	16.5	(0.6)	
New Zealand	-0.02	(0.01)	0.91	(0.01)	1.0	(0.2)	5.4	(0.3)	74.6	(0.6)	19.0	(0.6)	
Norway	m	m	m	m	m	m	m	m	m	m	m	m	
Poland	-0.06	(0.01)	0.95	(0.01)	3.2	(0.3)	8.3	(0.4)	71.4	(0.7)	17.1	(0.5)	
Portugal*	-0.01	(0.01)	0.89	(0.01)	1.2	(0.2)	8.2	(0.4)	71.0	(0.6)	19.7	(0.6)	
Slovak Republic	-0.28	(0.01)	0.96	(0.01)	5.6	(0.4)	14.6	(0.5)	65.9	(0.8)	13.8	(0.5)	
Slovenia	-0.05	(0.02)	0.97	(0.01)	2.4	(0.2)	8.5	(0.5)	69.7	(0.7)	19.5	(0.6)	
Spain	0.17	(0.01)	1.01	(0.01)	2.9	(0.2)	12.3	(0.3)	62.0	(0.4)	22.7	(0.4)	
Sweden	-0.06	(0.02)	1.04	(0.02)	1.7	(0.2)	5.2	(0.4)	63.2	(0.8)	29.9	(0.7)	
Switzerland	0.02	(0.01)	0.95	(0.01)	2.8	(0.3)	9.6	(0.5)	65.7	(1.0)	21.9	(0.8)	
Turkey	0.36	(0.02)	1.14	(0.01)	3.7	(0.4)	9.2	(0.4)	62.5	(0.7)	24.6	(0.6)	
United Kingdom	-0.17	(0.01)	0.95	(0.01)	1.5	(0.1)	8.2	(0.3)	73.0	(0.6)	17.3	(0.6)	
United States*	0.17	(0.02)	1.00	(0.01)	1.4	(0.2)	5.0	(0.4)	70.4	(0.8)	23.3	(0.7)	
<b>OECD average</b>	0.01	(0.00)	0.98	(0.00)	2.6	(0.0)	8.9	(0.1)	67.5	(0.1)	21.0	(0.1)	

\*Data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

**Note:** Information regarding the proportion of the sample covered is shown next to the standard error. No symbol means at least 75% of the population was covered; one dagger (†) means at least 50% but less than 75%; and one double-dagger (‡) means less than 50% was covered. For comparisons across cycles, the coverage information corresponds to the cycle with the lowest sample coverage.

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**Table III.B1.13.1**  
**Students' self-efficacy, ranked by country**  
**Based on students' reports**  
**OECD (37 countries)**

	Index of self-efficacy				Rank self efficacy
	Average		Variability		
	Mean index	S.E.	S.D.	S.E.	
Mexico	0.36	(0.01) †	1.02	(0.01) †	1
Turkey	0.36	(0.02)	1.14	(0.01)	2
Colombia	0.30	(0.02)	0.99	(0.01)	3
Chile	0.29	(0.02)	1.13	(0.01)	4
Lithuania	0.23	(0.01)	1.05	(0.01)	5
Hungary	0.17	(0.01)	0.95	(0.01)	6
Spain	0.17	(0.01)	1.01	(0.01)	7
United States*	0.17	(0.02)	1.00	(0.01)	8
Israel	0.17	(0.02)	1.14	(0.01)	9
Canada	0.13	(0.01)	1.01	(0.01)	10
Iceland	0.10	(0.02)	1.17	(0.02)	11
Austria	0.08	(0.02)	1.04	(0.01)	12
Denmark	0.05	(0.02)	0.92	(0.01)	13
Greece	0.05	(0.02)	0.95	(0.01)	14
Australia	0.03	(0.01)	0.96	(0.01)	15
Switzerland	0.02	(0.01)	0.95	(0.01)	16
Luxembourg	-0.01	(0.02)	1.06	(0.01)	17
Portugal*	-0.01	(0.01)	0.89	(0.01)	18
Germany	-0.02	(0.01) †	0.95	(0.02) †	19
New Zealand	-0.02	(0.01)	0.91	(0.01)	20
Estonia	-0.03	(0.02)	0.94	(0.01)	21
Italy	-0.03	(0.01)	0.94	(0.01)	22
Finland	-0.03	(0.02)	0.95	(0.01)	23
Korea	-0.04	(0.02)	1.00	(0.01)	24
Ireland	-0.04	(0.01)	0.88	(0.01)	25
Slovenia	-0.05	(0.02)	0.97	(0.01)	26
Poland	-0.06	(0.01)	0.95	(0.01)	27
Sweden	-0.06	(0.02)	1.04	(0.02)	28
France	-0.10	(0.01)	1.00	(0.01)	29
Netherlands*	-0.11	(0.02)	0.84	(0.02)	30
United Kingdom	-0.17	(0.01)	0.95	(0.01)	31
Latvia	-0.19	(0.01)	0.87	(0.01)	32
Belgium (Flemish)	-0.21	(0.02)	0.82	(0.01)	33
Czech Republic	-0.28	(0.01)	0.88	(0.01)	34
Slovak Republic	-0.28	(0.01)	0.96	(0.01)	35
Japan	-0.61	(0.01)	0.95	(0.01)	36
Norway	m	m	m	m	m

Table III.B1.13.2<sup>[14]</sup> **Students' fear of failure**

Based on students' reports

	Index of fear of failure <sup>1</sup>				Percentage of students who reported the following:							
	Average		Variability		When I am failing, I worry about what others think of me							
	Mean index	S.E.	S.D.	S.E.	Strongly disagree		Disagree		Agree		Strongly agree	
					%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD												
Australia	0.23	(0.01)	1.00	(0.01)	11.8	(0.3)	26.6	(0.5)	41.4	(0.5)	20.2	(0.4)
Austria	-0.26	(0.01)	1.05	(0.01)	18.9	(0.6)	29.6	(0.6)	33.6	(0.6)	17.8	(0.5)
Belgium (Flemish)	-0.19	(0.02)	0.89	(0.01)	15.9	(0.6)	37.0	(0.7)	36.9	(0.8)	10.2	(0.5)
Canada	0.27	(0.01)	1.04	(0.01)	13.5	(0.4)	24.7	(0.4)	39.6	(0.6)	22.2	(0.4)
Chile	0.08	(0.01)	1.00	(0.01)	20.3	(0.6)	28.4	(0.6)	35.3	(0.7)	16.0	(0.6)
Colombia	-0.19	(0.01)	0.94	(0.01)	17.1	(0.5)	34.5	(0.7)	38.2	(0.7)	10.1	(0.4)
Czech Republic	-0.05	(0.01)	0.91	(0.01)	12.2	(0.5)	29.2	(0.7)	44.4	(0.8)	14.2	(0.6)
Denmark	-0.02	(0.01)	0.91	(0.01)	10.7	(0.4)	31.0	(0.7)	44.2	(0.8)	14.1	(0.5)
Estonia	-0.17	(0.01)	0.91	(0.01)	14.7	(0.6)	38.9	(0.8)	36.6	(0.7)	9.8	(0.5)
Finland	-0.19	(0.01)	0.96	(0.01)	13.2	(0.5)	36.4	(0.7)	38.3	(0.7)	12.0	(0.5)
France	0.06	(0.01)	1.06	(0.01)	25.9	(0.7)	26.7	(0.6)	31.2	(0.7)	16.3	(0.5)
Germany	-0.37	(0.02)	1.02	(0.01)	20.1	(0.8)	32.3	(0.7)	33.0	(0.7)	14.6	(0.6)
Greece	-0.09	(0.01)	0.94	(0.01)	16.2	(0.5)	29.1	(0.6)	41.2	(0.7)	13.5	(0.4)
Hungary	-0.10	(0.02)	1.01	(0.01)	14.9	(0.5)	29.6	(0.8)	39.9	(0.8)	15.6	(0.6)
Iceland	0.00	(0.02)	1.06	(0.01)	12.2	(0.5)	23.9	(0.9)	44.0	(0.8)	19.9	(0.7)
Ireland	0.21	(0.01)	0.98	(0.01)	9.9	(0.4)	26.4	(0.6)	43.5	(0.7)	20.2	(0.6)
Israel	m	m	m	m	m	m	m	m	m	m	m	m
Italy	0.04	(0.02)	0.97	(0.01)	16.3	(0.5)	26.8	(0.7)	40.8	(0.7)	16.2	(0.5)
Japan	0.38	(0.01)	0.96	(0.01)	7.0	(0.4)	16.4	(0.5)	47.6	(0.7)	29.1	(0.6)
Korea	0.19	(0.01)	0.96	(0.01)	7.0	(0.3)	18.0	(0.5)	52.1	(0.7)	22.9	(0.7)
Latvia	-0.10	(0.01)	0.89	(0.01)	11.9	(0.5)	33.3	(0.6)	42.7	(0.7)	12.1	(0.5)
Lithuania	-0.07	(0.01)	1.03	(0.01)	16.9	(0.5)	21.4	(0.6)	40.1	(0.6)	21.5	(0.6)
Luxembourg	-0.14	(0.02)	1.06	(0.01)	23.0	(0.6)	27.3	(0.6)	33.4	(0.6)	16.2	(0.6)
Mexico	0.06	(0.02)	0.95	(0.01)	16.0	(0.6)	30.2	(0.8)	39.4	(0.7)	14.4	(0.5)
Netherlands*	-0.39	(0.02)	0.91	(0.01)	18.8	(0.7)	36.3	(0.8)	34.4	(0.8)	10.5	(0.5)
New Zealand	0.25	(0.01)	1.01	(0.01)	11.0	(0.4)	24.4	(0.6)	42.1	(0.6)	22.5	(0.5)
Norway	m	m	m	m	m	m	m	m	m	m	m	m
Poland	0.01	(0.02)	0.91	(0.01)	13.8	(0.5)	32.7	(0.7)	40.3	(0.7)	13.3	(0.5)
Portugal*	-0.01	(0.01)	0.97	(0.01)	14.1	(0.5)	29.4	(0.6)	40.6	(0.8)	15.9	(0.5)
Slovak Republic	0.01	(0.01)	0.89	(0.01)	12.7	(0.5)	28.2	(0.6)	46.1	(0.7)	13.0	(0.6)
Slovenia	0.00	(0.01)	0.96	(0.01)	11.4	(0.5)	25.5	(0.8)	48.0	(0.8)	15.2	(0.5)
Spain	-0.12	(0.01)	0.98	(0.01)	20.0	(0.4)	29.3	(0.4)	35.7	(0.4)	15.0	(0.3)
Sweden	0.00	(0.01)	1.02	(0.01)	14.6	(0.5)	32.0	(0.8)	37.7	(0.7)	15.6	(0.6)
Switzerland	-0.28	(0.02)	1.01	(0.01)	24.6	(0.8)	31.9	(0.7)	30.8	(0.8)	12.6	(0.6)
Turkey	0.12	(0.01)	1.01	(0.01)	14.5	(0.4)	19.1	(0.5)	42.7	(0.6)	23.7	(0.6)
United Kingdom	0.27	(0.02)	1.03	(0.01)	12.3	(0.5)	24.9	(0.6)	39.8	(0.7)	23.0	(0.6)
United States*	0.17	(0.02)	1.08	(0.01)	15.7	(0.6)	25.9	(0.7)	36.8	(0.7)	21.6	(0.7)
OECD average	-0.01	(0.00)	0.98	(0.00)	15.1	(0.1)	28.5	(0.1)	39.8	(0.1)	16.6	(0.1)

\*Data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

1. Higher values in the index indicate a greater fear of failure.

**Note:** Information regarding the proportion of the sample covered is shown next to the standard error. No symbol means at least 75% of the population was covered; one dagger (†) means at least 50% but less than 75%; and one double-dagger (‡) means less than 50% was covered. For comparisons across cycles, the coverage information corresponds to the cycle with the lowest sample coverage.

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**Table III.B1.13.2**  
**Students' fear of failure**  
**Based on students' reports**

	Index of fear of failure <sup>1</sup>				Rank
	Average		Variability		
	Mean index	S.E.	S.D.	S.E.	
<b>OECD (37 countries)</b>					
Netherlands*	-0.39	(0.02)	0.91	(0.01)	1
Germany	-0.37	(0.02)	1.02	(0.01)	2
Switzerland	-0.28	(0.02)	1.01	(0.01)	3
Austria	-0.26	(0.01)	1.05	(0.01)	4
Colombia	-0.19	(0.01)	0.94	(0.01)	5
Finland	-0.19	(0.01)	0.96	(0.01)	6
Belgium (Flemish)	-0.19	(0.02)	0.89	(0.01)	7
Estonia	-0.17	(0.01)	0.91	(0.01)	8
Luxembourg	-0.14	(0.02)	1.06	(0.01)	9
Spain	-0.12	(0.01)	0.98	(0.01)	10
Latvia	-0.10	(0.01)	0.89	(0.01)	11
Hungary	-0.10	(0.02)	1.01	(0.01)	12
Greece	-0.09	(0.01)	0.94	(0.01)	13
Lithuania	-0.07	(0.01)	1.03	(0.01)	14
Czech Republic	-0.05	(0.01)	0.91	(0.01)	15
Denmark	-0.02	(0.01)	0.91	(0.01)	16
Portugal*	-0.01	(0.01)	0.97	(0.01)	17
Sweden	0.00	(0.01)	1.02	(0.01)	18
Iceland	0.00	(0.02)	1.06	(0.01)	19
Slovenia	0.00	(0.01)	0.96	(0.01)	20
Slovak Republic	0.01	(0.01)	0.89	(0.01)	21
Poland	0.01	(0.02)	0.91	(0.01)	22
Italy	0.04	(0.02)	0.97	(0.01)	23
France	0.06	(0.01)	1.06	(0.01)	24
Mexico	0.06	(0.02)	0.95	(0.01)	25
Chile	0.08	(0.01)	1.00	(0.01)	26
Turkey	0.12	(0.01)	1.01	(0.01)	27
United States*	0.17	(0.02)	1.08	(0.01)	28
Korea	0.19	(0.01)	0.96	(0.01)	29
Ireland	0.21	(0.01)	0.98	(0.01)	30
Australia	0.23	(0.01)	1.00	(0.01)	31
New Zealand	0.25	(0.01)	1.01	(0.01)	32
Canada	0.27	(0.01)	1.04	(0.01)	33
United Kingdom	0.27	(0.02)	1.03	(0.01)	34
Japan	0.38	(0.01)	0.96	(0.01)	35
Israel	m	m	m	m	m
Norway	m	m	m	m	m



Appendix 5

5.1 PISA explanation for reading performance

- (i) There are two correlations or linkages with reading attainment which have a weak or low effect, both with an R2 of 0.47: school attendance levels (Figure III.4.4) and growth mindset (Figure III.14.3)

Figure III.4.4 Percentage of students who had not skipped school and reading performance

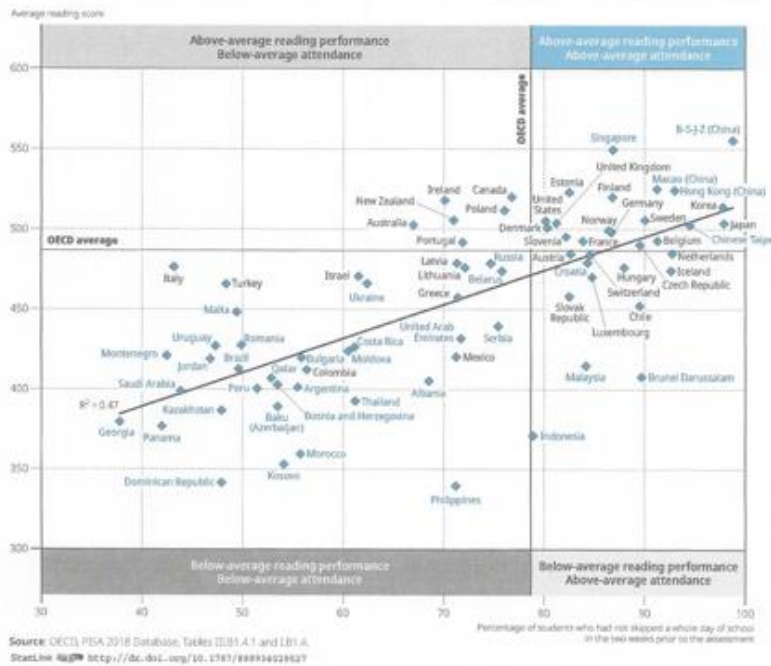
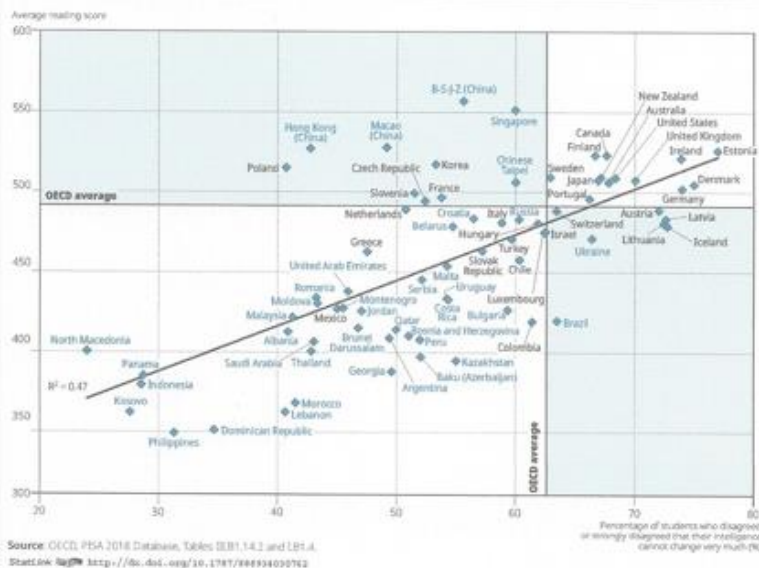


Figure III.14.3 Percentage of students with a growth mindset and average reading performance



- (ii) There are two further linkages with little, or at least very weak, correlations, each with an R2 below 0.3: Life satisfaction (R2 of 0.21, in Figure III.11.5) and Fear of Failure (R2 of 0.13, in Figure III. 13.4):

Figure III.11.5 Life satisfaction and reading performance across education systems

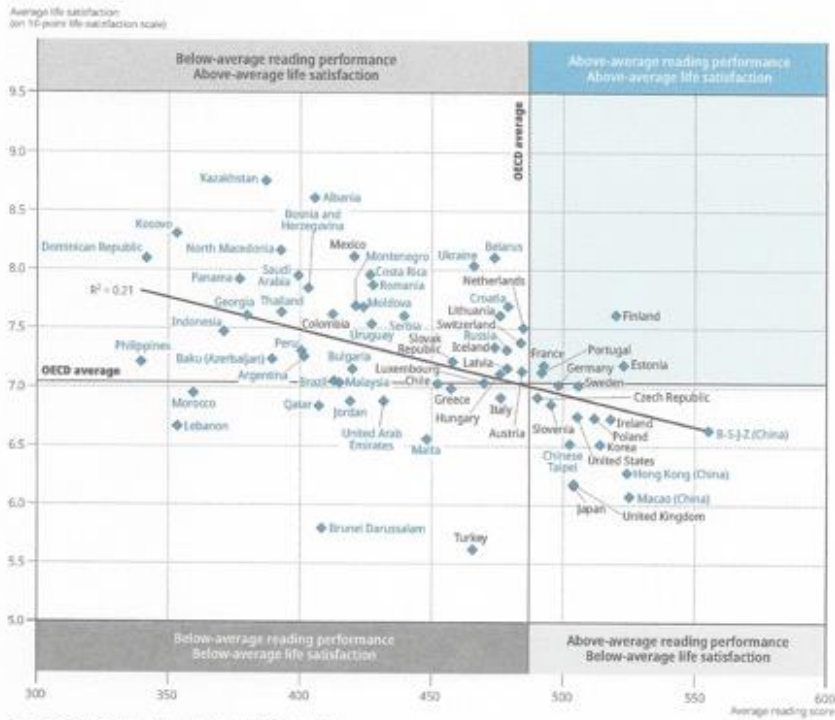
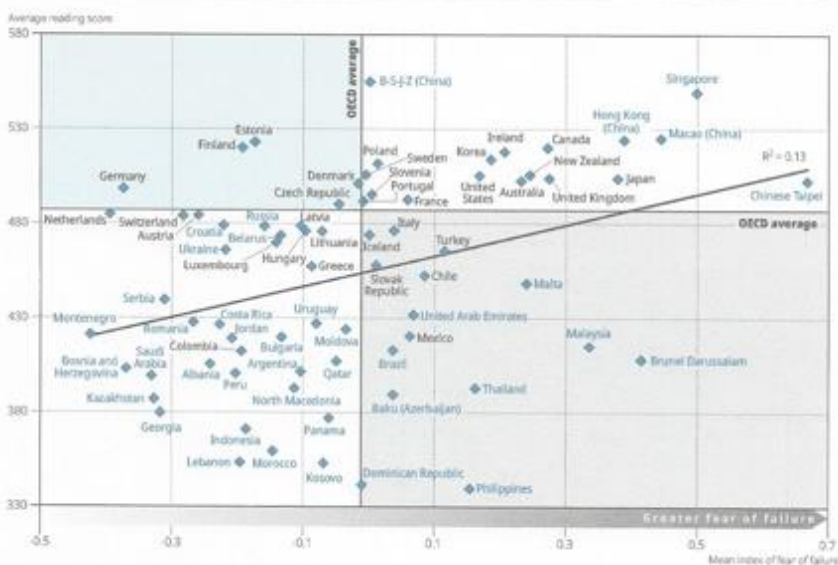


Figure III.13.4 Fear of failure and average reading performance

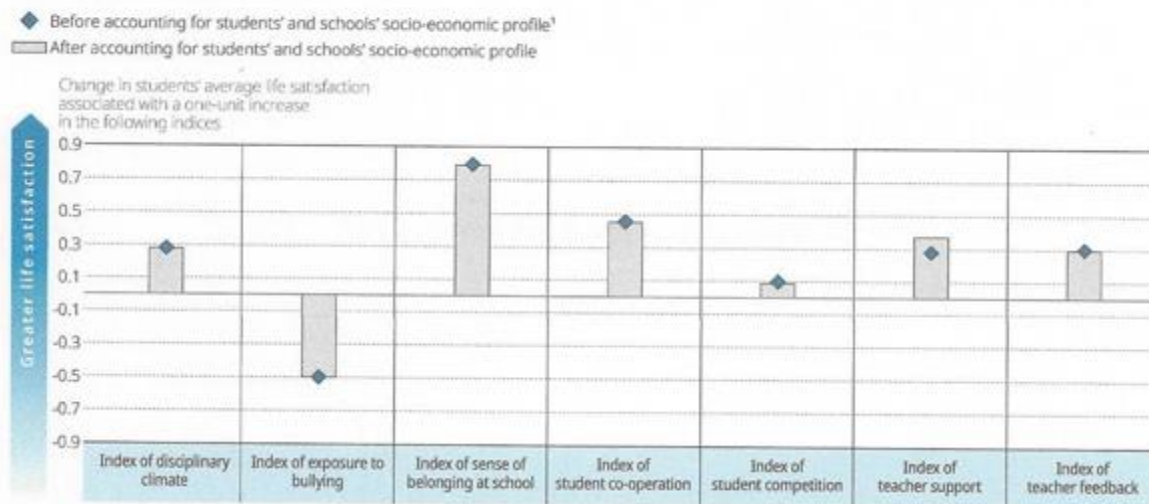


## 5.2 PISA explanation for life satisfaction.

### 5.2.1 Relationship between life satisfaction and school climate. PISA seeks to link student life satisfaction with seven factors.

Figure III.11.7 **Students' life satisfaction and school climate**

Based on students' reports; OECD average



1. Student and school characteristics include the PISA index of economic, social and cultural status (ESCS) at the student and school levels and gender.

**Note:** All values are statistically significant. (see Annex A3).

**Source:** OECD, PISA 2018 Database, Table III.B1.11.10.

**StatLink** <http://dx.doi.org/10.1787/888934030344>

Out of 37 OECD countries, the UK ranked as follows:


- (i) Disciplinary climate: 10<sup>th</sup> (Figure III.3.1)
- (ii) Exposure to bullying (negative): 33<sup>rd</sup> (Figure III.2.1)
- (iii) Sense of belonging at school: 29<sup>th</sup> (Table IIIB.1.9.1)
- (iv) Student cooperation: 29<sup>th</sup> (Table III.B1.8.1)
- (v) Student competition: 5<sup>th</sup> (Table IIIB.1.8.2)
- (vi) Teacher support: 5<sup>th</sup> (Figure III.6.2)
- (vii) Teacher feedback: (no comparative data included)

Given the UK's OECD ranking in each of these factors, it seems that UK students' life satisfaction levels are not linked solely to school climate. The relevant tables are copied below.

(i) Disciplinary climate: 10<sup>th</sup> (Figure III.3.1)

Table III.1 (M) Snapshot of school climate

		Countries/economies with values above the OECD average		Countries/economies with values not statistically different from the OECD average		Countries/economies with values below the OECD average	
OECD		Percentage of students who reported being victims of any type of bullying at least a few times a month	Difference between frequently <sup>1</sup> and not frequently <sup>2</sup> bullied students who reported feeling sometimes or always sad, after accounting for student and school characteristics <sup>3</sup>	Percentage of students who agreed or strongly agreed that "It is a wrong thing to join in bullying"	Difference in the index of sense of belonging between advantaged <sup>4</sup> and disadvantaged <sup>5</sup> students <sup>1</sup>	Difference in the percentage of students' parents who discussed their child's progress with a teacher on their own initiative between advantaged and disadvantaged schools <sup>1</sup>	
		%	%pt	%	IPC	%pt	
	<b>OECD average</b>	<b>23</b>	<b>20</b>	<b>88</b>	<b>0.23</b>	<b>11</b>	
	Australia	30	m	92	0.27	13	
	Austria	23	19	87	0.19	m	
	Belgium	19	m	94	0.06	16	
	Canada	25	22	92	0.31	13	
	Chile	24	15	86	0.24	4	
	Colombia	32	10	68	0.25	25	
	Czech Republic	30	12	88	0.20	4	
	Denmark	21	26	94	0.22	7	
	Estonia	25	19	89	0.21	4	
	Finland	18	30	93	0.23	2	
	France	20	28	93	0.19	19	
	Germany	23	22	90	0.23	14	
	Greece	27	12	85	0.25	20	
	Hungary	23	21	75	0.32	19	
	Iceland	17	32	88	0.34	1	
	Ireland	23	24	94	0.08	7	
	Israel	m	m	84	m	11	
	Italy	24	12	85	0.15	27	
	Japan	17	17	93	0.12	8	
	Korea	9	m	93	0.37	26	
	Latvia	35	19	83	0.25	-10	
	Lithuania	23	17	81	0.20	5	
	Luxembourg	21	24	89	0.41	25	
	Mexico	23	12	82	0.31	3	
	Netherlands	12	21	95	0.14	12	
	New Zealand	32	m	92	0.23	9	
	Norway	19	m	94	0.33	0	
	Poland	26	18	80	0.09	10	
	Portugal	14	23	86	0.32	18	
	Slovak Republic	28	11	80	0.30	11	
	Slovenia	21	16	84	0.21	14	
	Spain	17	m	90	0.25	13	
	Sweden	19	26	92	0.27	7	
	Switzerland	22	21	86	0.21	-9	
	Turkey	24	16	80	0.08	18	
	United Kingdom	27	23	95	0.18	9	
	United States	26	23	93	0.27	24	

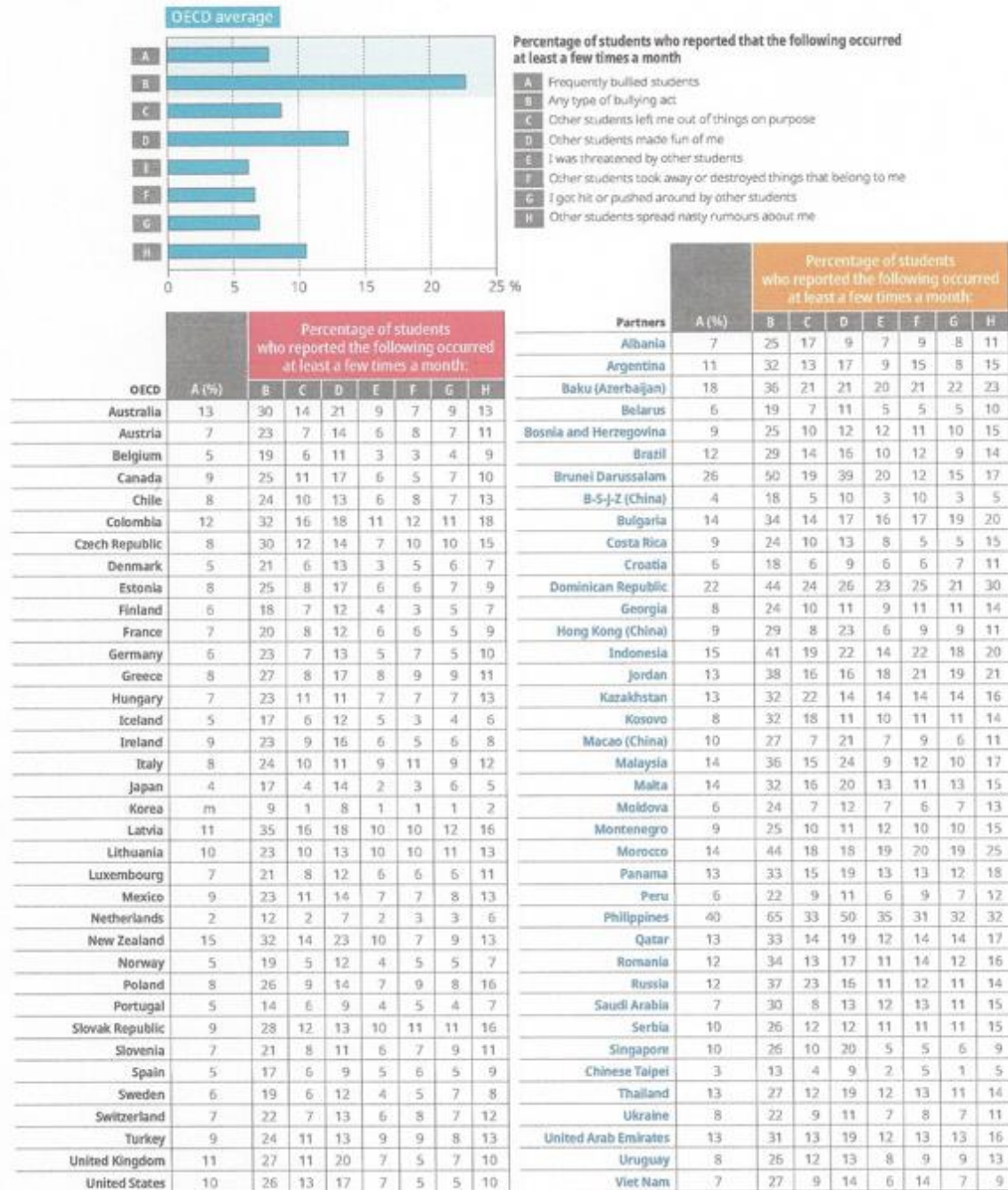
1. A student is frequently bullied if he or she is in the top 10% of the index of exposure to bullying across all countries/economies.  
 2. Student and school characteristics include the PISA index of economic, social and cultural status (ESCS) at the student and school levels, gender and reading performance.  
 3. A socio-economically disadvantaged (advantaged) student is a student in the bottom (top) quarter of the index of ESCS in his or her own country/economy.  
 4. A socio-economically disadvantaged (advantaged) school is a school in the bottom (top) quarter of the index of ESCS in the relevant country/economy.  
 5. The regression model accounts for students' and schools' socio-economic profile. The socio-economic profile is measured by the index of ESCS.  
 Note: Values that are statistically significant are indicated in bold (see Annex A2).  
 Source: OECD PISA 2018 Database, Tables III.B1.2.1, III.B1.2.13, III.B1.2.15, III.B1.3.8, III.B1.4.12, III.B1.8.10, III.B1.8.10, III.B1.8.14, III.B1.9.A and III.B1.10.3.  
 StatLink  <https://doi.org/10.1787/888934029147>



(ii) Exposure to bullying (negative): 33<sup>rd</sup> (Figure III.2.1)

Figure III.2.1 Students' exposure to bullying

Based on students' reports



Note: A student is frequently bullied if he or she is in the top 10% of the index of exposure to bullying across all countries/economies. The index of exposure to bullying includes the following statements: "Other students left me out of things on purpose", "Other students made fun of me", and "I was threatened by other students".

Source: OECD, PISA 2018 Database, Table III.B1.2.1.

StatLink <https://dx.doi.org/10.1787/888934029185>

(iii) Sense of belonging at school: 29<sup>th</sup> (Table IIIB.1.9.1)


Table III.B1.9.1 (1/8) **Students' sense of belonging at school**

Based on students' reports

	Index of sense of belonging				I feel like an outsider (or left out of things) at school							
	Average		Variability		Strongly disagree		Disagree		Agree		Strongly agree	
	Mean index	S.E.	S.D.	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD												
Australia	-0.19	(0.01)	0.95	(0.01)	24.5	(0.5)	48.4	(0.5)	20.2	(0.4)	6.8	(0.3)
Austria	0.40	(0.02)	1.22	(0.01)	57.3	(0.8)	27.3	(0.7)	9.4	(0.4)	6.0	(0.4)
Belgium	0.06	(0.01)	0.89	(0.01)	41.9	(0.7)	43.3	(0.6)	10.5	(0.4)	4.3	(0.2)
Canada	-0.18	(0.01)	0.96	(0.01)	26.8	(0.5)	46.7	(0.5)	19.4	(0.4)	7.0	(0.3)
Chile	-0.10	(0.01)	1.00	(0.01)	33.1	(0.6)	44.0	(0.7)	15.9	(0.5)	7.0	(0.4)
Colombia	-0.18	(0.02)	0.89	(0.01)	26.6	(0.8)	50.3	(0.7)	16.7	(0.5)	6.4	(0.4)
Czech Republic	-0.28	(0.01)	0.78	(0.01)	20.3	(0.7)	55.7	(0.8)	17.4	(0.6)	6.7	(0.4)
Denmark	0.21	(0.02)	1.03	(0.01)	51.1	(0.8)	37.5	(0.8)	8.3	(0.4)	3.0	(0.3)
Estonia	-0.13	(0.01)	0.85	(0.01)	33.7	(0.8)	50.7	(0.8)	11.7	(0.5)	3.8	(0.3)
Finland	0.01	(0.01)	1.00	(0.01)	42.6	(0.6)	42.2	(0.6)	11.2	(0.5)	4.0	(0.3)
France	-0.07	(0.01)	0.78	(0.01)	22.2	(0.6)	47.3	(0.7)	23.3	(0.6)	7.2	(0.4)
Germany	0.28	(0.02) †	1.01	(0.01) †	54.0	(0.9) †	30.1	(0.8) †	11.7	(0.5) †	4.2	(0.4) †
Greece	0.02	(0.02)	0.93	(0.01)	33.7	(0.7)	46.4	(0.7)	13.1	(0.5)	6.8	(0.4)
Hungary	0.07	(0.02)	1.01	(0.01)	37.4	(0.7)	43.0	(0.7)	14.6	(0.4)	5.0	(0.3)
Iceland	0.10	(0.02)	1.25	(0.02)	44.2	(0.8)	35.9	(1.0)	12.0	(0.6)	7.9	(0.5)
Ireland	-0.15	(0.01)	0.85	(0.01)	26.6	(0.6)	51.4	(0.7)	16.7	(0.6)	5.3	(0.3)
Israel	m	m	m	m	m	m	m	m	m	m	m	m
Italy	0.04	(0.02)	0.88	(0.01)	43.4	(0.8)	42.9	(0.7)	9.0	(0.4)	4.7	(0.4)
Japan	0.02	(0.02)	0.94	(0.01)	42.0	(0.8)	45.5	(0.8)	9.2	(0.4)	3.3	(0.3)
Korea	0.28	(0.02)	1.05	(0.01)	49.1	(0.7)	40.3	(0.7)	9.1	(0.4)	1.5	(0.2)
Latvia	-0.26	(0.01)	0.86	(0.02)	29.6	(0.7)	51.4	(0.8)	12.7	(0.5)	6.3	(0.4)
Lithuania	-0.13	(0.01)	1.02	(0.01)	48.5	(0.6)	25.2	(0.5)	14.1	(0.5)	12.2	(0.5)
Luxembourg	0.09	(0.01)	1.01	(0.01)	47.7	(0.6)	33.8	(0.7)	11.9	(0.5)	6.6	(0.4)
Mexico	-0.02	(0.02) †	1.03	(0.01) †	34.4	(0.7) †	44.9	(0.7) †	14.3	(0.6) †	6.4	(0.4) †
Netherlands*	0.20	(0.02)	0.89	(0.01)	50.6	(0.8)	40.2	(0.7)	6.7	(0.4)	2.6	(0.3)
New Zealand	-0.21	(0.01)	0.89	(0.01)	24.8	(0.6)	49.1	(0.7)	19.9	(0.6)	6.2	(0.3)
Norway	0.36	(0.02)	1.20	(0.01)	56.6	(0.8)	30.9	(0.7)	8.4	(0.4)	4.1	(0.3)
Poland	-0.24	(0.01)	0.87	(0.02)	28.0	(0.6)	50.5	(0.7)	14.1	(0.5)	7.4	(0.4)
Portugal*	0.12	(0.02)	0.97	(0.01)	42.6	(0.8)	44.2	(0.8)	10.0	(0.4)	3.2	(0.3)
Slovak Republic	-0.28	(0.01)	0.87	(0.02)	25.6	(0.6)	46.2	(0.8)	17.6	(0.7)	10.5	(0.5)
Slovenia	-0.11	(0.01)	0.84	(0.01)	29.4	(0.8)	50.1	(0.9)	14.9	(0.6)	5.7	(0.3)
Spain	0.46	(0.01)	1.17	(0.01)	58.5	(0.5)	30.0	(0.4)	7.0	(0.2)	4.5	(0.2)
Sweden	0.03	(0.02)	1.12	(0.02)	39.5	(0.7)	40.7	(0.6)	12.3	(0.4)	7.5	(0.4)
Switzerland	0.30	(0.02)	1.05	(0.01)	52.1	(0.8)	31.9	(0.8)	11.1	(0.4)	4.9	(0.3)
Turkey	-0.14	(0.02)	1.03	(0.01)	35.5	(0.7)	40.9	(0.7)	14.4	(0.5)	9.2	(0.4)
United Kingdom	-0.19	(0.01)	0.90	(0.01)	25.6	(0.7)	49.0	(0.7)	18.9	(0.5)	6.4	(0.4)
United States*	-0.24	(0.02)	0.97	(0.01)	22.0	(0.6)	47.0	(0.8)	23.1	(0.8)	7.9	(0.4)
OECD average	0.00	(0.00)	0.97	(0.00)	37.8	(0.1)	42.6	(0.1)	13.6	(0.1)	5.9	(0.1)

\*Data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

**Note:** Information regarding the proportion of the sample covered is shown next to the standard error. No symbol means at least 75% of the population was covered; one dagger (†) means at least 50% but less than 75%; and one double-dagger (‡) means less than 50% was covered. For comparisons across cycles, the coverage information corresponds to the cycle with the lowest sample coverage.

StatLink  <http://dx.doi.org/10.1787/888934031009>

(iv) Student cooperation: 29<sup>th</sup> (Table III.B1.8.1)


Table III.B1.8.1 (1/6) **Student co-operation**  
Based on students' reports

	Index of student co-operation <sup>1</sup>				Percentage of students who reported the following:							
	Average		Variability		Students seem to value co-operation							
	Mean index	S.E.	S.D.	S.E.	Not at all true		Slightly true		Very true		Extremely true	
					%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>OECD average</b>	0.00	(0.00)	0.98	(0.00)	8.0	(0.1)	35.0	(0.1)	43.7	(0.1)	13.2	(0.1)
<b>Australia</b>	0.02	(0.01) †	0.94	(0.01) †	5.1	(0.2)	36.2	(0.5)	46.7	(0.5)	11.9	(0.4)
<b>Austria</b>	0.36	(0.02)	1.01	(0.01)	7.4	(0.5)	19.9	(0.8)	48.4	(0.7)	24.3	(0.8)
<b>Belgium</b>	-0.06	(0.02)	0.98	(0.01)	7.7	(0.4)	35.2	(0.7)	48.2	(0.7)	8.9	(0.4)
<b>Canada</b>	m	m	m	m	m	m	m	m	m	m	m	m
<b>Chile</b>	-0.17	(0.02) †	1.03	(0.01) †	9.2	(0.5) †	42.4	(0.9) †	35.7	(0.8) †	12.7	(0.7) †
<b>Colombia</b>	-0.13	(0.02) †	1.00	(0.01) †	13.2	(0.7) †	33.4	(0.9) †	45.1	(0.9) †	8.3	(0.4) †
<b>Czech Republic</b>	-0.22	(0.02)	0.97	(0.01)	10.2	(0.5)	46.8	(0.9)	34.0	(0.8)	9.0	(0.5)
<b>Denmark</b>	0.34	(0.01)	0.86	(0.01)	2.7	(0.3)	21.2	(0.8)	59.2	(0.9)	16.9	(0.6)
<b>Estonia</b>	-0.12	(0.02)	0.94	(0.01)	7.4	(0.5)	46.0	(0.8)	37.0	(0.8)	9.6	(0.4)
<b>Finland</b>	0.08	(0.02)	0.90	(0.01)	4.8	(0.3)	31.5	(0.8)	55.2	(0.8)	8.5	(0.4)
<b>France</b>	-0.38	(0.02) †	1.00	(0.01) †	12.4	(0.6) †	47.0	(0.7) †	31.9	(0.7) †	8.6	(0.4) †
<b>Germany</b>	0.07	(0.03) ‡	1.03	(0.01) ‡	9.9	(0.8) ‡	28.1	(1.2) ‡	46.4	(1.1) ‡	15.6	(0.8) ‡
<b>Greece</b>	-0.02	(0.02)	1.01	(0.01)	9.5	(0.5)	33.5	(0.7)	40.0	(0.7)	17.0	(0.5)
<b>Hungary</b>	-0.13	(0.02)	1.01	(0.01)	9.0	(0.6)	40.0	(0.9)	40.0	(1.0)	11.0	(0.6)
<b>Iceland</b>	0.31	(0.02) †	0.98	(0.01) †	7.6	(0.6) †	19.1	(0.9) †	56.8	(1.0) †	16.5	(0.9) †
<b>Ireland</b>	-0.17	(0.02)	0.92	(0.01)	6.7	(0.4)	43.2	(0.8)	42.6	(0.9)	7.6	(0.5)
<b>Israel</b>	0.07	(0.02)	1.05	(0.01)	9.4	(0.4)	31.4	(0.8)	40.0	(0.7)	19.2	(0.9)
<b>Italy</b>	-0.31	(0.02)	0.94	(0.01)	11.8	(0.4)	47.3	(0.9)	33.4	(0.8)	7.5	(0.4)
<b>Japan</b>	0.11	(0.02)	1.05	(0.01)	5.8	(0.4)	36.4	(0.8)	40.2	(0.7)	17.7	(0.7)
<b>Korea</b>	0.16	(0.02)	1.04	(0.01)	7.9	(0.4)	27.0	(0.7)	49.3	(0.8)	15.8	(0.5)
<b>Latvia</b>	-0.22	(0.01)	0.91	(0.01)	8.7	(0.4)	47.9	(0.9)	35.4	(0.8)	8.1	(0.4)
<b>Lithuania</b>	0.22	(0.02)	1.05	(0.01)	8.2	(0.4)	26.5	(0.7)	43.9	(0.6)	21.4	(0.5)
<b>Luxembourg</b>	-0.05	(0.01)	1.03	(0.01)	10.3	(0.4)	32.6	(0.7)	44.1	(0.8)	13.1	(0.5)
<b>Mexico</b>	-0.05	(0.02) ‡	0.99	(0.01) ‡	8.0	(0.5) ‡	37.9	(1.1) ‡	42.7	(1.0) ‡	11.4	(0.6) ‡
<b>Netherlands*</b>	0.18	(0.02)	0.88	(0.01)	2.7	(0.3)	30.1	(0.8)	53.6	(0.8)	13.6	(0.7)
<b>New Zealand</b>	-0.01	(0.02)	0.92	(0.01)	4.2	(0.4)	39.6	(0.9)	45.8	(0.8)	10.4	(0.5)
<b>Norway</b>	0.62	(0.02)	0.85	(0.01)	3.1	(0.3)	10.4	(0.5)	57.4	(0.9)	29.0	(0.8)
<b>Poland</b>	0.00	(0.02)	0.97	(0.01)	10.2	(0.5)	29.2	(0.8)	49.6	(0.8)	10.9	(0.5)
<b>Portugal*</b>	-0.06	(0.02)	0.93	(0.01)	4.9	(0.4)	41.5	(0.9)	44.1	(0.8)	9.6	(0.5)
<b>Slovak Republic</b>	-0.23	(0.02)	0.99	(0.01)	11.9	(0.5)	42.3	(0.7)	34.7	(0.7)	11.1	(0.5)
<b>Slovenia</b>	-0.03	(0.02)	0.96	(0.01)	6.6	(0.4)	40.9	(0.8)	39.8	(0.8)	12.8	(0.6)
<b>Spain</b>	-0.13	(0.01) †	1.01	(0.01) †	11.0	(0.3) †	37.2	(0.6) †	41.1	(0.6) †	10.7	(0.4) †
<b>Sweden</b>	-0.05	(0.02)	0.98	(0.01)	6.9	(0.4)	36.8	(0.8)	45.2	(0.8)	11.1	(0.4)
<b>Switzerland</b>	0.13	(0.03) †	1.04	(0.01) †	8.7	(0.7) †	27.1	(1.0) †	45.0	(1.2) †	19.3	(1.0) †
<b>Turkey</b>	-0.01	(0.02)	1.15	(0.01)	13.9	(0.4)	27.9	(0.6)	37.7	(0.6)	20.4	(0.6)
<b>United Kingdom</b>	-0.14	(0.02)	0.92	(0.01)	6.0	(0.4)	44.5	(0.7)	41.9	(0.7)	7.7	(0.4)
<b>United States*</b>	-0.16	(0.02)	0.95	(0.01)	6.6	(0.5)	42.4	(0.9)	41.5	(0.9)	9.5	(0.5)

\*Data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

1. The index of student co-operation is based on the following statements: "Students seem to value co-operation"; "It seems that students are co-operating with each other"; and "Students seem to share the feeling that co-operating with each other is important".

**Note:** Information regarding the proportion of the sample covered is shown next to the standard error. No symbol means at least 75% of the population was covered; one dagger (†) means at least 50% but less than 75%; and one double-dagger (‡) means less than 50% was covered. For comparisons across cycles, the coverage information corresponds to the cycle with the lowest sample coverage.

StatLink  <http://dx.doi.org/10.1787/888934030990>



(v) Student competition: 5<sup>th</sup> (Table IIB.1.8.2)

Table IIB.1.8.2 (1/6) **Student competition**


Based on students' reports

OECD		Index of student competition <sup>1</sup>				Percentage of students who reported the following:							
		Average		Variability		Students seem to value competition							
						Not at all true		Slightly true		Very true		Extremely true	
		Mean index	S.E.	S.D.	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	Australia	0.35	(0.01)	0.95	(0.01)	3.5	(0.2)	29.7	(0.5)	48.0	(0.5)	18.8	(0.5)
	Austria	-0.03	(0.02)	0.94	(0.01)	12.0	(0.5)	43.9	(0.8)	35.4	(0.7)	8.8	(0.5)
	Belgium	-0.31	(0.02)	0.99	(0.01)	12.7	(0.4)	49.8	(0.7)	31.6	(0.7)	5.9	(0.4)
	Canada	m	m	m	m	m	m	m	m	m	m	m	m
	Chile	-0.02	(0.02) †	1.00	(0.01) †	10.2	(0.5) †	47.1	(0.8) †	31.1	(0.7) †	11.6	(0.5) †
	Colombia	0.12	(0.02) †	0.87	(0.01) †	11.8	(0.5) †	34.7	(0.8) †	45.7	(0.9) †	7.8	(0.4) †
	Czech Republic	-0.51	(0.01)	0.92	(0.01)	17.8	(0.5)	56.0	(0.7)	20.2	(0.6)	6.0	(0.4)
	Denmark	-0.20	(0.02)	0.90	(0.01)	5.9	(0.3)	45.3	(1.0)	40.0	(0.9)	8.7	(0.5)
	Estonia	-0.31	(0.01)	0.86	(0.01)	8.9	(0.5)	57.4	(0.7)	27.4	(0.7)	6.3	(0.4)
	Finland	0.10	(0.02)	0.86	(0.01)	4.8	(0.3)	40.8	(0.9)	47.0	(0.9)	7.4	(0.4)
	France	-0.18	(0.02)	1.11	(0.01)	11.8	(0.4)	44.9	(0.8)	29.6	(0.7)	13.7	(0.5)
	Germany	-0.40	(0.02) ‡	0.94	(0.01) ‡	16.4	(0.8) ‡	50.4	(1.0) ‡	28.3	(1.0) ‡	4.9	(0.5) ‡
	Greece	-0.06	(0.01)	0.95	(0.01)	13.6	(0.6)	50.5	(0.7)	26.8	(0.6)	9.1	(0.4)
	Hungary	-0.20	(0.02)	0.99	(0.01)	11.3	(0.6)	48.2	(0.8)	30.8	(0.9)	9.8	(0.5)
	Iceland	0.09	(0.02) †	0.99	(0.01) †	8.5	(0.5)	30.0	(0.9)	48.4	(1.0)	13.2	(0.6)
	Ireland	0.20	(0.02)	0.97	(0.01)	4.5	(0.3)	34.5	(0.8)	44.6	(0.8)	16.4	(0.5)
	Israel	-0.08	(0.02)	1.07	(0.01)	16.6	(0.6)	40.6	(0.7)	30.9	(0.7)	11.9	(0.6)
	Italy	-0.21	(0.01)	0.95	(0.01)	12.6	(0.5)	46.0	(0.8)	31.0	(0.9)	10.4	(0.5)
	Japan	-0.37	(0.02)	1.00	(0.01)	21.1	(0.7)	54.4	(0.7)	17.6	(0.6)	6.9	(0.4)
	Korea	0.52	(0.02)	1.11	(0.01)	8.9	(0.5)	25.2	(0.6)	41.6	(0.6)	24.3	(0.7)
	Latvia	-0.07	(0.01)	0.89	(0.01)	8.3	(0.4)	53.4	(0.8)	30.8	(0.7)	7.6	(0.4)
	Lithuania	0.10	(0.01)	1.01	(0.01)	9.2	(0.4)	41.0	(0.7)	36.5	(0.6)	13.2	(0.4)
	Luxembourg	-0.15	(0.02)	0.95	(0.01)	12.1	(0.5)	48.2	(0.7)	31.3	(0.6)	8.3	(0.5)
	Mexico	0.01	(0.02) †	0.87	(0.01) †	6.1	(0.5) †	41.0	(0.9) †	44.0	(0.8) †	9.0	(0.6) †
	Netherlands*	-0.45	(0.02)	0.83	(0.01)	12.3	(0.6)	64.8	(0.8)	20.4	(0.6)	2.5	(0.3)
	New Zealand	0.34	(0.01)	0.93	(0.01)	3.1	(0.3)	30.0	(0.7)	48.4	(0.9)	18.5	(0.5)
	Norway	0.43	(0.02)	0.88	(0.01)	3.3	(0.3)	15.5	(0.5)	57.1	(0.7)	24.1	(0.7)
	Poland	0.18	(0.01)	0.89	(0.01)	10.3	(0.6)	34.8	(0.7)	45.2	(0.8)	9.8	(0.4)
	Portugal*	0.19	(0.01)	0.95	(0.01)	5.1	(0.3)	37.6	(0.8)	43.2	(0.9)	14.1	(0.5)
	Slovak Republic	-0.09	(0.02)	0.93	(0.01)	11.9	(0.5)	47.6	(0.8)	30.3	(0.7)	10.3	(0.5)
	Slovenia	-0.16	(0.02)	0.94	(0.01)	11.0	(0.5)	54.1	(0.9)	25.9	(0.8)	9.0	(0.4)
	Spain	-0.05	(0.01) †	1.01	(0.01) †	9.9	(0.3) †	36.2	(0.4) †	41.7	(0.5) †	12.3	(0.3) †
	Sweden	0.10	(0.02)	1.02	(0.01)	4.9	(0.4)	35.2	(0.9)	43.2	(0.7)	16.8	(0.7)
	Switzerland	-0.16	(0.02) †	0.96	(0.01) †	13.3	(0.6) †	46.2	(1.0) †	31.7	(0.8) †	8.8	(0.5) †
	Turkey	-0.34	(0.02)	1.10	(0.01)	10.1	(0.4)	29.9	(0.6)	36.9	(0.6)	23.2	(0.6)
	United Kingdom	0.30	(0.02)	0.94	(0.01)	4.4	(0.2)	37.8	(0.6)	42.6	(0.6)	15.1	(0.5)
	United States*	0.39	(0.02)	0.98	(0.01)	3.2	(0.3)	29.8	(0.8)	44.8	(0.9)	22.1	(0.9)
	<b>OECD average</b>	<b>-0.01</b>	<b>(0.00)</b>	<b>0.96</b>	<b>(0.00)</b>	<b>9.8</b>	<b>(0.1)</b>	<b>42.0</b>	<b>(0.1)</b>	<b>36.4</b>	<b>(0.1)</b>	<b>11.8</b>	<b>(0.1)</b>

\*Data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

1. The index of student competition is based on the following statements: "Students seem to value competition", "It seems that students are competing with each other", and "Students seem to share the feeling that competing with each other is important".

**Note:** Information regarding the proportion of the sample covered is shown next to the standard error. No symbol means at least 75% of the population was covered; one dagger (†) means at least 50% but less than 75%; and one double dagger (‡) means less than 50% was covered. For comparisons across cycles, the coverage information corresponds to the cycle with the lowest sample coverage.

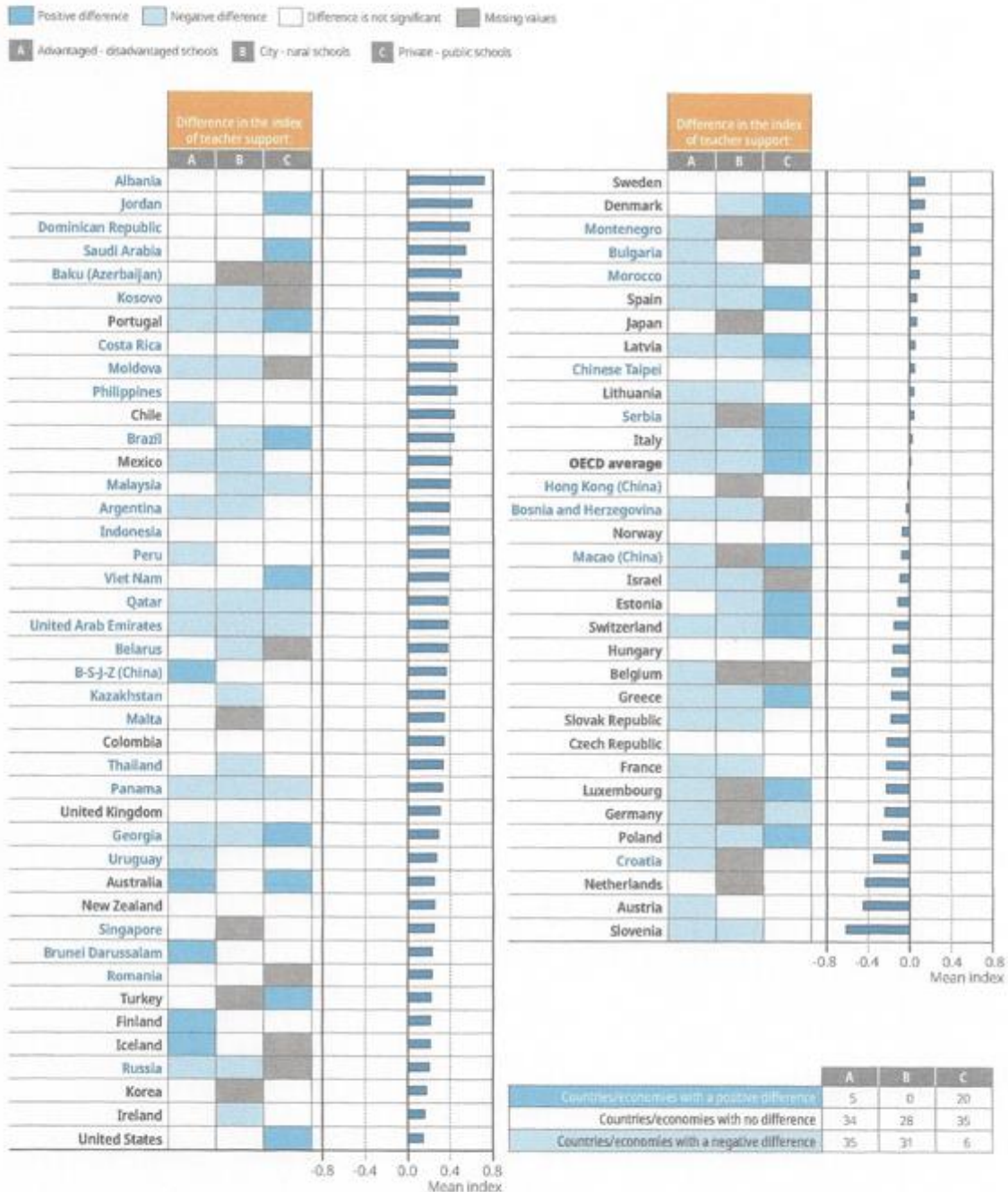
StatLink  <http://dx.doi.org/10.1787/888934030990>



(vi) Teacher support: 5<sup>th</sup> (Figure III.6.2)

Figure III.6.2 Index of teacher support, by school characteristics

Based on students' reports



Countries and economies are ranked in descending order of the index of teacher support.

Source: OECD, PISA 2018 Database, Tables III.B1.6.1 and III.B1.6.6.

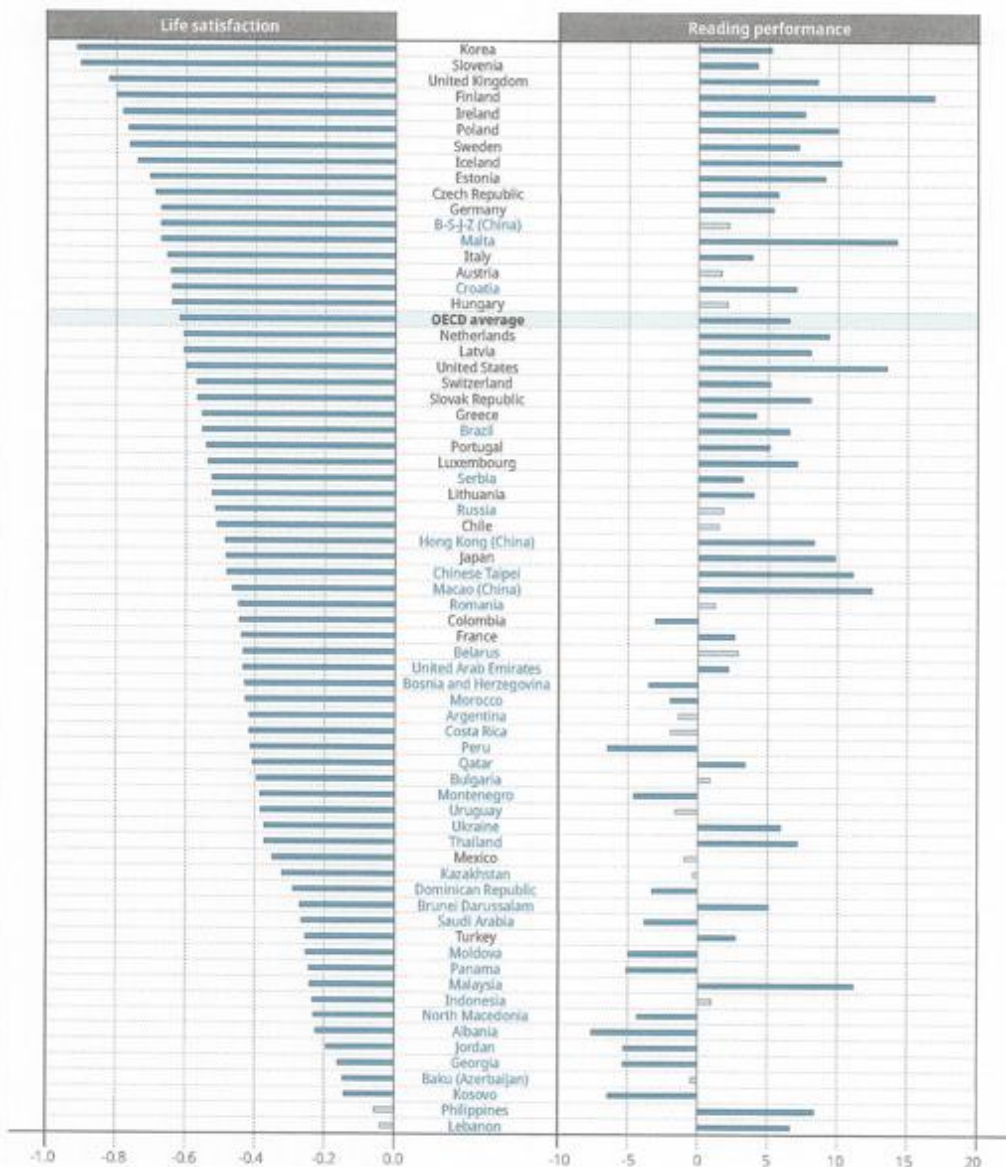
StatLink <http://dx.doi.org/10.1787/888934029498>

### 5.2.2 Relationship between Life Satisfaction and Fear of Failure

Fear of failure appears to have a significant impact on life satisfaction, with the UK link being particularly striking (Figure III.13.7):

Figure III.13.7 How fear of failure is related to reading performance and life satisfaction

Change associated with a one-unit increase in the index of fear of failure<sup>1</sup>



1. Higher values in the index indicate a greater fear of failure.

Notes: Statistically significant values are shown in darker tones (see Annex A3).

The results are based on linear regression analysis, after accounting for students' and schools' socio-economic profile. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).

Countries and economies are ranked in ascending order of the change in the index of life satisfaction associated with a one-unit increase in the index of fear of failure.

Source: OECD, PISA 2018 Database, Tables III.B1.13.10 and III.B1.13.15.

StatLink <http://dx.doi.org/10.1787/888954020667>

### 5.2.3 PISA 2015 life satisfaction linkages.

PISA 2015 set out six factors (four positive, two negative) affecting student life satisfaction: positive social context; more physical activity; good teacher support; and good parental support (all positive); and anxiety with schoolwork; and high internet usage (both negative). We commented on these in our August 2018 report.

### 5.3 Factors influencing positive feelings and sadness

PISA 2018 received responses from 9 countries on nine factors that could influence student feelings, positive and negative. As can be seen from Figures III.12.7 and 8 below, the most significant four factors were:

- The way they look
- Their life at school
- How they use their time
- Their relationship with parents or guardians

More work needs to be undertaken in the UK on these (and other) factors.

Figure III.12.7 Satisfaction with different aspects of life and positive feelings



1. The index of positive feelings is based on three items: "happy", "joyful" and "cheerful".  
 Notes: Results based on a linear regression analysis, after accounting for students' gender, immigrant background and socio-economic status. The socio-economic status is measured by the PISA index of economic, social and cultural status (ESCS).

Figure III.12.8 Satisfaction with different aspects of life and feelings of sadness



Notes: Results based on a logit regression analysis, after accounting for students' gender, immigration background and socio-economic status. The socio-economic status is measured by the PISA index of economic, social and cultural status (ESCS).  
 All predictors were included in the same logit regression model.  
 Source: OECD, PISA 2018 Database, Table III.B1.12.22.  
 StatsLink: <https://dx.doi.org/10.1787/888934030572>

## Appendix 6

### Life satisfaction and meaning in life (Cognitive subjective wellbeing, Appendix 2), positive and negative feelings (affective subjective wellbeing, Appendix 3), and self-efficacy and fear of failure (Appendix 4) rankings by country

The table below takes each of the six rankings seen earlier in this report (four positive, two negative) for each country, adds them and then ranks the countries according to the aggregate ranking. It should be noted that only 29 countries completed sufficient data for all six measures; these are the ones included in the table below. Other countries will have been included in individual measures: Life satisfaction (30 countries); meaning in Life (33); positive feelings (31); negative feelings (32); self-efficacy (36); and fear of failure (35).

	Average life satisfaction		Meaning of Life		Index of positive feelings		Index of negative feelings		Index of self efficacy		Index of fear of failure		Sum of rankings	Ranking of rankings
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank		
<b>OECD countries (30) with sufficient data</b>														
Mexico	8.11	1	0.49	1	0.36	1	37.95	6	0.36	1	0.06	25	74	1
Colombia	7.62	2	0.47	2	0.25	4	42.99	17	0.30	3	-0.19	5	77	2
Lithuania	7.61	4	0.12	8	0.08	12	34.06	2	0.23	5	-0.07	14	79	3
Switzerland	7.38	6	0.22	3	0.22	7	41.36	13	0.02	16	-0.28	3	90	4
Austria	7.14	13	0.16	5	0.11	10	43.11	18	0.08	12	-0.26	4	105	5
Chile	7.03	17	0.18	4	0.17	9	38.90	9	0.29	4	0.08	26	109	6
Spain	7.35	7	0.10	11	0.30	2	48.56	28	0.17	7	-0.12	10	114	7
Germany	7.02	18	0.11	9	0.07	13	41.74	14	-0.02	19	-0.37	2	117	8
Finland	7.61	3	0.06	15	-0.12	24	38.62	8	-0.03	23	-0.19	6	117	9
Hungary	7.12	15	-0.17	28	0.19	8	39.20	10	0.17	6	-0.10	12	118	10
Iceland	7.34	8	-0.08	24	-0.09	22	34.53	3	0.10	11	0.00	19	121	11
Netherlands*	7.50	5	-0.18	29	0.08	11	40.60	11	-0.11	30	-0.39	1	127	12
France	7.19	11	0.10	10	0.27	3	42.19	15	-0.10	29	0.06	24	135	13
Turkey	5.62	30	0.15	6	-0.26	29	38.12	7	0.36	2	0.12	27	139	14
Luxembourg	7.04	16	0.09	14	0.07	14	46.92	25	-0.01	17	-0.14	9	142	15
Portugal*	7.13	14	0.09	13	0.22	6	48.27	27	-0.01	18	-0.01	17	144	16
Greece	6.99	20	0.03	16	-0.05	18	46.44	23	0.05	14	-0.09	13	150	17
Latvia	7.16	12	-0.07	23	0.03	15	42.42	16	-0.19	32	-0.10	11	151	18
Estonia	7.19	10	-0.06	21	-0.18	28	45.19	22	-0.03	21	-0.17	8	155	19
Slovenia	6.86	23	0.03	17	-0.61	31	35.94	4	-0.05	26	0.00	20	156	20
Poland	6.74	25	-0.07	22	-0.08	21	37.68	5	-0.06	27	0.01	22	159	21
United States*	6.75	24	0.12	7	-0.13	26	47.70	26	0.17	8	0.17	28	167	22
Slovak Republic	7.22	9	-0.04	20	-0.02	17	46.71	24	-0.28	35	0.01	21	172	23
Sweden	7.01	19	-0.11	27	-0.05	19	44.11	20	-0.06	28	0.00	18	175	24
Korea	6.52	27	0.09	12	0.03	16	49.68	29	-0.04	24	0.19	29	187	25
Ireland	6.74	26	-0.18	30	-0.09	23	41.08	12	-0.04	25	0.21	30	187	26
Czech Republic	6.91	21	-0.22	31	-0.13	27	52.20	30	-0.28	34	-0.05	15	210	27
United Kingdom	6.16	29	-0.25	32	-0.29	30	54.23	31	-0.17	31	0.27	34	241	28
Japan	6.18	28	-0.40	33	-0.13	25	63.75	32	-0.61	36	0.38	35	252	29

## Appendix 7

### PISA 2018: Countries with both Attainment and Life Satisfaction results

#### Appendix 7.1 Ranked alphabetically

Four countries (in red) achieve very good rankings in life satisfaction, whilst maintaining upper level attainment performance: Estonia, Finland, Switzerland and The Netherlands:

	2018 Rankings	
	Attainment	Life satisfaction
Argentina	48	9
Austria	28	14
Chile	46	18
China (Beijing, Shanghai, Jiangsu, Zhejiang)	1	28
Croatia	37	1
Czechia	24	22
<b>Estonia</b>	<b>5</b>	<b>11</b>
<b>Finland</b>	<b>10</b>	<b>2</b>
France	26	12
Germany	19	19
Greece	43	21
Hong Kong/China	4	31
Hungary	33	16
Iceland	31	7
Ireland	12	27
Italy	34	23
Japan	6	32
Latvia	29	13
Lithuania	32	3
Luxembourg	35	17
Macao	3	34
Malta	42	29
<b>Netherlands</b>	<b>16</b>	<b>4</b>
Poland	11	26
Portugal	27	15
Russia	30	8
Slovakia	38	10
Slovenia	13	24
South Korea (09_06 Korea)	7	30
Spain	49	6
Sweden	16	20
<b>Switzerland</b>	<b>22</b>	<b>5</b>
Turkey	40	35
United Kingdom	13	33
United States	25	25



## Appendix 7.2 Ranked by attainment

Of the top 15 countries ranked by student attainment, four were also in the top 15 for life satisfaction: Estonia, Finland, Netherlands and Switzerland:

	2018 Rankings	
	Attainment	Life satisfaction
Argentina	48	9
Austria	28	14
Chile	46	18
China (Beijing, Shanghai, Jiangsu, Zhejiang)	1	28
Croatia	37	1
Czechia	24	22
<b>Estonia</b>	<b>5</b>	<b>11</b>
<b>Finland</b>	<b>10</b>	<b>2</b>
France	26	12
Germany	19	19
Greece	43	21
Hong Kong/China	4	31
Hungary	33	16
Iceland	31	7
Ireland	12	27
Italy	34	23
Japan	6	32
Latvia	29	13
Lithuania	32	3
Luxembourg	35	17
Macao	3	34
Malta	42	29
<b>Netherlands</b>	<b>16</b>	<b>4</b>
Poland	11	26
Portugal	27	15
Russia	30	8
Slovakia	38	10
Slovenia	13	24
South Korea (09_06 Korea)	7	30
Spain	49	6
Sweden	16	20
<b>Switzerland</b>	<b>22</b>	<b>5</b>
Turkey	40	35
United Kingdom	13	33
United States	25	25

	2018 Rankings	
	Attainment	Life satisfaction
China (Beijing, Shanghai, Jiangsu, Zhejiang)	1	28
Macao	3	34
Hong Kong/China	4	31
<b>Estonia</b>	<b>5</b>	<b>11</b>
Japan	6	32
South Korea (09_06 Korea)	7	30
<b>Finland</b>	<b>10</b>	<b>2</b>
Poland	11	26
Ireland	12	27
Slovenia	13	24
United Kingdom	13	33
<b>Netherlands</b>	<b>16</b>	<b>4</b>
Sweden	16	20
Germany	19	19
<b>Switzerland</b>	<b>22</b>	<b>5</b>
Czechia	24	22
United States	25	25
France	26	12
Portugal	27	15
Austria	28	14
Latvia	29	13
Russia	30	8
Iceland	31	7
Lithuania	32	3
Hungary	33	16
Italy	34	23
Luxembourg	35	17
Croatia	37	1
Slovakia	38	10
Turkey	40	35
Malta	42	29
Greece	43	21
Chile	46	18
Argentina	48	9
Spain	49	6

### Appendix 7.3 Ranked by life satisfaction

The top eighteen countries ranked by life satisfaction were all ranked worse than 25<sup>th</sup> in attainment apart from these same four countries (Estonia, Finland, Netherlands and Switzerland):

Rankings of countries with both attainment and life satisfaction rankings		
	2018 Rankings	
	Attainment	Life satisfaction
Croatia	37	1
<b>Finland</b>	<b>10</b>	<b>2</b>
Lithuania	32	3
<b>Netherlands</b>	<b>16</b>	<b>4</b>
<b>Switzerland</b>	<b>22</b>	<b>5</b>
Spain	49	6
Iceland	31	7
Russia	30	8
Argentina	48	9
Slovakia	38	10
<b>Estonia</b>	<b>5</b>	<b>11</b>
France	26	12
Latvia	29	13
Austria	28	14
Portugal	27	15
Hungary	33	16
Luxembourg	35	17
Chile	46	18
Germany	19	19
Sweden	16	20
Greece	43	21
Czechia	24	22
Italy	34	23
Slovenia	13	24
United States	25	25
Poland	11	26
Ireland	12	27
China (Beijing, Shanghai, Jiangsu, Zhejiang)	1	28
Malta	42	29
South Korea (09_06 Korea)	7	30
Hong Kong/China	4	31
Japan	6	32
United Kingdom	13	33
Macao	3	34
Turkey	40	35

#### **Appendix 7.4 Correlation coefficients**

There is a weak, negative correlation between attainment and life satisfaction in each of the following four cases (-0.35 or less):

- 2018 life satisfaction and 2018 attainment
- 2018 life satisfaction and % change in attainment between 2015 and 2018
- 2018 attainment and % change in life satisfaction between 2015 and 2018
- % changes (between 2015 and 2018) of both attainment and life satisfaction

## Appendix 8 Other Socioeconomic reports

### Appendix 8.1

**Growing up Unequal: gender and socioeconomic differences in young people’s health and well-being.** Health Behaviour in School-aged children (HBSC) study: International Report from the 2013/14 Survey

HBSC, a WHO collaborative cross-national study, asks 11-, 13- and 15-year-old boys and girls about their health and well-being, social environments and health behaviours every four years using a self-report survey. The first HBSC survey was conducted in 1983/1984 in five countries. The study has now grown to include 44 countries and regions across Europe and North America.

A summary of selected data for 15 year olds, ranked against the other countries in the survey, is shown in the table below. It is notable that the top three countries in the HBSC ranking of rankings are Switzerland, Finland and The Netherlands – three of the four countries that manage to achieve both student attainment and life satisfaction. The fourth of those countries, Estonia, is ninth.

Social/Teenage Comparison Data	15 yr olds %															Average of rankings	
	Rank: Family structure (highest %, worst ranking)	Rank: quality of family communication (highest %, highest ranking)	Rank: serious injury requiring medical treatment (highest %, worst ranking)	Rank: difficulty getting to sleep (highest %, worst ranking)	Rank: feeling nervous (highest %, worst ranking)	Rank: feeling low (highest %, worst ranking)	Rank: vigorous physical activity levels (highest %, highest ranking)	Rank: Daily vegetable consumption (highest %, highest ranking)	Rank: Having breakfast with mother or father every day (highest %, highest ranking)	Rank: Playing computer games (highest %, worst ranking)	Rank: Drinking spirits (highest %, worst ranking)	Rank: Daily smoking (highest %, worst ranking)	Rank: fighting (highest %, worst ranking)	Rank: being bullied (highest %, worst ranking)	Rank: being cyberbullied (highest %, worst ranking)		
For those 35 countries with both 2015-2018 attainment and life satisfaction scores, excluding 9 with no HBSC data																	
Switzerland	8	2	12	17	7	6	2	1	4	4	7	5	4	19	1	6.6	
Finland	15	4	3	8	4	1	2	16	26	2	1	10	2	13	11	7.9	
Netherlands	10	14	1	18	3	4	1	3	11	25	1	9	20	8	11	9.3	
Iceland	16	1	9	21	5	14	26	8	15	13	1	1	1	1	11	9.5	
Sweden	20	3	9	25	11	19	6	4	18	20	1	2	2	3	1	9.6	
Germany	12	4	20	13	1	2	5	20	6	24	7	14	9	11	1	9.9	
Portugal	12	10	3	7	8	5	24	24	3	5	13	5	5	23	11	10.5	
Austria	10	14	18	4	2	2	6	14	15	8	21	14	16	22	1	11.1	
Estonia	12	13	12	9	8	16	11	25	15	14	7	10	6	19	11	12.5	
Ireland	16	24	9	23	16	16	10	2	14	3	1	5	12	16	22	12.6	
Greece	2	14	3	4	23	19	17	10	18	9	21	19	25	6	1	12.7	
Slovenia	5	18	12	18	11	14	19	20	24	1	20	12	8	8	1	12.7	
Croatia	2	7	12	3	18	7	22	18	10	5	24	26	18	5	17	12.9	
Italy	4	21	20	13	26	26	11	12	6	14	21	24	9	1	1	13.9	
Luxembourg	16	9	12	24	17	22	4	10	4	18	13	22	12	15	17	14.3	
Latvia	25	17	22	9	11	19	11	16	6	11	9	1	14	16	25	14.7	
France	20	19	24	26	18	11	16	6	11	9	7	18	19	20	16	14.9	
World Average, see note)	United Kingdom	23	22	2	21	6	18	15	5	23	21	18	3	11	21	17	15.1
Malta	1	6	3	15	24	25	25	7	11	26	26	5	23	8	22	15.1	
Poland	6	24	8	18	25	23	23	14	21	5	7	14	12	16	11	15.1	
Lithuania	16	19	18	9	11	11	8	12	1	23	13	19	20	26	22	15.2	
Czechia	23	23	22	15	22	9	11	20	24	16	13	12	24	6	1	16.1	
Hungary	20	8	7	9	18	23	18	18	21	18	25	25	19	12	1	16.1	
Russia	-	12	17	1	8	9	21	9	2	16	7	14	12	24	26	-	
Slovakia	9	26	-	4	18	11	20	20	20	22	19	22	25	14	17	-	
Spain	6	11	-	2	11	7	9	26	9	11	13	4	7	4	22	-	

Source: HBSC. Growing up Unequal: gender and socioeconomic differences in young people’s health and well-being.

It should be noted that the HBSC report includes a large number of tables, from which we have extracted those in green as representative data for 15 year olds:

**1. Social context:**

- family structure: young people living in different family types
- immigrant status
- high quality of family communication
- spending time with friends after 8 pm (20:00) daily
- contacting friends using texting/SMS daily.

**2. Health outcomes:**

- overweight and obesity, using International Obesity Task Force cut-off points
- overweight and obesity: rates of missing BMI data
- most serious injury requiring medical treatment
- reporting difficulties getting to sleep more than once a week
- reporting stomach ache more than once a week
- reporting feeling nervous more than once a week
- reporting a headache more than once a week
- reporting feeling low more than once a week.

**3. Health behaviours:**

- participating in vigorous physical activity for two or more hours per week
- daily vegetable consumption
- daily sweets consumption
- having breakfast with mother or father every day
- using a computer for email, internet or homework for two or more hours on weekdays
- playing games on a computer or games console for two or more hours on weekdays.

**4. Risk behaviour:**

- drinking beer at least once a week
- drinking alcopops at least once a week
- drinking wine at least once a week
- drinking spirits at least once a week
- first alcohol use at age 13 or younger
- ever smoked tobacco
- daily smoking
- involved in a physical fight at least once in the past 12 months
- been bullied at school at least once in the past couple of months
- bullying others at school at least once in the past couple of months
- been cyberbullied by messages at least once
- been cyberbullied by pictures at least once
- been cyberbullied by pictures at least 2–3 times a month.



## Appendix 8.2

### Obesity

The World Obesity Federation (WOF) represents professional members of the scientific, medical and research communities from over 50 regional and national obesity associations. Through our membership we create a global community of organisations dedicated to solving the problems of obesity.

WOF completes individual report cards, providing the latest estimates of infant, child and adolescent obesity prevalence in 191 countries. They also provide estimates of the prevalence and numbers of children living with obesity in 2030, along with an estimate of the probability of achieving the World Health Organization (WHO) target of ‘no increase in obesity prevalence by 2025’ on the assumption that present trends continue.

A summary of the results for the countries identified elsewhere in this document is as follows. It can be seen that the four countries which achieve in both student attainment and life satisfaction have comparably good obesity records, with all four (Estonia, Switzerland, Netherlands and Finland) being in the top 10, and the top three (Estonia, Switzerland and Netherlands) being in the top six.

Child obesity	Ranking 2016 % boys aged 10-19 with obesity	Ranking 2016 % girls aged 10-19 with obesity	Ranking Predicted 2030 % children aged 10-19 with obesity	Average ranking, 2016 actual and 2030 forecast obesity
For those 35 countries with both 2015-2018 attainment and life satisfaction scores, excluding four with inadequate obesity records				
Estonia	1	2	4	2
Russia	3	1	3	2
Switzerland	1	5	1	2
Lithuania	4	3	6	4
Sweden	8	5	2	5
Netherlands	4	11	6	7
Latvia	7	7	9	8
Luxembourg	13	12	5	10
France	6	20	6	11
Finland	21	8	11	13
Poland	18	3	19	13
Slovakia	11	9	21	14
Germany	14	15	14	14
Austria	17	12	15	15
Slovenia	9	16	21	15
Portugal	11	24	13	16
Ireland	10	22	17	16
Iceland	21	17	12	17
United Kingdom	15	26	10	17
Czechia	20	14	20	18
Spain	19	19	16	18
Italy	23	23	18	21
China (Beijing, Shanghai, Jiangsu, Zhejiang)	25	10	30	22
Croatia	24	17	25	22
Turkey	16	27	26	23
Hungary	26	21	27	25
Malta	27	28	21	25
Greece	28	25	24	26
Chile	29	30	28	29
Argentina	30	29	29	29
United States	31	31	31	31

Source: World Obesity Federation