

# PIRLS 2011

## The PIRLS 2011 Students Like Reading Scale

The Students Like Reading (SLR) scale was created based on students' responses to the eight statements described below. See [Creating and Interpreting TIMSS and PIRLS 2011 Context Questionnaire Scales](#) for more information on how the scales were formed.

**Exhibit 1: Items in the PIRLS 2011 Students Like Reading Scale**

**What do you think about reading? Tell how much you agree with each of these statements.**

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
ASBR07A* 1) I read only if I have to* -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR07B 2) I like talking about what I read with other people -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR07C 3) I would be happy if someone gave me a book as a present -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR07D* 4) I think reading is boring* -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR07E 5) I would like to have more time for reading -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR07F 6) I enjoy reading -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* Reverse coded

←-----→

Like Reading
Somewhat Like Reading
Do Not Like Reading

11.0
8.2

**How often do you do these things outside of school?**

	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never
ASBR02A 1) I read for fun -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR02B 2) I read things that I choose myself -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

←-----→

Like Reading
Somewhat Like Reading
Do Not Like Reading

11.0
8.2

**Exhibit 2: Item Parameters for the PIRLS 2011 Students Like Reading Scale**

Item	delta	tau_1	tau_2	tau_3
ASBR07A*	-0.12481	-0.00545	0.07325	-0.06780
ASBR07B	-0.57871	-0.14195	-0.35871	0.50066
ASBR07C	-1.01157	0.09181	-0.33602	0.24421
ASBR07D*	-0.86280	0.03216	0.19059	-0.22275
ASBR07E	-0.67436	-0.28846	-0.12790	0.41636
ASBR07F	-1.05489	0.21701	-0.39316	0.17615
ASBR02A	-0.58419	0.10397	-0.64568	0.54171
ASBR02B	-1.03058	-0.09460	-0.30701	0.40161

\* Reverse coded

**Exhibit 3: Scale Transformation Constants**

Scale Transformation Constants

$$A = 10.00804$$

$$B = 2.12934$$

$$\text{Transformed Scale Score} = 10.00804 + 2.12934 \cdot \text{Logit Scale Score}$$

**Exhibit 4: Equivalence Table of the Raw Score and the Transformed Scale Score**

Raw Score	Transformed Scale Score	Cutpoint	Raw Score	Transformed Scale Score	Cutpoint
0	2.54648		13	8.57567	
1	4.44628		14	8.81107	
2	5.28060		15	9.05518	
3	5.82848		16	9.31239	
4	6.24743		17	9.59084	
5	6.59515		18	9.88980	
6	6.89835		19	10.22658	
7	7.17171		20	10.61953	
8	7.42476		21	11.09533	11.0
9	7.66429		22	11.72951	
10	7.89554		23	12.71112	
11	8.12255	8.2	24	14.95609	
12	8.34513				

**Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the PIRLS 2011 Students Like Reading Scale**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item							
			ASBR07A*	ASBR07B	ASBR07C	ASBR07D*	ASBR07E	ASBR07F	ASBR02A	ASBR02B
Australia	0.84	49	0.51	0.48	0.69	0.78	0.81	0.87	0.74	0.62
Austria	0.85	50	0.64	0.48	0.65	0.78	0.72	0.88	0.80	0.64
Azerbaijan	0.38	26	0.43	0.44	0.64	0.44	0.68	0.74	-0.15	0.22
Belgium (French)	0.77	41	0.37	0.42	0.68	0.63	0.72	0.84	0.71	0.63
Bulgaria	0.83	48	0.46	0.60	0.72	0.68	0.76	0.84	0.75	0.64
Canada	0.83	48	0.57	0.50	0.67	0.77	0.78	0.86	0.74	0.58
Chinese Taipei	0.81	45	0.37	0.51	0.59	0.68	0.84	0.84	0.73	0.68
Colombia	0.64	32	0.24	0.60	0.66	0.40	0.76	0.78	0.44	0.44
Croatia	0.84	47	0.58	0.59	0.71	0.76	0.78	0.85	0.63	0.55
Czech Republic	0.85	50	0.61	0.57	0.72	0.78	0.69	0.87	0.77	0.61
Denmark	0.82	46	0.67	0.47	0.65	0.79	0.71	0.85	0.71	0.45
England	0.85	50	0.60	0.53	0.71	0.77	0.77	0.87	0.74	0.62
Finland	0.88	55	0.68	0.53	0.73	0.83	0.73	0.88	0.77	0.73
France	0.78	42	0.46	0.50	0.62	0.70	0.63	0.84	0.74	0.61
Georgia	0.60	31	0.30	0.50	0.72	0.45	0.74	0.80	0.32	0.40
Germany	0.85	51	0.67	0.47	0.67	0.80	0.69	0.88	0.78	0.67
Hong Kong SAR	0.78	43	0.15	0.52	0.68	0.62	0.81	0.84	0.72	0.66
Hungary	0.85	49	0.63	0.59	0.71	0.70	0.77	0.84	0.72	0.61
Indonesia	0.41	22	0.25	0.35	0.49	0.36	0.68	0.66	0.37	0.44
Iran, Islamic Rep. of	0.52	27	0.32	0.54	0.63	0.48	0.71	0.75	0.20	0.20
Ireland	0.84	50	0.57	0.51	0.73	0.79	0.75	0.86	0.74	0.63
Israel	0.83	48	0.50	0.53	0.73	0.71	0.79	0.85	0.74	0.60
Italy	0.82	46	0.46	0.57	0.74	0.73	0.80	0.84	0.65	0.54
Lithuania	0.80	44	0.42	0.54	0.70	0.73	0.72	0.83	0.71	0.54
Malta	0.79	43	0.40	0.55	0.72	0.71	0.80	0.85	0.66	0.40
Morocco	0.56	27	0.17	0.58	0.51	0.39	0.69	0.68	0.46	0.52
Netherlands	0.84	49	0.56	0.43	0.67	0.81	0.74	0.87	0.78	0.64
New Zealand	0.80	45	0.49	0.41	0.69	0.71	0.77	0.84	0.72	0.61
Northern Ireland	0.86	52	0.62	0.56	0.73	0.80	0.77	0.86	0.74	0.66
Norway	0.79	43	0.54	0.40	0.65	0.78	0.67	0.85	0.64	0.59
Oman	0.54	29	-0.14	0.58	0.60	0.34	0.68	0.72	0.50	0.50
Poland	0.85	50	0.51	0.67	0.73	0.72	0.74	0.86	0.75	0.59
Portugal	0.72	36	0.46	0.51	0.63	0.69	0.63	0.77	0.54	0.50
Qatar	0.59	31	-0.14	0.53	0.67	0.32	0.73	0.75	0.54	0.49
Romania	0.80	44	0.47	0.57	0.69	0.65	0.76	0.82	0.73	0.54
Russian Federation	0.78	43	0.37	0.57	0.68	0.70	0.75	0.82	0.70	0.51
Saudi Arabia	0.60	29	0.17	0.44	0.62	0.48	0.66	0.74	0.52	0.47
Singapore	0.75	41	0.48	0.40	0.71	0.76	0.83	0.87	0.34	0.49

**Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the PIRLS 2011 Students Like Reading Scale (Continued)**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item							
			ASBR07A*	ASBR07B	ASBR07C	ASBR07D*	ASBR07E	ASBR07F	ASBR02A	ASBR02B
Slovak Republic	0.84	49	0.61	0.55	0.72	0.74	0.71	0.84	0.74	0.63
Slovenia	0.81	45	0.48	0.53	0.73	0.72	0.71	0.86	0.64	0.58
Spain	0.77	41	0.40	0.53	0.66	0.70	0.77	0.83	0.65	0.48
Sweden	0.85	50	0.55	0.49	0.67	0.81	0.72	0.88	0.79	0.67
Trinidad and Tobago	0.72	37	0.37	0.59	0.71	0.58	0.77	0.81	0.51	0.35
United Arab Emirates	0.65	32	0.13	0.51	0.63	0.50	0.74	0.79	0.52	0.44
United States	0.84	49	0.52	0.52	0.70	0.76	0.80	0.86	0.75	0.58
<b>Sixth Grade Participants</b>										
Botswana	0.47	28	0.26	0.57	0.66	0.64	0.69	0.69	-0.14	0.17
Honduras	0.69	35	0.23	0.61	0.71	0.39	0.79	0.80	0.49	0.50
Kuwait	0.69	34	0.25	0.53	0.66	0.49	0.75	0.78	0.55	0.51
Morocco	0.61	30	0.31	0.64	0.49	0.54	0.71	0.73	0.40	0.41
<b>Benchmarking Participants</b>										
Alberta, Canada	0.82	47	0.54	0.49	0.67	0.79	0.78	0.85	0.72	0.57
Ontario, Canada	0.82	46	0.56	0.49	0.67	0.73	0.77	0.84	0.72	0.58
Quebec, Canada	0.81	45	0.53	0.47	0.64	0.76	0.76	0.85	0.71	0.59
Maltese - Malta	0.79	43	0.40	0.55	0.72	0.71	0.80	0.85	0.66	0.39
Eng/Afr (5) - RSA <sup>◊</sup>	0.62	32	0.10	0.59	0.74	0.24	0.77	0.77	0.48	0.41
Andalusia, Spain	0.77	41	0.37	0.52	0.66	0.69	0.77	0.82	0.66	0.52
Abu Dhabi, UAE	0.62	31	0.01	0.54	0.61	0.46	0.72	0.78	0.53	0.48
Dubai, UAE	0.69	35	0.27	0.49	0.65	0.57	0.76	0.80	0.55	0.43
Florida, US	0.84	49	0.55	0.53	0.71	0.77	0.80	0.86	0.73	0.57
<b>prePIRLS Participants</b>										
Botswana	0.42	25	-0.24	0.49	0.66	0.41	0.68	0.65	0.17	0.42
Colombia	0.64	32	0.25	0.60	0.66	0.40	0.76	0.78	0.44	0.44
South Africa	0.46	28	-0.20	0.65	0.69	-0.05	0.70	0.72	0.36	0.40

\* Reverse coded

◊ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

**Exhibit 6: Relationship Between the PIRLS 2011 Students Like Reading Scale and PIRLS 2011 Reading Achievement**

Country	Pearson's Correlation with Reading Achievement		Variance in Reading Achievement Accounted for by Difference Between Regions of the Scale ( $\eta^2$ )
	(r)	(r <sup>2</sup> )	
Australia	0.34	0.12	0.11
Austria	0.23	0.05	0.05
Azerbaijan	0.17	0.03	0.03
Belgium (French)	0.29	0.08	0.08
Bulgaria	0.25	0.06	0.05
Canada	0.29	0.08	0.08
Chinese Taipei	0.31	0.10	0.09
Colombia	0.20	0.04	0.04
Croatia	0.14	0.02	0.02
Czech Republic	0.22	0.05	0.05
Denmark	0.24	0.06	0.06
England	0.32	0.10	0.09
Finland	0.35	0.12	0.11
France	0.34	0.12	0.10
Georgia	0.26	0.07	0.06
Germany	0.29	0.09	0.09
Hong Kong SAR	0.27	0.07	0.06
Hungary	0.28	0.08	0.08
Indonesia	0.27	0.07	0.06
Iran, Islamic Rep. of	0.28	0.08	0.07
Ireland	0.30	0.09	0.10
Israel	0.16	0.02	0.04
Italy	0.20	0.04	0.04
Lithuania	0.21	0.04	0.05
Malta	0.24	0.06	0.05
Morocco	0.28	0.08	0.07
Netherlands	0.28	0.08	0.08
New Zealand	0.34	0.12	0.12
Northern Ireland	0.30	0.09	0.09
Norway	0.27	0.07	0.07
Oman	0.29	0.08	0.07
Poland	0.24	0.06	0.05
Portugal	0.22	0.05	0.04
Qatar	0.32	0.10	0.07
Romania	0.29	0.08	0.07
Russian Federation	0.18	0.03	0.03
Saudi Arabia	0.26	0.07	0.05

**Exhibit 6: Relationship Between the PIRLS 2011 Students Like Reading Scale and PIRLS 2011 Reading Achievement (Continued)**

Country	Pearson's Correlation with Reading Achievement		Variance in Reading Achievement Accounted for by Difference Between Regions of the Scale ( $\eta^2$ )
	(r)	(r <sup>2</sup> )	
Singapore	0.31	0.10	0.09
Slovak Republic	0.22	0.05	0.05
Slovenia	0.29	0.09	0.09
Spain	0.23	0.05	0.06
Sweden	0.29	0.08	0.08
Trinidad and Tobago	0.29	0.08	0.07
United Arab Emirates	0.32	0.10	0.10
United States	0.26	0.07	0.06
<b>International Median</b>	<b>0.28</b>	<b>0.08</b>	<b>0.07</b>
<b>Sixth Grade Participants</b>			
Botswana	0.36	0.13	0.11
Honduras	0.03	0.00	0.02
Kuwait	0.19	0.04	0.05
Morocco	0.26	0.07	0.06
<b>Benchmarking Participants</b>			
Alberta, Canada	0.29	0.09	0.08
Ontario, Canada	0.27	0.07	0.08
Quebec, Canada	0.28	0.08	0.07
Maltese - Malta	0.24	0.06	0.05
Eng/Afr (5) - RSA <sup>◇</sup>	0.25	0.06	0.07
Andalusia, Spain	0.21	0.04	0.05
Abu Dhabi, UAE	0.32	0.10	0.09
Dubai, UAE	0.35	0.12	0.11
Florida, US	0.26	0.07	0.08
<b>prePIRLS Participants</b>			
Botswana	0.36	0.13	0.08
Colombia	0.19	0.04	0.04
South Africa	0.28	0.08	0.07

◇ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).