

PIRLS 2011

The PIRLS 2011 Students Engaged in Reading Lessons Scale

The Students Engaged in Reading Lessons (ERL) scale was created based on students' degree of agreement with seven 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 Engaged in Reading Lessons Scale

Think about the reading you do for school. How much do you agree with these statements about your reading lessons?

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
ASBR05A 1) I like what I read about in school -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR05B 2) My teacher gives me interesting things to read -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR05C 3) I know what my teacher expects me to do -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR05D* 4) I think of things not related to the lesson* -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR05E 5) My teacher is easy to understand -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR05F 6) I am interested in what my teacher says -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBR05G 7) My teacher gives me interesting things to do -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Reverse coded

Exhibit 2: Item Parameters for the PIRLS 2011 Students Engaged in Reading Lessons Scale

Item	delta	tau_1	tau_2	tau_3
ASBR05A	-1.25947	-0.23924	-0.69619	0.93543
ASBR05B	-1.14606	-0.26373	-0.44769	0.71142
ASBR05C	-1.29925	0.04393	-0.59989	0.55596
ASBR05D*	-0.20013	-0.57777	0.34238	0.23539
ASBR05E	-1.50964	-0.14577	-0.49486	0.64063
ASBR05F	-1.42539	-0.15417	-0.54717	0.70134
ASBR05G	-1.18640	-0.12698	-0.47512	0.60210

* Reverse coded

Exhibit 3: Scale Transformation Constants

Scale Transformation Constants

$$A = 10.02024$$

$$B = 1.99248$$

$$\text{Transformed Scale Score} = 10.02024 + 1.99248 \cdot \text{Logit Scale Score}$$

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	2.07132		11	7.67963	
1	3.80713		12	7.97697	
2	4.60354		13	8.29776	
3	5.14305		14	8.64503	
4	5.57037		15	9.02858	
5	5.93049		16	9.45792	
6	6.25272		17	9.94480	
7	6.54563		18	10.51137	10.5
8	6.83321		19	11.20989	
9	7.11289		20	12.21043	
10	7.39451	7.4	21	14.32260	

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

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item						
			ASBR05A	ASBR05B	ASBR05C	ASBR05D*	ASBR05E	ASBR05F	ASBR05G
Australia	0.75	44	0.66	0.76	0.58	0.19	0.66	0.80	0.79
Austria	0.75	44	0.73	0.79	0.57	0.25	0.57	0.77	0.80
Azerbaijan	0.44	35	0.56	0.67	0.53	-0.21	0.59	0.70	0.74
Belgium (French)	0.74	44	0.66	0.75	0.66	0.24	0.66	0.74	0.76
Bulgaria	0.69	42	0.73	0.74	0.54	0.26	0.60	0.74	0.75
Canada	0.74	44	0.69	0.77	0.55	0.19	0.66	0.79	0.80
Chinese Taipei	0.75	45	0.71	0.79	0.72	0.15	0.64	0.76	0.70
Colombia	0.54	34	0.62	0.70	0.49	0.03	0.56	0.65	0.71
Croatia	0.72	42	0.75	0.80	0.47	0.23	0.55	0.73	0.77
Czech Republic	0.77	45	0.74	0.74	0.62	0.40	0.64	0.76	0.74
Denmark	0.74	42	0.74	0.79	0.49	0.33	0.44	0.77	0.79
England	0.77	46	0.68	0.77	0.60	0.24	0.68	0.79	0.80
Finland	0.79	46	0.69	0.80	0.59	0.36	0.67	0.76	0.80
France	0.71	42	0.71	0.76	0.47	0.22	0.62	0.76	0.78
Georgia	0.42	31	0.62	0.71	0.47	0.04	0.59	0.40	0.74
Germany	0.76	45	0.73	0.78	0.55	0.31	0.64	0.75	0.79
Hong Kong SAR	0.78	47	0.68	0.79	0.72	0.17	0.69	0.79	0.73
Hungary	0.77	47	0.71	0.80	0.61	0.29	0.70	0.79	0.77

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

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item						
			ASBR05A	ASBR05B	ASBR05C	ASBR05D*	ASBR05E	ASBR05F	ASBR05G
Indonesia	0.47	31	0.54	0.62	0.57	0.03	0.56	0.64	0.66
Iran, Islamic Rep. of	0.62	36	0.62	0.63	0.57	0.19	0.61	0.74	0.66
Ireland	0.76	45	0.70	0.79	0.56	0.23	0.64	0.79	0.81
Israel	0.78	46	0.76	0.81	0.46	0.38	0.58	0.80	0.80
Italy	0.71	41	0.72	0.75	0.43	0.34	0.55	0.77	0.75
Lithuania	0.69	39	0.73	0.79	0.53	0.26	0.56	0.65	0.72
Malta	0.73	43	0.68	0.75	0.58	0.24	0.62	0.78	0.76
Morocco	0.62	35	0.61	0.71	0.49	0.23	0.57	0.71	0.69
Netherlands	0.76	43	0.70	0.77	0.53	0.31	0.63	0.76	0.78
New Zealand	0.72	43	0.70	0.77	0.57	0.05	0.63	0.79	0.78
Northern Ireland	0.72	42	0.70	0.77	0.49	0.19	0.61	0.77	0.77
Norway	0.73	42	0.70	0.76	0.52	0.24	0.57	0.79	0.79
Oman	0.57	34	0.59	0.67	0.54	0.01	0.64	0.68	0.66
Poland	0.76	46	0.75	0.79	0.62	0.24	0.59	0.80	0.79
Portugal	0.70	40	0.69	0.74	0.54	0.35	0.61	0.69	0.72
Qatar	0.65	38	0.62	0.72	0.60	0.05	0.65	0.71	0.69
Romania	0.69	41	0.70	0.74	0.55	0.26	0.60	0.74	0.74
Russian Federation	0.70	41	0.67	0.71	0.53	0.28	0.65	0.73	0.78
Saudi Arabia	0.41	28	0.62	0.68	0.52	0.19	0.62	0.65	0.09
Singapore	0.75	45	0.66	0.76	0.64	0.11	0.70	0.79	0.79
Slovak Republic	0.74	44	0.72	0.77	0.63	0.20	0.60	0.74	0.77
Slovenia	0.70	39	0.72	0.75	0.58	0.30	0.46	0.71	0.69
Spain	0.68	39	0.66	0.74	0.48	0.18	0.59	0.75	0.75
Sweden	0.74	43	0.61	0.74	0.56	0.26	0.64	0.78	0.81
Trinidad and Tobago	0.66	40	0.65	0.73	0.56	0.03	0.66	0.74	0.75
United Arab Emirates	0.66	39	0.65	0.72	0.55	0.09	0.63	0.72	0.73
United States	0.72	43	0.69	0.78	0.54	0.11	0.64	0.79	0.78
Sixth Grade Participants									
Botswana	0.58	32	0.58	0.62	0.53	0.11	0.60	0.65	0.64
Honduras	0.56	35	0.59	0.67	0.55	0.02	0.58	0.69	0.72
Kuwait	0.67	37	0.53	0.76	0.57	0.23	0.60	0.69	0.73
Morocco	0.62	35	0.62	0.70	0.47	0.30	0.54	0.68	0.72
Benchmarking Participants									
Alberta, Canada	0.73	44	0.70	0.77	0.56	0.13	0.68	0.77	0.78
Ontario, Canada	0.72	42	0.69	0.76	0.51	0.18	0.60	0.79	0.78
Quebec, Canada	0.75	45	0.67	0.78	0.55	0.22	0.66	0.81	0.81
Maltese - Malta	0.77	49	0.73	0.80	0.67	0.14	0.69	0.80	0.80
Eng/Afr (5) - RSA ^o	0.64	40	0.61	0.72	0.61	-0.14	0.66	0.71	0.76

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

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item						
			ASBR05A	ASBR05B	ASBR05C	ASBR05D*	ASBR05E	ASBR05F	ASBR05G
Andalusia, Spain	0.68	39	0.65	0.74	0.48	0.19	0.60	0.75	0.76
Abu Dhabi, UAE	0.67	38	0.65	0.72	0.54	0.12	0.65	0.71	0.72
Dubai, UAE	0.68	41	0.68	0.74	0.58	0.09	0.62	0.74	0.75
Florida, US	0.73	45	0.69	0.80	0.61	0.10	0.66	0.80	0.77
prePIRLS Participants									
Botswana	0.55	30	0.62	0.55	0.56	-0.04	0.59	0.59	0.65
Colombia	0.54	34	0.61	0.69	0.49	0.03	0.56	0.65	0.71
South Africa	0.60	38	0.59	0.70	0.65	-0.19	0.66	0.66	0.73

* 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 Engaged in Reading Lessons Scale and PIRLS 2011 Achievement

Country	Pearson's Correlation with Reading Achievement		Variance in Reading Achievement Accounted for by Difference Between Regions of the Scale (η^2)
	(r)	(r^2)	
Australia	0.14	0.02	0.01
Austria	0.00	0.00	0.00
Azerbaijan	0.13	0.02	0.02
Belgium (French)	0.04	0.00	0.00
Bulgaria	0.15	0.02	0.02
Canada	0.13	0.02	0.01
Chinese Taipei	0.14	0.02	0.02
Colombia	0.15	0.02	0.01
Croatia	-0.01	0.00	0.00
Czech Republic	0.03	0.00	0.00
Denmark	0.07	0.00	0.00
England	0.03	0.00	0.00
Finland	0.07	0.01	0.01
France	0.11	0.01	0.01
Georgia	0.19	0.04	0.03
Germany	0.07	0.00	0.01
Hong Kong SAR	0.10	0.01	0.01
Hungary	0.16	0.03	0.02
Indonesia	0.23	0.05	0.04
Iran, Islamic Rep. of	0.11	0.01	0.01
Ireland	0.09	0.01	0.00
Israel	-0.01	0.00	0.00
Italy	0.05	0.00	0.01

Exhibit 6: Relationship Between the PIRLS 2011 Students Engaged in Reading Lessons Scale and PIRLS 2011 Achievement (Continued)

Country	Pearson's Correlation with Reading Achievement		Variance in Reading Achievement Accounted for by Difference Between Regions of the Scale (η^2)
	(r)	(r ²)	
Lithuania	0.09	0.01	0.02
Malta	0.18	0.03	0.03
Morocco	0.25	0.06	0.06
Netherlands	0.11	0.01	0.01
New Zealand	0.08	0.01	0.00
Northern Ireland	0.05	0.00	0.00
Norway	0.07	0.01	0.01
Oman	0.27	0.07	0.07
Poland	0.11	0.01	0.01
Portugal	0.17	0.03	0.02
Qatar	0.19	0.04	0.03
Romania	0.21	0.04	0.04
Russian Federation	0.06	0.00	0.00
Saudi Arabia	0.10	0.01	0.01
Singapore	0.09	0.01	0.01
Slovak Republic	0.02	0.00	0.00
Slovenia	0.03	0.00	0.00
Spain	0.10	0.01	0.01
Sweden	0.05	0.00	0.01
Trinidad and Tobago	0.19	0.03	0.02
United Arab Emirates	0.18	0.03	0.02
United States	0.14	0.02	0.01
International Median	0.10	0.01	0.01
Sixth Grade Participants			
Botswana	0.30	0.09	0.07
Honduras	-0.03	0.00	0.00
Kuwait	0.15	0.02	0.02
Morocco	0.23	0.05	0.04
Benchmarking Participants			
Alberta, Canada	0.14	0.02	0.01
Ontario, Canada	0.13	0.02	0.01
Quebec, Canada	0.11	0.01	0.01
Maltese - Malta	0.22	0.05	0.04
Eng/Afr (5) - RSA ^o	0.16	0.02	0.02
Andalusia, Spain	0.08	0.01	0.00
Abu Dhabi, UAE	0.21	0.04	0.03
Dubai, UAE	0.16	0.02	0.02
Florida, US	0.16	0.03	0.02

Exhibit 6: Relationship Between the PIRLS 2011 Students Engaged in Reading Lessons Scale and PIRLS 2011 Achievement (Continued)

Country	Pearson's Correlation with Reading Achievement		Variance in Reading Achievement Accounted for by Difference Between Regions of the Scale (η^2)
	(r)	(r^2)	
prePIRLS Participants			
Botswana	0.41	0.16	0.14
Colombia	0.14	0.02	0.01
South Africa	0.29	0.08	0.07

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