

PIRLS 2011

The PIRLS 2011 Early Literacy Activities Before Beginning Primary School Scale

The Early Literacy Activities Before Beginning Primary School (ELA) scale was created based on parents' frequency of doing nine activities 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 Early Literacy Activities Before Beginning Primary School Scale

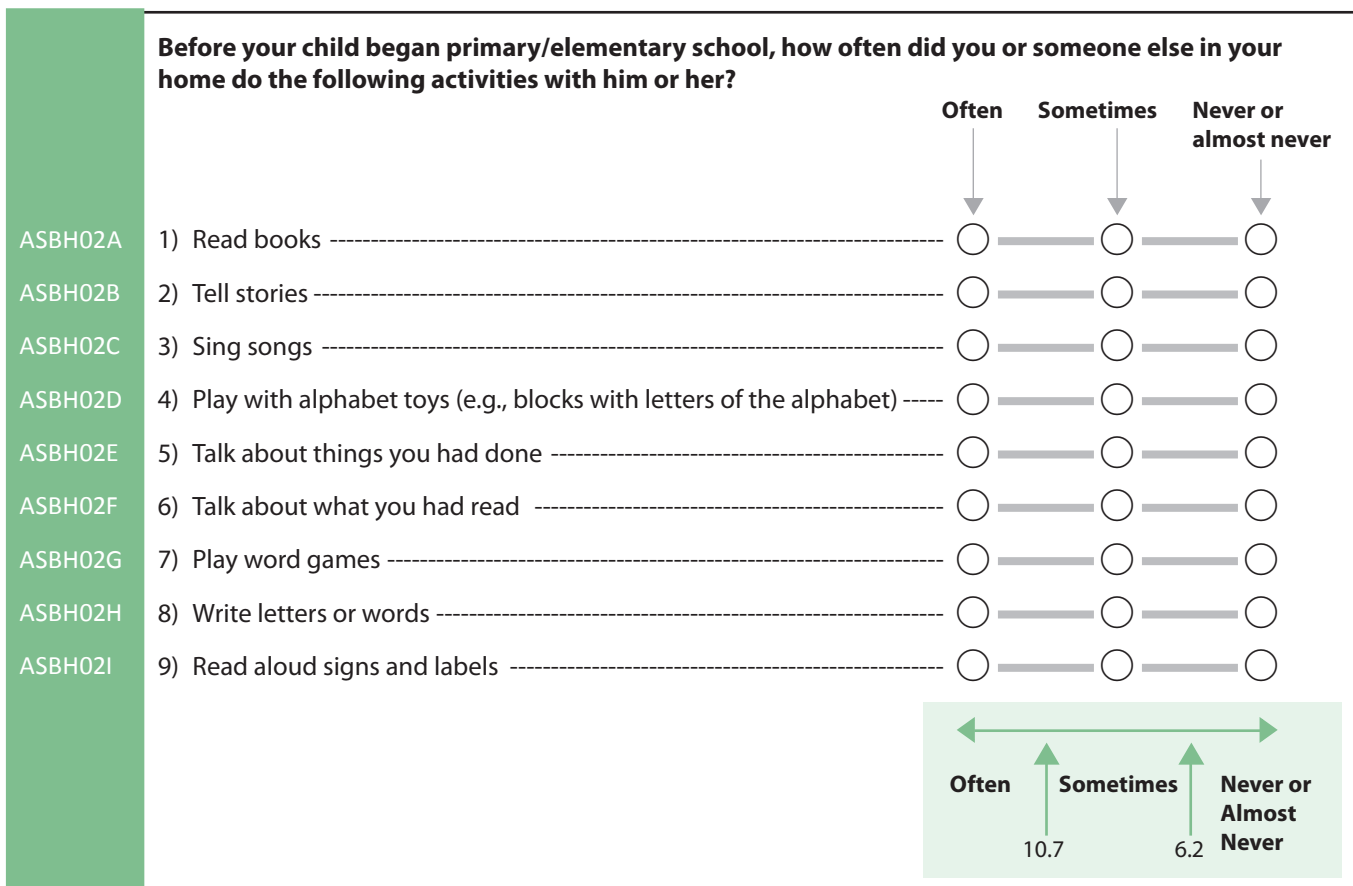


Exhibit 2: Item Parameters for the PIRLS 2011 Early Literacy Activities Before Beginning Primary School Scale

Item	delta	tau_1	tau_2
ASBH02A	-1.55846	-1.38837	1.38837
ASBH02B	-1.23058	-1.37237	1.37237
ASBH02C	-0.99194	-0.98882	0.98882
ASBH02D	-0.69449	-1.02037	1.02037
ASBH02E	-1.82023	-1.14874	1.14874
ASBH02F	-0.75392	-1.33504	1.33504
ASBH02G	-0.42446	-1.20341	1.20341
ASBH02H	-1.06159	-1.15244	1.15244
ASBH02I	-0.79101	-0.99028	0.99028

Exhibit 3: Scale Transformation Constants

Scale Transformation Constants	
A = 10.01234	Transformed Scale Score = 10.01234 + 1.49109 • Logit Scale Score
B = 1.49109	

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	2.13766		8	8.05868	
1	3.95611		9	8.48819	
2	4.90647		10	8.91614	
3	5.60276		11	9.34812	
4	6.18207	6.2	12	9.79151	
5	6.69620		13	10.25429	
6	7.17111		14	10.75483	10.7
7	7.62199		15	11.31620	

Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the PIRLS 2011 Early Literacy Activities Before Beginning Primary School Scale**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item								
			ASBH02A	ASBH02B	ASBH02C	ASBH02D	ASBH02E	ASBH02F	ASBH02G	ASBH02H	ASBH02I
Australia	0.82	41	0.61	0.66	0.58	0.60	0.56	0.69	0.73	0.64	0.68
Austria	0.73	32	0.61	0.63	0.55	0.51	0.55	0.62	0.65	0.40	0.54
Azerbaijan	0.73	32	0.62	0.59	0.44	0.57	0.43	0.62	0.53	0.62	0.65
Belgium (French)	0.73	32	0.58	0.57	0.46	0.61	0.44	0.55	0.68	0.60	0.57
Bulgaria	0.86	47	0.71	0.72	0.54	0.70	0.64	0.74	0.68	0.74	0.67
Canada	0.80	39	0.61	0.64	0.54	0.62	0.52	0.67	0.69	0.65	0.65
Chinese Taipei	0.80	39	0.68	0.67	0.58	0.61	0.56	0.60	0.68	0.59	0.66

Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the PIRLS 2011 Early Literacy Activities Before Beginning Primary School Scale (Continued)**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item								
			ASBH02A	ASBH02B	ASBH02C	ASBH02D	ASBH02E	ASBH02F	ASBH02G	ASBH02H	ASBH02I
Colombia	0.78	36	0.61	0.62	0.53	0.62	0.51	0.64	0.66	0.61	0.58
Croatia	0.75	33	0.61	0.59	0.46	0.61	0.49	0.65	0.60	0.54	0.61
Czech Republic	0.70	30	0.50	0.53	0.41	0.54	0.50	0.64	0.64	0.55	0.56
Denmark	0.74	33	0.58	0.57	0.48	0.53	0.51	0.69	0.68	0.55	0.55
Finland	0.72	31	0.53	0.57	0.51	0.54	0.52	0.65	0.56	0.57	0.57
France	0.73	32	0.56	0.55	0.44	0.61	0.47	0.58	0.63	0.62	0.57
Georgia	0.72	32	0.61	0.52	0.43	0.65	0.47	0.60	0.59	0.57	0.62
Germany	0.71	31	0.53	0.60	0.48	0.50	0.48	0.63	0.69	0.47	0.56
Hong Kong SAR	0.79	38	0.67	0.65	0.57	0.56	0.55	0.63	0.70	0.60	0.60
Hungary	0.70	30	0.53	0.56	0.49	0.63	0.42	0.53	0.60	0.53	0.60
Indonesia	0.75	34	0.58	0.52	0.50	0.62	0.52	0.62	0.65	0.63	0.56
Iran, Islamic Rep. of	0.76	34	0.58	0.54	0.51	0.64	0.49	0.59	0.68	0.61	0.60
Ireland	0.79	38	0.64	0.64	0.49	0.60	0.53	0.67	0.68	0.62	0.66
Israel	0.74	33	0.52	0.57	0.47	0.61	0.49	0.61	0.69	0.60	0.59
Italy	0.70	30	0.50	0.56	0.42	0.62	0.40	0.56	0.60	0.63	0.57
Lithuania	0.74	33	0.59	0.55	0.44	0.61	0.53	0.66	0.61	0.58	0.54
Malta	0.77	35	0.62	0.62	0.50	0.61	0.43	0.63	0.65	0.63	0.63
Morocco	0.78	37	0.68	0.60	0.48	0.63	0.56	0.65	0.54	0.68	0.60
Netherlands	0.73	32	0.47	0.55	0.45	0.57	0.47	0.59	0.68	0.63	0.63
New Zealand	0.82	42	0.63	0.68	0.54	0.63	0.57	0.68	0.72	0.65	0.68
Northern Ireland	0.80	39	0.61	0.66	0.59	0.58	0.55	0.70	0.71	0.59	0.64
Norway	0.77	36	0.57	0.60	0.47	0.67	0.46	0.68	0.70	0.58	0.61
Oman	0.70	31	0.60	0.51	0.21	0.59	0.45	0.62	0.63	0.64	0.63
Poland	0.75	34	0.60	0.54	0.44	0.63	0.51	0.67	0.62	0.59	0.59
Portugal	0.79	37	0.65	0.67	0.53	0.65	0.48	0.61	0.68	0.60	0.58
Qatar	0.76	35	0.60	0.62	0.38	0.64	0.53	0.61	0.66	0.64	0.61
Romania	0.88	52	0.73	0.73	0.61	0.76	0.69	0.76	0.75	0.73	0.69
Russian Federation	0.78	37	0.65	0.57	0.52	0.66	0.59	0.67	0.64	0.60	0.56
Saudi Arabia	0.74	33	0.57	0.55	0.51	0.58	0.47	0.59	0.63	0.64	0.58
Singapore	0.84	45	0.69	0.72	0.61	0.66	0.60	0.68	0.68	0.66	0.71
Slovak Republic	0.77	36	0.63	0.57	0.41	0.64	0.55	0.69	0.65	0.59	0.61
Slovenia	0.75	34	0.58	0.61	0.51	0.59	0.49	0.63	0.63	0.54	0.63
Spain	0.73	32	0.56	0.59	0.49	0.60	0.45	0.55	0.65	0.61	0.55
Sweden	0.78	36	0.58	0.57	0.50	0.62	0.52	0.68	0.69	0.63	0.63
Trinidad and Tobago	0.80	39	0.70	0.68	0.52	0.60	0.49	0.68	0.62	0.65	0.64
United Arab Emirates	0.75	34	0.63	0.59	0.45	0.58	0.54	0.61	0.62	0.58	0.59

Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the PIRLS 2011 Early Literacy Activities Before Beginning Primary School Scale (Continued)**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item								
			ASBH02A	ASBH02B	ASBH02C	ASBH02D	ASBH02E	ASBH02F	ASBH02G	ASBH02H	ASBH02I
Sixth Grade Participants											
Botswana	0.78	37	0.64	0.51	0.47	0.59	0.55	0.68	0.66	0.67	0.63
Honduras	0.78	37	0.63	0.65	0.50	0.60	0.50	0.67	0.65	0.65	0.61
Kuwait	0.76	35	0.61	0.54	0.36	0.65	0.52	0.63	0.68	0.65	0.62
Morocco	0.77	35	0.64	0.60	0.44	0.61	0.53	0.62	0.55	0.70	0.62
Benchmarking Participants											
Alberta, Canada	0.82	41	0.60	0.66	0.55	0.64	0.56	0.70	0.72	0.66	0.69
Ontario, Canada	0.79	38	0.63	0.65	0.55	0.62	0.54	0.65	0.67	0.59	0.65
Quebec, Canada	0.77	35	0.58	0.59	0.47	0.60	0.49	0.62	0.68	0.65	0.62
Maltese - Malta	0.77	35	0.61	0.61	0.50	0.62	0.42	0.63	0.66	0.63	0.63
Eng/Afr (5) - RSA ^o	0.81	40	0.66	0.59	0.50	0.64	0.58	0.67	0.70	0.66	0.67
Andalusia, Spain	0.73	32	0.57	0.60	0.49	0.61	0.45	0.55	0.65	0.60	0.53
Abu Dhabi, UAE	0.74	33	0.61	0.57	0.47	0.56	0.53	0.61	0.61	0.59	0.59
Dubai, UAE	0.76	35	0.66	0.60	0.48	0.60	0.54	0.62	0.62	0.59	0.61
prePIRLS Participants											
Botswana	0.77	36	0.64	0.52	0.43	0.64	0.51	0.65	0.63	0.65	0.65
Colombia	0.77	36	0.61	0.62	0.53	0.62	0.51	0.64	0.66	0.61	0.58
South Africa	0.77	36	0.64	0.54	0.44	0.61	0.55	0.66	0.64	0.65	0.63

** England and the United States did not administer the Home Questionnaire.

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

Exhibit 6: Relationship Between the PIRLS 2011 Early Literacy Activities Before Beginning Primary School 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 (η^2)
	(r)	(r ²)	
Australia	0.21	0.04	0.04
Austria	0.20	0.04	0.03
Azerbaijan	0.07	0.00	0.01
Belgium (French)	0.20	0.04	0.03
Bulgaria	0.38	0.14	0.13
Canada	0.21	0.04	0.03
Chinese Taipei	0.21	0.05	0.03
Colombia	0.07	0.01	0.01
Croatia	0.17	0.03	0.02
Czech Republic	0.12	0.02	0.01
Denmark	0.15	0.02	0.02
Finland	0.16	0.02	0.02

Exhibit 6: Relationship Between the PIRLS 2011 Early Literacy Activities Before Beginning Primary School 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 (η^2)
	(r)	(r ²)	
France	0.19	0.04	0.02
Georgia	0.15	0.02	0.02
Germany	0.14	0.02	0.01
Hong Kong SAR	0.13	0.02	0.01
Hungary	0.18	0.03	0.04
Indonesia	0.11	0.01	0.01
Iran, Islamic Rep. of	0.16	0.03	0.03
Ireland	0.21	0.05	0.04
Israel	0.21	0.04	0.03
Italy	0.17	0.03	0.02
Lithuania	0.17	0.03	0.02
Malta	0.28	0.08	0.06
Morocco	0.06	0.00	0.00
Netherlands	0.09	0.01	0.01
New Zealand	0.26	0.07	0.05
Northern Ireland	0.18	0.03	0.03
Norway	0.22	0.05	0.04
Oman	0.22	0.05	0.04
Poland	0.26	0.07	0.05
Portugal	0.17	0.03	0.03
Qatar	0.20	0.04	0.03
Romania	0.32	0.10	0.10
Russian Federation	0.19	0.04	0.03
Saudi Arabia	0.22	0.05	0.05
Singapore	0.22	0.05	0.04
Slovak Republic	0.17	0.03	0.03
Slovenia	0.18	0.03	0.02
Spain	0.20	0.04	0.03
Sweden	0.25	0.06	0.04
Trinidad and Tobago	0.30	0.09	0.06
United Arab Emirates	0.28	0.08	0.06
International Median	0.19	0.04	0.03
Sixth Grade Participants			
Botswana	0.26	0.07	0.05
Honduras	0.10	0.01	0.01
Kuwait	0.16	0.03	0.02
Morocco	0.10	0.01	0.01

Exhibit 6: Relationship Between the PIRLS 2011 Early Literacy Activities Before Beginning Primary School 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 (η^2)
	(r)	(r ²)	
Benchmarking Participants			
Alberta, Canada	0.19	0.04	0.04
Ontario, Canada	0.18	0.03	0.02
Quebec, Canada	0.21	0.04	0.04
Maltese - Malta	0.23	0.05	0.04
Eng/Afr (5) - RSA [◇]	0.29	0.08	0.07
Andalusia, Spain	0.21	0.04	0.03
Abu Dhabi, UAE	0.28	0.08	0.05
Dubai, UAE	0.32	0.10	0.08
prePIRLS Participants			
Botswana	0.23	0.05	0.05
Colombia	0.07	0.00	0.01
South Africa	0.12	0.01	0.01

** England and the United States did not administer the Home Questionnaire.

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