

**Exhibit 14.8: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the PIRLS 2016 Parents Like Reading Scale**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Component Loadings for Each Item								
			ASBH12A*	ASBH12B	ASBH12C	ASBH12D*	ASBH12E	ASBH12F	ASBH12G	ASBH12H	ASBH12I
Australia	0.89	56	0.76	0.59	0.84	0.75	0.72	0.62	0.84	0.86	0.67
Austria	0.90	57	0.72	0.57	0.87	0.76	0.79	0.63	0.85	0.84	0.70
Azerbaijan	0.83	52	-	0.55	0.77	-	0.76	0.65	0.84	0.84	0.57
Bahrain	0.81	43	0.43	0.47	0.79	0.50	0.70	0.68	0.81	0.83	0.57
Belgium (Flemish)	0.90	57	0.75	0.50	0.87	0.75	0.75	0.67	0.88	0.86	0.70
Belgium (French)	0.90	55	0.70	0.52	0.85	0.72	0.72	0.71	0.86	0.86	0.70
Bulgaria	0.91	60	0.62	0.71	0.89	0.48	0.82	0.84	0.90	0.88	0.73
Canada	0.89	54	0.73	0.56	0.84	0.73	0.70	0.64	0.84	0.85	0.69
Chile	0.87	50	0.63	0.60	0.83	0.59	0.69	0.70	0.80	0.83	0.63
Chinese Taipei	0.86	49	0.57	0.48	0.77	0.54	0.76	0.77	0.86	0.86	0.56
Czech Republic	0.90	57	0.73	0.63	0.86	0.75	0.71	0.67	0.86	0.89	0.66
Denmark	0.90	57	0.74	0.60	0.88	0.78	0.76	0.60	0.85	0.83	0.70
Egypt	0.79	55	-0.25	0.78	0.83	-0.41	0.85	0.86	0.91	0.87	0.58
England	-	-	-	-	-	-	-	-	-	-	-
Finland	0.91	58	0.73	0.57	0.87	0.76	0.82	0.65	0.86	0.87	0.67
France	0.88	51	0.69	0.53	0.82	0.70	0.65	0.60	0.82	0.84	0.71
Georgia	0.78	43	0.24	0.56	0.81	0.26	0.68	0.75	0.85	0.81	0.61
Germany	0.89	54	0.75	0.57	0.87	0.66	0.70	0.61	0.86	0.85	0.68
Hong Kong SAR	0.85	48	0.46	0.52	0.78	0.41	0.75	0.78	0.87	0.87	0.61
Hungary	0.90	56	0.70	0.60	0.84	0.71	0.74	0.74	0.83	0.86	0.65
Iran, Islamic Rep. of	0.81	44	0.39	0.55	0.79	0.28	0.71	0.78	0.82	0.82	0.60
Ireland	0.88	53	0.74	0.55	0.83	0.74	0.69	0.57	0.84	0.86	0.69
Israel	0.85	47	0.65	0.50	0.81	0.65	0.68	0.57	0.79	0.84	0.62
Italy	0.88	52	0.69	0.55	0.82	0.69	0.70	0.67	0.81	0.83	0.67
Kazakhstan	0.72	39	0.11	0.51	0.74	0.20	0.70	0.73	0.77	0.82	0.60
Kuwait	0.84	47	0.52	0.49	0.80	0.58	0.75	0.70	0.81	0.84	0.54
Latvia	0.87	51	0.68	0.37	0.84	0.72	0.69	0.68	0.84	0.85	0.61
Lithuania	0.89	54	0.68	0.56	0.85	0.65	0.75	0.70	0.85	0.86	0.64
Macao SAR	0.83	46	0.38	0.56	0.76	0.35	0.76	0.78	0.87	0.87	0.55
Malta	0.86	49	0.68	0.49	0.82	0.72	0.57	0.64	0.82	0.86	0.62
Morocco	0.84	55	-0.04	0.81	0.86	-0.19	0.86	0.82	0.90	0.88	0.69
Netherlands	0.89	56	0.81	0.54	0.87	0.76	0.61	0.55	0.87	0.87	0.74

A dash (-) indicates comparable data not available.

\*Reverse coded

**Exhibit 14.8: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the PIRLS 2016 *Parents Like Reading Scale* (Continued)**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Component Loadings for Each Item								
			ASBH12A*	ASBH12B	ASBH12C	ASBH12D*	ASBH12E	ASBH12F	ASBH12G	ASBH12H	ASBH12I
New Zealand	0.89	54	0.73	0.53	0.85	0.72	0.73	0.61	0.84	0.87	0.68
Northern Ireland	0.91	59	0.82	0.66	0.86	0.80	0.71	0.58	0.82	0.88	0.75
Norway (5)	0.89	53	0.73	0.52	0.85	0.74	0.74	0.60	0.83	0.83	0.66
Oman	0.78	41	0.24	0.55	0.77	0.34	0.69	0.69	0.80	0.81	0.58
Poland	0.88	53	0.70	0.61	0.83	0.71	0.75	0.62	0.81	0.80	0.67
Portugal	0.87	50	0.68	0.55	0.80	0.67	0.72	0.64	0.79	0.84	0.61
Qatar	0.81	43	0.44	0.44	0.79	0.46	0.70	0.68	0.82	0.83	0.54
Russian Federation	0.86	49	0.61	0.51	0.82	0.64	0.65	0.68	0.83	0.85	0.61
Saudi Arabia	0.82	44	0.38	0.55	0.79	0.34	0.74	0.69	0.83	0.83	0.61
Singapore	0.85	49	0.58	0.43	0.82	0.54	0.72	0.75	0.86	0.87	0.59
Slovak Republic	0.90	57	0.74	0.62	0.87	0.71	0.72	0.68	0.87	0.89	0.68
Slovenia	0.88	53	0.74	0.54	0.85	0.63	0.70	0.69	0.87	0.83	0.59
South Africa	0.75	41	0.03	0.66	0.76	0.05	0.70	0.71	0.82	0.80	0.61
Spain	0.89	54	0.71	0.59	0.83	0.73	0.67	0.67	0.83	0.85	0.70
Sweden	0.89	55	0.78	0.58	0.88	0.77	0.68	0.56	0.85	0.82	0.67
Trinidad and Tobago	0.82	44	0.63	0.53	0.80	0.63	0.60	0.45	0.79	0.83	0.57
United Arab Emirates	0.80	42	0.41	0.49	0.78	0.41	0.72	0.68	0.81	0.82	0.53
United States	-	-	-	-	-	-	-	-	-	-	-
<b>Benchmarking Participants</b>											
Buenos Aires, Argentina	0.84	46	0.62	0.51	0.82	0.62	0.62	0.66	0.78	0.83	0.57
Ontario, Canada	0.88	53	0.73	0.53	0.83	0.73	0.69	0.64	0.83	0.85	0.67
Quebec, Canada	0.90	55	0.74	0.63	0.85	0.72	0.70	0.62	0.84	0.85	0.70
Denmark (3)	0.89	55	0.74	0.58	0.87	0.77	0.75	0.61	0.84	0.82	0.66
Norway (4)	0.88	53	0.72	0.53	0.85	0.73	0.75	0.60	0.83	0.83	0.63
Moscow City, Russian Fed.	0.86	49	0.65	0.47	0.82	0.69	0.67	0.63	0.83	0.83	0.61
Eng/Afr/Zulu - RSA (5)	0.78	41	0.28	0.62	0.77	0.29	0.69	0.60	0.81	0.80	0.63
Andalusia, Spain	0.89	55	0.71	0.59	0.83	0.73	0.69	0.67	0.85	0.86	0.70
Madrid, Spain	0.87	51	0.69	0.55	0.82	0.74	0.68	0.58	0.81	0.85	0.65
Abu Dhabi, UAE	0.79	41	0.39	0.50	0.78	0.37	0.73	0.66	0.81	0.82	0.49
Dubai, UAE	0.82	44	0.54	0.44	0.78	0.56	0.71	0.66	0.81	0.82	0.57

A dash (-) indicates comparable data not available.

\*Reverse coded