

Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the PIRLS 2016 Students Engaged in Reading Lessons Scale

Co n	A	N	Principal Components									
			1	2	3	4	5	6	7	8	9	10
A	0.84	44	0.61	0.72	0.59	0.66	0.75	0.67	0.65	0.67	0.65	
A	0.85	46	0.63	0.73	0.61	0.66	0.72	0.72	0.70	0.70	0.64	
A	0.83	44	0.55	0.70	0.55	0.63	0.73	0.69	0.69	0.68	0.71	
B	0.84	44	0.59	0.67	0.61	0.66	0.72	0.69	0.69	0.67	0.64	
B (F)	0.80	39	0.58	0.69	0.51	0.60	0.67	0.63	0.68	0.63	0.63	
B (F)	0.84	45	0.63	0.74	0.68	0.67	0.71	0.66	0.57	0.70	0.64	
B	0.85	46	0.64	0.76	0.55	0.62	0.63	0.70	0.74	0.71	0.72	
C	0.84	44	0.60	0.71	0.61	0.67	0.73	0.68	0.65	0.65	0.65	
C	0.88	50	0.63	0.74	0.69	0.70	0.74	0.72	0.72	0.72	0.72	
C	0.89	52	0.61	0.74	0.73	0.68	0.75	0.75	0.76	0.76	0.74	
C R	0.85	45	0.65	0.70	0.57	0.67	0.69	0.69	0.65	0.69	0.70	
D	0.85	46	0.67	0.74	0.58	0.59	0.71	0.74	0.72	0.72	0.63	
E	0.79	40	0.63	0.60	0.46	0.66	0.71	0.71	0.70	0.58	0.60	
E	0.84	44	0.63	0.71	0.62	0.65	0.72	0.65	0.65	0.67	0.66	
F	0.86	48	0.62	0.72	0.61	0.72	0.73	0.70	0.70	0.72	0.70	
F	0.83	42	0.67	0.73	0.55	0.58	0.72	0.65	0.67	0.62	0.64	
G	0.72	35	0.56	0.69	0.49	0.64	0.47	0.47	0.69	0.66	0.64	
G	0.85	46	0.63	0.75	0.61	0.73	0.69	0.71	0.67	0.66	0.66	
H K AR	0.89	52	0.66	0.78	0.70	0.68	0.78	0.74	0.73	0.72	0.71	
H	0.86	48	0.65	0.71	0.64	0.69	0.74	0.70	0.66	0.72	0.70	
I ,I R	0.82	42	0.64	0.65	0.52	0.68	0.73	0.63	0.70	0.64	0.64	
I	0.83	44	0.64	0.76	0.59	0.64	0.75	0.64	0.62	0.65	0.63	
I	0.87	49	0.67	0.77	0.59	0.66	0.77	0.71	0.71	0.69	0.71	
I	0.78	37	0.66	0.71	0.49	0.57	0.69	0.59	0.59	0.58	0.60	
K	0.80	40	0.54	0.66	0.59	0.64	0.66	0.68	0.67	0.57	0.62	
K	0.79	38	0.59	0.67	0.52	0.59	0.67	0.63	0.65	0.60	0.60	
L	0.83	43	0.62	0.71	0.60	0.67	0.71	0.62	0.66	0.66	0.66	
L	0.81	40	0.62	0.71	0.60	0.62	0.64	0.65	0.64	0.60	0.62	
M AR	0.85	46	0.68	0.74	0.65	0.66	0.71	0.69	0.69	0.66	0.62	
M	0.81	41	0.61	0.69	0.64	0.55	0.69	0.65	0.65	0.62	0.65	
M	0.76	35	0.53	0.56	0.54	0.61	0.64	0.64	0.67	0.56	0.55	
N	0.81	41	0.60	0.69	0.54	0.63	0.71	0.61	0.67	0.65	0.62	
N	0.83	43	0.63	0.73	0.60	0.65	0.73	0.65	0.64	0.67	0.63	
N I	0.83	42	0.61	0.72	0.57	0.66	0.71	0.65	0.66	0.64	0.64	
N (5)	0.83	43	0.62	0.71	0.57	0.66	0.69	0.72	0.66	0.63	0.62	
O	0.83	44	0.59	0.68	0.51	0.67	0.72	0.69	0.69	0.70	0.66	
P	0.86	48	0.66	0.75	0.66	0.63	0.74	0.68	0.71	0.69	0.68	
P	0.79	39	0.63	0.70	0.49	0.60	0.67	0.63	0.64	0.58	0.64	
Q	0.87	49	0.65	0.73	0.68	0.71	0.74	0.69	0.69	0.72	0.68	
R F	0.81	40	0.56	0.68	0.59	0.65	0.68	0.62	0.64	0.65	0.65	
A	0.82	42	0.48	0.64	0.56	0.67	0.70	0.71	0.71	0.69	0.66	
	0.85	45	0.63	0.72	0.61	0.67	0.74	0.68	0.65	0.68	0.68	
R	0.84	44	0.64	0.73	0.59	0.65	0.71	0.66	0.66	0.69	0.64	
	0.85	46	0.65	0.73	0.64	0.70	0.60	0.68	0.68	0.72	0.70	
A	0.84	44	0.62	0.70	0.65	0.64	0.62	0.66	0.70	0.69	0.66	
	0.80	40	0.61	0.70	0.47	0.57	0.70	0.66	0.65	0.66	0.63	
	0.86	47	0.63	0.72	0.61	0.70	0.71	0.72	0.69	0.71	0.65	
	0.83	42	0.60	0.69	0.61	0.66	0.73	0.66	0.62	0.63	0.64	
A E	0.85	45	0.62	0.72	0.61	0.68	0.71	0.68	0.69	0.69	0.64	
	0.86	47	0.60	0.74	0.62	0.69	0.76	0.71	0.67	0.67	0.68	
Benchmarking Pa icipan												
B A ,A	0.83	44	0.60	0.68	0.55	0.56	0.70	0.67	0.72	0.72	0.71	
O ,C	0.84	45	0.61	0.71	0.63	0.70	0.74	0.70	0.64	0.65	0.65	
Q ,C	0.83	43	0.54	0.71	0.60	0.65	0.75	0.64	0.69	0.65	0.65	
D (3)	0.83	43	0.66	0.73	0.59	0.51	0.73	0.70	0.72	0.65	0.59	
N (4)	0.82	42	0.63	0.72	0.54	0.62	0.71	0.70	0.63	0.59	0.62	
M C ,R F	0.83	43	0.61	0.73	0.59	0.66	0.73	0.60	0.63	0.67	0.66	
E /A / -R A (5)	0.81	40	0.63	0.68	0.63	0.61	0.62	0.66	0.64	0.62	0.63	
A ,	0.79	39	0.58	0.67	0.46	0.55	0.68	0.63	0.68	0.67	0.64	
M ,	0.81	41	0.61	0.70	0.51	0.61	0.65	0.67	0.67	0.66	0.66	
A D , AE	0.85	45	0.61	0.71	0.59	0.69	0.71	0.70	0.68	0.72	0.64	
D , AE	0.84	44	0.63	0.71	0.62	0.63	0.71	0.66	0.69	0.66	0.64	

PIRLS 2016
O RCE: IEA P I R L

Relationship Between the PIRLS 2016 *Students Engaged in Reading Lessons* Scale and PIRLS 2016 Reading Achievement

Country	Pearson's Correlation with Reading Achievement		Variance in Reading Achievement Accounted for by the Scale (r ²)
	(r)	(r ²)	(%)
Australia	0.02	0.00	
Austria	0.02	0.00	
Azerbaijan	0.14	0.02	
Bahrain	0.17	0.03	
Belgium (Flemish)	0.04	0.00	
Belgium (French)	-0.01	0.00	
Bulgaria			
Canada			
Chile	0.12	0.01	
Chinese Taipei			
Czech Republic			
Denmark			
Egypt	0.15		
England	0.04		
Finland	0.08		
France	-0.01		
Georgia	0.14		
Germany	0.12		0.03
Hong Kong SAR	0.11		0.02
Hungary			
Iran, Islamic Rep. of			
Ireland	0.03		0.00
Israel	-0.09		0.00
Italy	0.06		0.01
Kazakhstan	0.04		0.00
Kuwait	0.13		0.03
Latvia	0.03		0.00
Lithuania	0.09		
Macao SAR	0.10		
Malta			0.05
Morocco	0.10		0.01
Netherlands	0.05		
New Zealand	-0.01		
Northern Ireland	-0.01		0.00
Norway (5)	0.05		0.00
Oman	0.15		
Poland	-0.04		
Portugal	0.09		
Qatar	0.16		0.04
Russian Federation	-0.01		0.00
Saudi Arabia	0.16		
Singapore	0.03		
Slovak Republic	-0.08	0.01	0.00
Slovenia		0.00	0.00
South Africa	0.16	0.03	0.02
Spain	0.03		
Sweden	0.04		0.01
Trinidad and Tobago	0.09		0.01
United Arab Emirates	0.17	0.03	0.04
United States	0.08	0.01	
International Median	0.07		0.01
Benchmarking Participants			
Buenos Aires, Argentina	0.02	0.00	0.00
Ontario, Canada	0.11	0.01	0.02
Quebec, Canada	0.06	0.00	0.01
Denmark (3)	0.05	0.00	0.01
Norway (4)	0.04	0.00	0.01
Moscow City, Russian Fed.	0.02	0.00	0.00
Eng/Afr/Zulu - RSA (5)	0.04	0.00	0.01
Andalusia, Spain	0.04	0.00	0.00
Madrid, Spain	-0.02	0.00	0.00
Abu Dhabi, UAE	0.16	0.03	0.04
Dubai, UAE	0.13	0.02	0.04