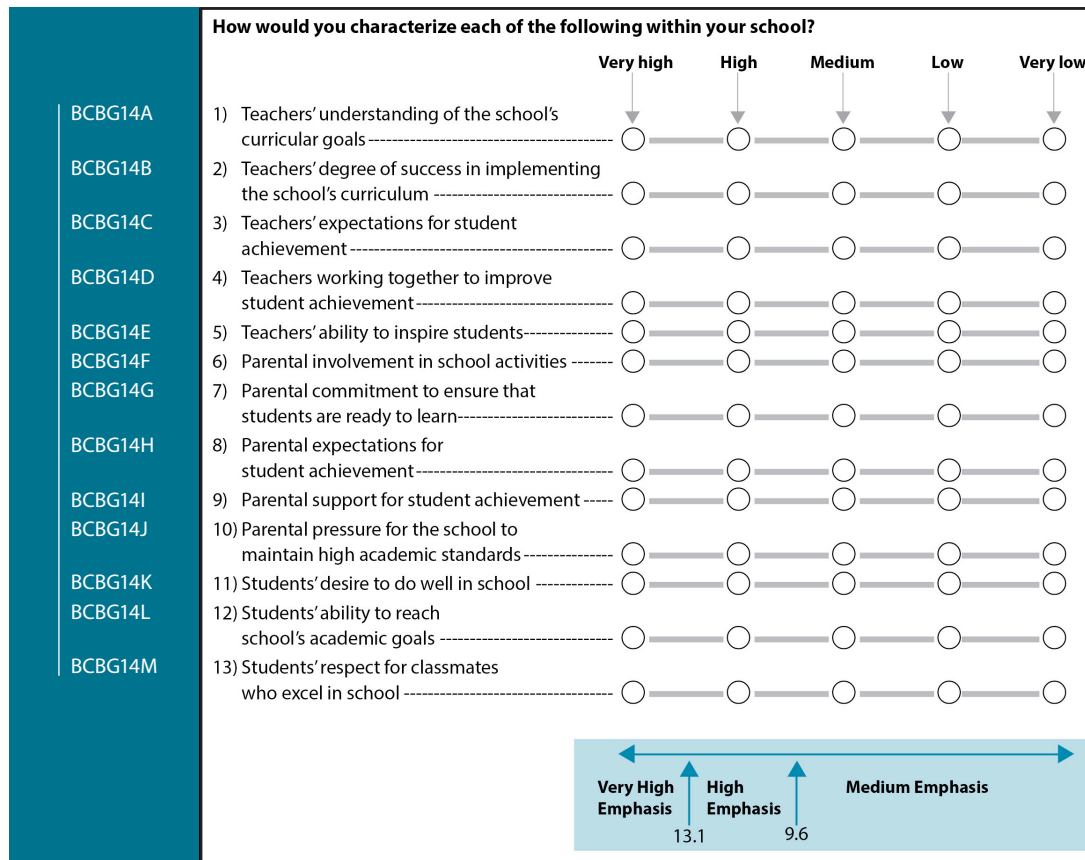


School Emphasis on Academic Success–Principals’ Reports Scale, Eighth Grade

The School Emphasis on Academic Success–Principals’ Reports (EAS) scale was created based on teachers’ responses characterizing the thirteen aspects described below.

Items in the TIMSS 2015 School Emphasis on Academic Success–Principals’ Reports Scale, Eighth Grade¹



¹ For the purpose of scaling, categories in which there were very few respondents were combined. The categories “Low” and “Very low” were combined for all variables. The scale statistics that are reported herein reflect analysis of the items following collapsing.

Item Parameters for the TIMSS 2015 School Emphasis on Academic Success - Principals' Reports Scale, Eighth Grade

Item	delta	tau_1	tau_2	tau_3	Infit
BCBG14A	-1.76385	-3.28017	-0.07481	3.35498	1.08
BCBG14B	-1.17365	-3.50530	0.06625	3.43905	0.96
BCBG14C	-0.88646	-3.14005	-0.04034	3.18039	0.95
BCBG14D	-0.76453	-2.71198	-0.12909	2.84107	1.08
BCBG14E	-0.49217	-3.19184	0.00480	3.18704	0.95
BCBG14F	1.62433	-2.27811	0.09269	2.18542	1.11
BCBG14G	1.38302	-2.36022	0.06460	2.29562	0.85
BCBG14H	-0.06276	-2.26101	-0.22820	2.48921	1.03
BCBG14I	1.13998	-2.47307	0.03842	2.43465	0.79
BCBG14J	0.78562	-2.02339	-0.09617	2.11956	1.23
BCBG14K	0.20569	-3.16759	0.13127	3.03632	0.87
BCBG14L	0.44841	-3.54657	0.11136	3.43521	0.81
BCBG14M	-0.44363	-2.97276	-0.18570	3.15846	1.15

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015

Scale Transformation Constants for the TIMSS 2015 School Emphasis on Academic Success - Principals' Reports Scale, Eighth Grade

Scale Transformation Constants	
A = 9.587978	Transformed Scale Score = 9.587978 + 1.101886 • Logit Scale Score
B = 1.101886	

**Equivalence Table of Raw and Transformed Scale Scores for the TIMSS
2015 School Emphasis on Academic Success - Principals' Reports Scale,
Eighth Grade**

Raw Score	Transformed Scale Score	Cutpoint
0	1.93343	
1	3.33811	
2	4.10092	
3	4.66995	
4	5.14483	
5	5.56379	
6	5.94753	
7	6.30527	
8	6.64249	
9	6.96191	
10	7.26508	
11	7.55352	
12	7.82881	
13	8.09374	
14	8.35031	
15	8.60068	
16	8.84696	
17	9.09098	
18	9.33426	
19	9.57780	9.6
20	9.82234	
21	10.06789	
22	10.31430	
23	10.56114	
24	10.80795	
25	11.05447	
26	11.30073	
27	11.54716	
28	11.79471	
29	12.04479	
30	12.29937	
31	12.56014	
32	12.83181	
33	13.11864	13.1
34	13.42815	
35	13.76917	
36	14.16268	
37	14.64698	
38	15.31745	
39	16.63263	

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015



Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2015 School Emphasis on Academic Success - Principals' Reports Scale, Eighth Grade

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Component Loadings for Each Item													
			BCBG14A	BCBG14B	BCBG14C	BCBG14D	BCBG14E	BCBG14F	BCBG14G	BCBG14H	BCBG14I	BCBG14J	BCBG14K	BCBG14L	BCBG14M	
Australia	0.94	60	0.70	0.75	0.83	0.72	0.82	0.72	0.83	0.83	0.83	0.77	0.79	0.68	0.74	
Bahrain	0.93	55	0.59	0.71	0.79	0.68	0.79	0.81	0.81	0.78	0.87	0.70	0.78	0.84	0.45	
Botswana (9)	0.86	39	0.58	0.59	0.69	0.67	0.70	0.62	0.64	0.52	0.71	0.49	0.70	0.60	0.60	
Canada	0.94	58	0.74	0.78	0.78	0.63	0.75	0.73	0.85	0.81	0.85	0.75	0.77	0.74	0.68	
Chile	0.92	51	0.74	0.79	0.73	0.62	0.76	0.68	0.75	0.76	0.69	0.70	0.75	0.70	0.64	
Chinese Taipei	0.93	56	0.64	0.73	0.77	0.68	0.77	0.82	0.83	0.80	0.79	0.70	0.78	0.82	0.58	
Egypt	0.88	42	0.50	0.61	0.44	0.53	0.50	0.73	0.69	0.76	0.76	0.69	0.71	0.74	0.60	
England	0.95	61	0.69	0.77	0.78	0.63	0.80	0.84	0.89	0.81	0.84	0.84	0.81	0.72	0.72	
Georgia	0.89	43	0.69	0.67	0.74	0.70	0.74	0.63	0.59	0.59	0.74	0.59	0.63	0.56	0.65	
Hong Kong SAR	0.92	52	0.59	0.65	0.74	0.63	0.74	0.54	0.83	0.79	0.84	0.73	0.79	0.81	0.58	
Hungary	0.89	45	0.37	0.61	0.57	0.42	0.65	0.70	0.80	0.76	0.72	0.68	0.81	0.75	0.72	
Iran, Islamic Rep. of	0.91	49	0.63	0.73	0.60	0.65	0.71	0.66	0.79	0.67	0.76	0.72	0.77	0.77	0.61	
Ireland	0.93	56	0.63	0.64	0.81	0.61	0.70	0.64	0.85	0.82	0.82	0.79	0.84	0.82	0.65	
Israel	0.89	44	0.62	0.72	0.73	0.48	0.58	0.59	0.72	0.72	0.80	0.55	0.73	0.71	0.60	
Italy	0.87	40	0.65	0.62	0.49	0.47	0.64	0.62	0.70	0.66	0.63	0.68	0.71	0.69	0.62	
Japan	0.89	44	0.60	0.63	0.75	0.55	0.53	0.55	0.73	0.70	0.77	0.54	0.78	0.76	0.67	
Jordan	0.91	49	0.65	0.65	0.55	0.73	0.72	0.69	0.78	0.71	0.71	0.69	0.73	0.77	0.66	
Kazakhstan	0.92	52	0.61	0.63	0.63	0.75	0.80	0.75	0.82	0.71	0.80	0.71	0.74	0.75	0.66	
Korea, Rep. of	0.90	46	0.44	0.57	0.77	0.60	0.62	0.77	0.81	0.75	0.81	0.59	0.67	0.79	0.52	
Kuwait	0.91	48	0.63	0.62	0.69	0.67	0.71	0.68	0.80	0.71	0.77	0.64	0.71	0.77	0.58	
Lebanon	0.90	46	0.61	0.68	0.66	0.69	0.59	0.70	0.75	0.77	0.75	0.56	0.70	0.73	0.54	
Lithuania	0.89	43	0.54	0.58	0.59	0.65	0.74	0.67	0.73	0.73	0.70	0.44	0.73	0.70	0.65	
Malaysia	0.91	49	0.44	0.63	0.60	0.61	0.68	0.72	0.79	0.79	0.80	0.63	0.80	0.77	0.70	
Malta	0.93	55	0.78	0.82	0.66	0.68	0.67	0.72	0.78	0.72	0.82	0.72	0.80	0.81	0.59	
Morocco	0.88	41	0.58	0.54	0.59	0.63	0.64	0.57	0.75	0.73	0.69	0.71	0.64	0.68	0.55	
New Zealand	0.90	48	0.65	0.69	0.71	0.61	0.74	0.62	0.76	0.66	0.79	0.73	0.76	0.70	0.48	
Norway (9)	0.88	43	0.46	0.59	0.76	0.59	0.62	0.80	0.71	0.66	0.76	0.54	0.61	0.66	0.63	
Oman	0.90	46	0.65	0.68	0.62	0.62	0.65	0.70	0.77	0.78	0.78	0.50	0.64	0.71	0.61	
Qatar	0.92	52	0.56	0.72	0.75	0.67	0.69	0.67	0.85	0.70	0.74	0.73	0.81	0.77	0.65	
Russian Federation	0.83	37	0.60	0.68	0.55	0.60	0.65	0.72	0.70	0.39	0.64	0.01	0.67	0.70	0.59	
Saudi Arabia	0.90	47	0.62	0.64	0.62	0.66	0.61	0.72	0.73	0.76	0.68	0.60	0.77	0.83	0.66	
Singapore	0.93	56	0.58	0.72	0.77	0.70	0.77	0.64	0.83	0.75	0.83	0.72	0.81	0.80	0.72	
Slovenia	0.84	36	0.72	0.76	0.71	0.76	0.79	0.50	0.55	0.27	0.56	0.40	0.54	0.54	0.48	
South Africa (9)	0.89	45	0.57	0.63	0.63	0.75	0.70	0.72	0.74	0.52	0.76	0.56	0.69	0.76	0.68	
Sweden	0.91	48	0.56	0.68	0.71	0.63	0.69	0.62	0.76	0.80	0.79	0.70	0.64	0.73	0.64	
Thailand	0.91	48	0.62	0.72	0.63	0.65	0.67	0.76	0.78	0.66	0.77	0.66	0.71	0.76	0.62	
Turkey	0.91	49	0.61	0.65	0.67	0.56	0.70	0.71	0.78	0.66	0.81	0.76	0.81	0.79	0.57	
United Arab Emirates	0.93	56	0.72	0.71	0.81	0.73	0.72	0.73	0.77	0.72	0.79	0.70	0.82	0.80	0.66	
United States	0.93	55	0.61	0.70	0.74	0.66	0.71	0.79	0.84	0.80	0.82	0.69	0.78	0.73	0.75	
Benchmarking Participants																
Buenos Aires, Argentina	0.87	42	0.70	0.62	0.67	0.58	0.61	0.60	0.66	0.64	0.74	0.70	0.60	0.62	0.62	
Ontario, Canada	0.93	56	0.74	0.77	0.79	0.48	0.65	0.70	0.85	0.80	0.85	0.78	0.79	0.76	0.65	
Quebec, Canada	0.94	58	0.76	0.73	0.72	0.79	0.79	0.79	0.83	0.77	0.82	0.69	0.71	0.72	0.73	
Norway (8)	0.88	42	0.47	0.60	0.76	0.57	0.64	0.81	0.71	0.63	0.77	0.52	0.59	0.65	0.63	
Abu Dhabi, UAE	0.92	52	0.72	0.72	0.82	0.69	0.74	0.70	0.78	0.66	0.75	0.64	0.84	0.74	0.57	
Dubai, UAE	0.94	60	0.74	0.77	0.83	0.78	0.80	0.71	0.73	0.74	0.83	0.70	0.83	0.85	0.75	
Florida, US	0.94	60	0.68	0.81	0.79	0.72	0.62	0.87	0.89	0.81	0.81	0.73	0.86	0.63	0.75	

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015

Relationship Between the TIMSS 2015 School Emphasis on Academic Success - Principals' Reports Scale, Eighth Grade, and TIMSS 2015 Achievement

Country	Pearson's Correlation with Achievement				Variance in Achievement Accounted for by Difference Between Regions of the Scale (η^2)	
	(r)		(r)		Mathematics	Science
	Mathematics	Science	Mathematics	Science		
Australia	0.32	0.27	0.10	0.07	0.09	0.07
Bahrain	0.24	0.21	0.06	0.04	0.08	0.05
Botswana (9)	0.34	0.31	0.12	0.10	0.13	0.11
Canada	0.21	0.14	0.05	0.02	0.04	0.02
Chile	0.30	0.30	0.09	0.09	0.07	0.06
Chinese Taipei	0.36	0.35	0.13	0.12	0.10	0.10
Egypt	0.09	0.09	0.01	0.01	0.00	0.01
England	0.38	0.35	0.14	0.13	0.14	0.12
Georgia	0.06	0.06	0.00	0.00	0.00	0.00
Hong Kong SAR	0.33	0.31	0.11	0.09	0.13	0.11
Hungary	0.43	0.42	0.19	0.17	0.12	0.12
Iran, Islamic Rep. of	0.31	0.30	0.10	0.09	0.07	0.06
Ireland	0.22	0.21	0.05	0.04	0.04	0.04
Israel	0.25	0.23	0.06	0.05	0.04	0.04
Italy	0.07	0.07	0.00	0.00	0.00	0.00
Japan	0.24	0.20	0.06	0.04	0.03	0.03
Jordan	0.27	0.26	0.07	0.07	0.06	0.05
Kazakhstan	0.14	0.10	0.02	0.01	0.00	0.00
Korea, Rep. of	0.19	0.15	0.03	0.02	0.02	0.01
Kuwait	0.22	0.26	0.05	0.07	0.04	0.06
Lebanon	0.28	0.28	0.08	0.08	0.07	0.08
Lithuania	0.14	0.13	0.02	0.02	0.01	0.01
Malaysia	0.21	0.22	0.04	0.05	0.05	0.04
Malta	0.32	0.32	0.10	0.10	0.06	0.06
Morocco	0.28	0.24	0.08	0.06	0.08	0.06
New Zealand	0.26	0.25	0.07	0.06	0.06	0.06
Norway (9)	0.18	0.18	0.03	0.03	0.03	0.03
Oman	0.11	0.10	0.01	0.01	0.01	0.01
Qatar	0.21	0.23	0.05	0.05	0.03	0.04
Russian Federation	0.21	0.24	0.05	0.06	0.03	0.03
Saudi Arabia	0.17	0.21	0.03	0.04	0.04	0.05
Singapore	0.34	0.33	0.11	0.11	0.10	0.09
Slovenia	0.09	0.08	0.01	0.01	0.01	0.01
South Africa (9)	0.20	0.19	0.04	0.04	0.04	0.04
Sweden	0.22	0.23	0.05	0.05	0.04	0.05
Thailand	0.13	0.12	0.02	0.02	0.01	0.01
Turkey	0.37	0.35	0.14	0.12	0.13	0.11
United Arab Emirates	0.32	0.31	0.10	0.10	0.09	0.08
United States	0.33	0.31	0.11	0.10	0.07	0.06
International Median	0.24	0.23	0.06	0.05	0.04	0.05
Benchmarking Participants						
Buenos Aires, Argentina	0.33	0.28	0.11	0.08	0.07	0.05
Ontario, Canada	0.18	0.11	0.03	0.01	0.02	0.01
Quebec, Canada	0.15	0.16	0.02	0.03	0.02	0.03
Norway (8)	0.18	0.18	0.03	0.03	0.03	0.03
Abu Dhabi, UAE	0.30	0.27	0.09	0.07	0.06	0.04
Dubai, UAE	0.28	0.28	0.08	0.08	0.09	0.10
Florida, US	0.30	0.26	0.09	0.07	0.04	0.03

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015