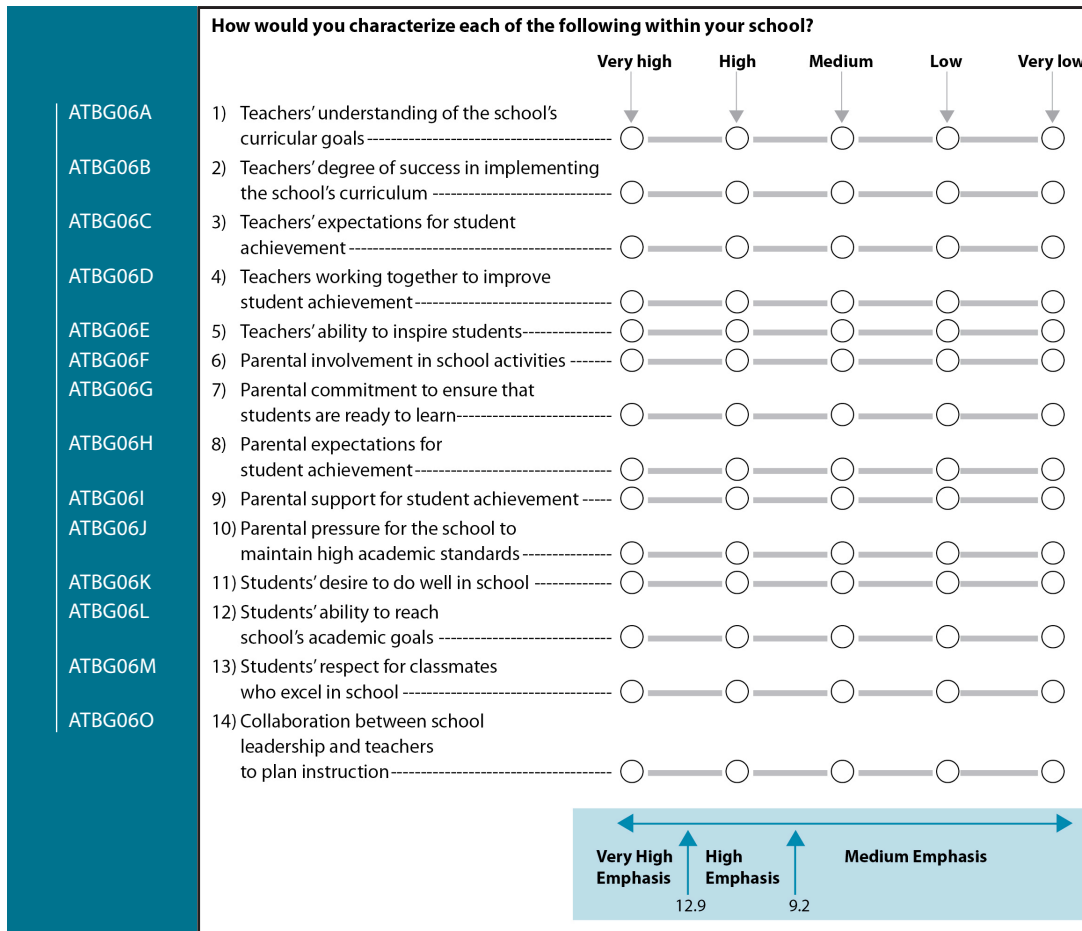


School Emphasis on Academic Success–Teachers’ Reports Scale, Fourth Grade

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

Items in the TIMSS 2015 School Emphasis on Academic Success–Teachers’ Reports Scale, Fourth 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 – Teachers' Reports Scale, Fourth Grade

Item	delta	tau_1	tau_2	tau_3	Infit
ATBG06A	-1.44621	-2.99618	-0.10920	3.10538	1.03
ATBG06B	-1.02745	-3.33623	-0.02415	3.36038	0.92
ATBG06C	-0.80942	-3.00204	-0.03625	3.03829	0.97
ATBG06D	-0.82375	-2.16113	-0.18841	2.34954	1.12
ATBG06E	-1.03209	-3.02365	-0.12507	3.14872	0.94
ATBG06F	1.06140	-2.19239	0.10160	2.09079	0.99
ATBG06G	1.33471	-2.43171	0.10214	2.32957	0.84
ATBG06H	0.09125	-2.39276	-0.14839	2.54115	1.00
ATBG06I	1.18060	-2.53725	0.11920	2.41805	0.81
ATBG06J	0.99194	-2.19510	0.01274	2.18236	1.18
ATBG06K	0.18650	-2.93168	0.00378	2.92790	0.91
ATBG06L	0.72569	-3.47712	0.18892	3.28820	0.85
ATBG06M	-0.16081	-2.70547	-0.18329	2.88876	1.11
ATBG06O	-0.27236	-1.68993	-0.37720	2.06713	1.22

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

Scale Transformation Constants for the TIMSS 2015 School Emphasis on Academic Success – Teachers' Reports Scale, Fourth Grade

Scale Transformation Constants	
A = 9.063358	Transformed Scale Score = 9.063358 + 1.313036 • Logit Scale Score
B = 1.313036	

**Equivalence Table of Raw and Transformed Scale Scores for the TIMSS
2015 School Emphasis on Academic Success – Teachers' Reports Scale,
Fourth Grade**

Raw Score	Transformed Scale Score	Cutpoint
0	0.32674	
1	1.95328	
2	2.81824	
3	3.45663	
4	3.98402	
5	4.44252	
6	4.85355	
7	5.22828	
8	5.57462	
9	5.89827	
10	6.20320	
11	6.49407	
12	6.77317	
13	7.04306	
14	7.30603	
15	7.56425	
16	7.81962	
17	8.07381	
18	8.32820	
19	8.58380	
20	8.84122	
21	9.10064	9.2
22	9.36202	
23	9.62473	
24	9.88825	
25	10.15200	
26	10.41565	
27	10.67922	
28	10.94307	
29	11.20798	
30	11.47508	
31	11.74519	
32	12.02119	
33	12.30494	
34	12.59942	
35	12.90857	12.9
36	13.23796	
37	13.59643	
38	13.99453	
39	14.45744	
40	15.03090	
41	15.82855	
42	17.39737	

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 – Teachers' Reports Scale, Fourth Grade

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Component Loadings for Each Item													
			ATB606A	ATB606B	ATB606C	ATB606D	ATB606E	ATB606F	ATB606G	ATB606H	ATB606I	ATB606J	ATB606K	ATB606L	ATB606M	ATB606O
Australia	0.90	45	0.57	0.63	0.68	0.59	0.71	0.71	0.77	0.68	0.80	0.63	0.73	0.71	0.64	0.49
Bahrain	0.90	46	0.54	0.64	0.75	0.57	0.65	0.67	0.78	0.70	0.76	0.62	0.74	0.74	0.67	0.55
Belgium (Flemish)	0.85	35	0.37	0.52	0.60	0.49	0.58	0.67	0.75	0.69	0.75	0.62	0.66	0.55	0.48	0.44
Bulgaria	0.89	43	0.63	0.73	0.68	0.58	0.60	0.77	0.73	0.65	0.69	0.59	0.71	0.69	0.54	0.54
Canada	0.91	47	0.59	0.62	0.65	0.56	0.64	0.74	0.83	0.75	0.82	0.65	0.72	0.73	0.61	0.58
Chile	0.90	44	0.52	0.59	0.58	0.53	0.53	0.72	0.82	0.76	0.78	0.69	0.72	0.70	0.71	0.58
Chinese Taipei	0.90	43	0.64	0.57	0.63	0.65	0.72	0.65	0.72	0.66	0.71	0.47	0.71	0.73	0.61	0.66
Croatia	0.90	44	0.56	0.60	0.57	0.70	0.68	0.75	0.71	0.57	0.80	0.80	0.59	0.62	0.61	0.61
Cyprus	0.87	39	0.44	0.57	0.68	0.40	0.53	0.68	0.79	0.70	0.77	0.64	0.73	0.69	0.60	0.37
Czech Republic	0.88	40	0.60	0.64	0.68	0.71	0.64	0.65	0.72	0.62	0.67	0.54	0.71	0.65	0.51	0.50
Denmark	0.86	37	0.45	0.52	0.55	0.40	0.63	0.68	0.76	0.69	0.75	0.56	0.68	0.65	0.62	0.34
England	0.92	49	0.63	0.66	0.66	0.66	0.62	0.75	0.81	0.76	0.81	0.64	0.75	0.73	0.66	0.67
Finland	0.85	36	0.53	0.64	0.59	0.57	0.58	0.61	0.71	0.64	0.67	0.42	0.66	0.61	0.53	0.51
France	0.78	29	0.21	0.27	0.35	0.21	0.32	0.61	0.80	0.72	0.79	0.45	0.68	0.80	0.49	0.19
Georgia	0.90	45	0.63	0.62	0.64	0.66	0.63	0.72	0.75	0.75	0.73	0.68	0.60	0.61	0.69	0.68
Germany	0.85	36	0.59	0.63	0.64	0.45	0.56	0.75	0.79	0.57	0.75	0.47	0.47	0.66	0.39	0.50
Hong Kong SAR	0.90	44	0.61	0.69	0.70	0.58	0.67	0.66	0.75	0.74	0.72	0.56	0.68	0.77	0.47	0.57
Hungary	0.89	42	0.42	0.67	0.57	0.49	0.60	0.71	0.80	0.67	0.77	0.70	0.78	0.73	0.61	0.41
Indonesia	0.91	47	0.60	0.65	0.57	0.65	0.62	0.76	0.78	0.74	0.81	0.59	0.69	0.73	0.72	0.64
Iran, Islamic Rep. of	0.89	43	0.67	0.62	0.45	0.54	0.64	0.76	0.78	0.63	0.76	0.69	0.70	0.72	0.60	0.57
Ireland	0.91	47	0.58	0.70	0.76	0.57	0.70	0.66	0.80	0.71	0.80	0.60	0.78	0.69	0.59	0.62
Italy	0.88	41	0.63	0.69	0.61	0.53	0.72	0.66	0.73	0.59	0.73	0.57	0.63	0.71	0.48	0.64
Japan	0.87	39	0.45	0.54	0.69	0.49	0.59	0.64	0.79	0.74	0.81	0.53	0.59	0.72	0.45	0.54
Jordan	0.89	42	0.55	0.59	0.55	0.65	0.64	0.65	0.78	0.61	0.73	0.71	0.63	0.73	0.60	0.63
Kazakhstan	0.93	52	0.70	0.72	0.67	0.73	0.74	0.74	0.82	0.71	0.82	0.66	0.72	0.76	0.55	0.69
Korea, Rep. of	0.91	48	0.63	0.64	0.70	0.66	0.66	0.75	0.78	0.75	0.76	0.67	0.71	0.69	0.62	0.62
Kuwait	0.88	39	0.57	0.53	0.65	0.55	0.60	0.67	0.76	0.64	0.67	0.54	0.67	0.70	0.62	0.51
Lithuania	0.89	42	0.49	0.62	0.64	0.58	0.67	0.69	0.75	0.78	0.76	0.61	0.64	0.65	0.52	0.58
Morocco	0.91	47	0.61	0.63	0.60	0.68	0.60	0.76	0.80	0.69	0.78	0.71	0.71	0.73	0.55	0.66
Netherlands	0.77	28	0.08	0.25	0.19	0.25	0.49	0.65	0.75	0.66	0.78	0.60	0.59	0.66	0.48	0.38
New Zealand	0.89	42	0.57	0.63	0.60	0.55	0.61	0.60	0.75	0.72	0.74	0.66	0.73	0.72	0.57	0.53
Northern Ireland	0.90	45	0.58	0.60	0.65	0.61	0.60	0.75	0.83	0.76	0.83	0.65	0.69	0.72	0.39	0.57
Norway (5)	0.87	39	0.49	0.53	0.67	0.55	0.53	0.80	0.72	0.74	0.75	0.55	0.60	0.60	0.52	0.58
Oman	0.89	42	0.50	0.62	0.61	0.60	0.59	0.71	0.81	0.71	0.74	0.49	0.62	0.71	0.62	0.62
Poland	0.87	39	0.53	0.68	0.61	0.55	0.62	0.71	0.76	0.58	0.77	0.54	0.61	0.67	0.57	0.47
Portugal	0.87	41	0.62	0.72	0.62	0.44	0.53	0.74	0.81	0.72	0.79	0.55	0.65	0.59	0.49	0.49
Qatar	0.88	40	0.57	0.59	0.66	0.48	0.64	0.69	0.77	0.64	0.73	0.42	0.69	0.75	0.57	0.53
Russian Federation	0.82	34	0.58	0.59	0.63	0.66	0.71	0.65	0.67	0.52	0.57	-0.07	0.60	0.65	0.49	0.53
Saudi Arabia	0.92	50	0.65	0.67	0.70	0.70	0.71	0.71	0.76	0.74	0.80	0.65	0.77	0.77	0.59	0.61
Serbia	0.87	40	0.59	0.60	0.68	0.66	0.70	0.73	0.73	0.43	0.78	0.46	0.62	0.61	0.41	0.67
Singapore	0.90	45	0.56	0.56	0.60	0.58	0.62	0.68	0.80	0.73	0.80	0.68	0.76	0.77	0.56	0.58
Slovak Republic	0.88	40	0.54	0.64	0.62	0.58	0.61	0.72	0.76	0.47	0.73	0.57	0.74	0.66	0.62	0.51
Slovenia	0.81	31	0.57	0.66	0.63	0.64	0.69	0.62	0.64	0.29	0.62	0.15	0.54	0.54	0.33	0.60
South Africa (5)	0.89	42	0.49	0.41	0.51	0.60	0.58	0.69	0.78	0.68	0.76	0.73	0.74	0.73	0.71	0.57
Spain	0.90	43	0.47	0.71	0.71	0.56	0.55	0.73	0.81	0.71	0.80	0.70	0.69	0.68	0.43	0.50
Sweden	0.88	41	0.62	0.60	0.68	0.52	0.69	0.66	0.76	0.65	0.72	0.66	0.60	0.69	0.53	0.46
Turkey	0.90	45	0.60	0.70	0.62	0.51	0.57	0.77	0.79	0.71	0.78	0.66	0.71	0.79	0.49	0.58
United Arab Emirates	0.91	47	0.59	0.68	0.68	0.68	0.72	0.69	0.77	0.63	0.76	0.56	0.75	0.77	0.61	0.61
United States	0.91	48	0.54	0.65	0.65	0.55	0.66	0.77	0.82	0.81	0.82	0.72	0.75	0.71	0.63	0.55
Benchmarking Participants																
Buenos Aires, Argentina	0.90	43	0.60	0.62	0.64	0.72	0.55	0.63	0.73	0.73	0.69	0.64	0.64	0.72	0.53	0.67
Ontario, Canada	0.90	46	0.55	0.51	0.64	0.43	0.51	0.76	0.83	0.78	0.84	0.74	0.75	0.73	0.62	0.59
Quebec, Canada	0.88	42	0.74	0.71	0.62	0.69	0.73	0.66	0.80	0.65	0.72	0.43	0.60	0.65	0.42	0.54
Norway (4)	0.87	38	0.55	0.64	0.69	0.54	0.60	0.71	0.72	0.67	0.62	0.44	0.64	0.64	0.63	0.52
Abu Dhabi, UAE	0.90	45	0.53	0.69	0.63	0.68	0.78	0.74	0.79	0.57	0.76	0.49	0.74	0.77	0.49	0.60
Dubai, UAE	0.89	42	0.61	0.64	0.72	0.62	0.62	0.61	0.74	0.62	0.75	0.45	0.75	0.71	0.62	0.61
Florida, US	0.93	54	0.69	0.80	0.64	0.71	0.74	0.81	0.81	0.81	0.83	0.79	0.68	0.67	0.63	0.63

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

Relationship Between the TIMSS 2015 School Emphasis on Academic Success – Teachers' Reports Scale, Fourth 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 ²)		Mathematics	Science
	Mathematics	Science	Mathematics	Science		
Australia	0.24	0.22	0.06	0.05	0.05	0.04
Bahrain	0.11	0.02	0.01	0.00	0.02	0.03
Belgium (Flemish)	0.20	0.22	0.04	0.05	0.03	0.03
Bulgaria	0.23	0.28	0.05	0.08	0.04	0.06
Canada	0.14	0.06	0.02	0.00	0.03	0.01
Chile	0.24	0.25	0.06	0.06	0.03	0.03
Chinese Taipei	0.07	0.02	0.01	0.00	0.01	0.00
Croatia	0.02	0.02	0.00	0.00	0.00	0.00
Cyprus	0.15	0.16	0.02	0.03	0.02	0.02
Czech Republic	0.08	0.10	0.01	0.01	0.00	0.01
Denmark	0.15	0.16	0.02	0.02	0.01	0.01
England	0.20	0.21	0.04	0.04	0.05	0.04
Finland	0.05	0.06	0.00	0.00	0.00	0.01
France	0.20	0.18	0.04	0.03	0.04	0.03
Georgia	0.14	0.17	0.02	0.03	0.02	0.02
Germany	0.18	0.21	0.03	0.04	0.02	0.03
Hong Kong SAR	0.25	0.18	0.06	0.03	0.05	0.03
Hungary	0.25	0.26	0.06	0.07	0.05	0.05
Indonesia	0.14	0.14	0.02	0.02	0.02	0.02
Iran, Islamic Rep. of	0.15	0.14	0.02	0.02	0.03	0.03
Ireland	0.17	0.19	0.03	0.04	0.03	0.04
Italy	0.07	0.05	0.00	0.00	0.00	0.00
Japan	0.11	0.14	0.01	0.02	0.00	0.01
Jordan	0.21	-	0.04	-	0.02	-
Kazakhstan	0.09	0.08	0.01	0.01	0.01	0.00
Korea, Rep. of	0.22	0.17	0.05	0.03	0.03	0.02
Kuwait	0.17	0.12	0.03	0.01	0.03	0.01
Lithuania	0.12	0.12	0.02	0.01	0.03	0.02
Morocco	0.24	0.23	0.06	0.05	0.07	0.05
Netherlands	0.12	0.17	0.01	0.03	0.00	0.01
New Zealand	0.23	0.22	0.05	0.05	0.04	0.04
Northern Ireland	0.15	0.13	0.02	0.02	0.02	0.01
Norway (5)	0.15	0.13	0.02	0.02	0.03	0.02
Oman	0.08	0.06	0.01	0.00	0.01	0.00
Poland	0.13	0.12	0.02	0.01	0.02	0.01
Portugal	0.23	0.19	0.05	0.04	0.03	0.02
Qatar	0.12	0.18	0.01	0.03	0.02	0.02
Russian Federation	0.07	0.11	0.01	0.01	0.01	0.01
Saudi Arabia	0.21	0.16	0.04	0.03	0.03	0.01
Serbia	0.10	0.11	0.01	0.01	0.01	0.02
Singapore	0.26	0.28	0.07	0.08	0.06	0.07
Slovak Republic	0.20	0.22	0.04	0.05	0.03	0.03
Slovenia	0.01	0.02	0.00	0.00	0.00	0.00
South Africa (5)	0.05	-	0.00	-	0.00	-
Spain	0.25	0.25	0.06	0.06	0.06	0.06
Sweden	0.17	0.15	0.03	0.02	0.02	0.01
Turkey	0.28	0.26	0.08	0.07	0.06	0.05
United Arab Emirates	0.34	0.35	0.11	0.13	0.09	0.10
United States	0.23	0.24	0.05	0.06	0.04	0.05
International Median	0.15	0.16	0.02	0.03	0.03	0.02
Benchmarking Participants						
Buenos Aires, Argentina	0.18	0.20	0.03	0.04	0.03	0.04
Ontario, Canada	0.11	0.07	0.01	0.01	0.02	0.02
Quebec, Canada	0.03	0.02	0.00	0.00	0.00	0.00
Norway (4)	0.10	0.13	0.01	0.02	0.01	0.01
Abu Dhabi, UAE	0.37	0.37	0.13	0.14	0.09	0.08
Dubai, UAE	0.28	0.29	0.08	0.08	0.05	0.07
Florida, US	0.34	0.28	0.11	0.08	0.08	0.06

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

A dash (-) indicates comparable data not available.