

TIMSS 2011

The TIMSS 2011 School Emphasis on Academic Success–Teacher Reports Scale, Eighth Grade

The School Emphasis on Academic Success–Teacher Reports (EAS–T) scale was created based on teachers’ degree of agreement to the five statements 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 TIMSS 2011 School Emphasis on Academic Success–Teacher Reports Scale, Eighth Grade

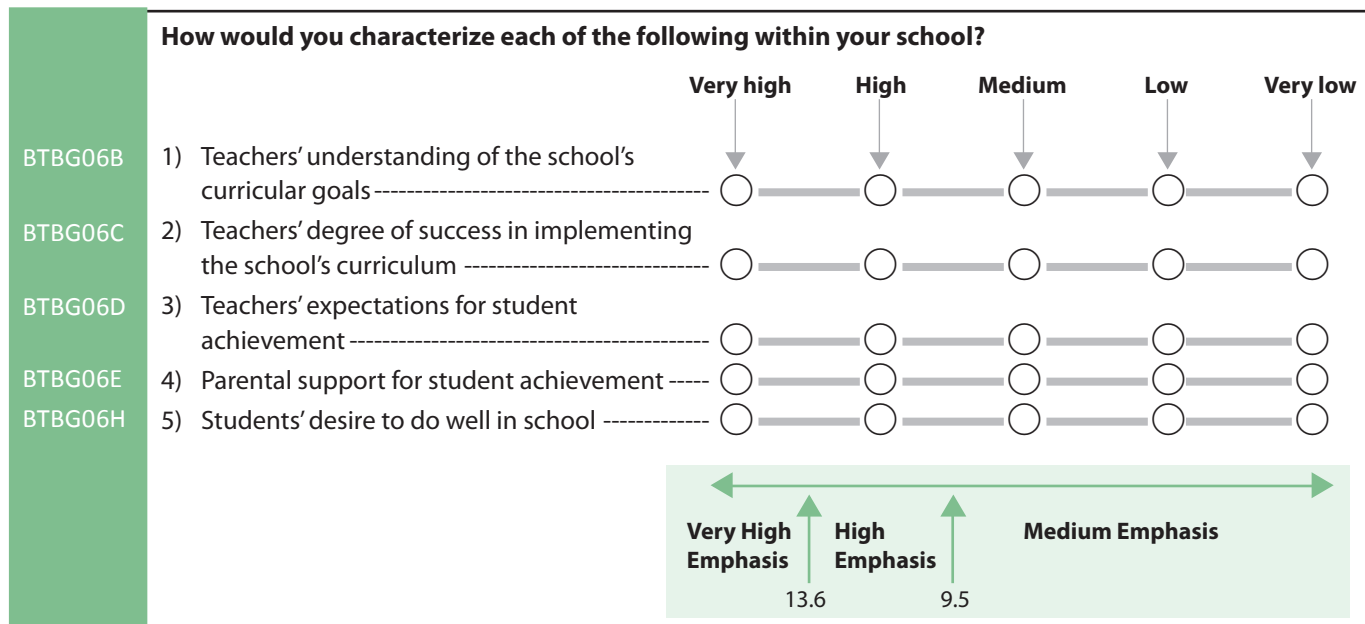


Exhibit 2: Item Parameters for TIMSS 2011 School Emphasis on Academic Success–Teacher Reports Scale, Eighth Grade¹

Item	delta	tau_1	tau_2	tau_3
BTBG06B	-0.00704	-1.73300	1.73300	
BTBG06C	0.61598	-1.62706	1.62706	
BTBG06D	0.91839	-1.25155	1.25155	
BTBG06E	1.15003	-2.19124	0.21102	1.98022
BTBG06H	0.33255	-2.68365	0.25027	2.43338

¹ For the purpose of scaling, categories in which there were very few respondents were combined for several of the variables. The categories “Medium,” “Low,” and “Very low” were combined for variables BTBG06B, BTBG06C, and BTBG06D, and the categories “Low” and “Very low” were combined for variables BTBG06E and BTBG06H, respectively.

Exhibit 3: Scale Transformation Constants

Scale Transformation Constants

$$A = 9.98288$$

$$B = 1.26840$$

$$\text{Transformed Scale Score} = 9.98288 + 1.26840 \cdot \text{Logit Scale Score}$$

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	4.98849		7	11.60898	
1	6.73785		8	12.26965	
2	7.77789		9	12.93738	
3	8.63297		10	13.66467	13.6
4	9.42629	9.5	11	14.58053	
5	10.18961		12	16.20948	
6	10.91998				

Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2011 School Emphasis on Academic Success–Teacher Reports Scale, Eighth Grade

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item				
			BTBG06B	BTBG06C	BTBG06D	BTBG06E	BTBG06H
Armenia	0.72	48	0.67	0.69	0.71	0.66	0.72
Australia	0.83	60	0.73	0.81	0.79	0.79	0.76
Bahrain	0.77	53	0.61	0.72	0.78	0.75	0.76
Chile	0.80	57	0.75	0.77	0.78	0.71	0.75
Chinese Taipei	0.76	52	0.66	0.62	0.77	0.76	0.76
England	0.82	58	0.70	0.82	0.77	0.75	0.77
Finland	0.74	49	0.65	0.74	0.72	0.68	0.72
Georgia	0.76	51	0.62	0.76	0.71	0.76	0.70
Ghana	0.66	43	0.57	0.67	0.71	0.64	0.68
Hong Kong SAR	0.79	55	0.63	0.73	0.79	0.77	0.77
Hungary	0.71	47	0.48	0.71	0.74	0.76	0.70
Indonesia	0.78	54	0.73	0.76	0.66	0.75	0.78
Iran, Islamic Rep. of	0.72	48	0.63	0.75	0.65	0.72	0.71
Israel	0.74	49	0.60	0.70	0.72	0.72	0.76
Italy	0.64	41	0.61	0.56	0.66	0.68	0.70
Japan	0.77	53	0.72	0.69	0.77	0.78	0.69
Jordan	0.66	43	0.68	0.72	0.51	0.71	0.64
Kazakhstan	0.78	53	0.62	0.75	0.78	0.71	0.77
Korea, Rep. of	0.76	52	0.73	0.77	0.73	0.68	0.71
Lebanon	0.78	54	0.67	0.75	0.75	0.77	0.71
Lithuania	0.73	48	0.69	0.76	0.67	0.69	0.66
Macedonia, Rep. of	0.75	50	0.68	0.76	0.73	0.74	0.64

Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2011 School Emphasis on Academic Success–Teacher Reports Scale, Eighth Grade (Continued)

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item				
			BTBG06B	BTBG06C	BTBG06D	BTBG06E	BTBG06H
Malaysia	0.78	54	0.71	0.74	0.76	0.74	0.73
Morocco	0.71	48	0.67	0.72	0.74	0.69	0.64
New Zealand	0.78	53	0.67	0.77	0.72	0.75	0.74
Norway	0.65	42	0.56	0.62	0.71	0.67	0.66
Oman	0.74	50	0.74	0.79	0.61	0.71	0.65
Palestinian Nat'l Auth.	0.64	42	0.66	0.65	0.53	0.73	0.65
Qatar	0.77	53	0.71	0.73	0.73	0.74	0.71
Romania	0.80	56	0.70	0.80	0.75	0.76	0.74
Russian Federation	0.73	48	0.56	0.73	0.68	0.75	0.73
Saudi Arabia	0.73	49	0.70	0.77	0.69	0.73	0.60
Singapore	0.81	57	0.72	0.78	0.78	0.77	0.75
Slovenia	0.68	44	0.65	0.74	0.61	0.68	0.62
Sweden	0.75	51	0.61	0.73	0.77	0.72	0.73
Syrian Arab Republic	0.68	45	0.73	0.72	0.67	0.67	0.55
Thailand	0.71	47	0.47	0.74	0.63	0.81	0.72
Tunisia	0.70	46	0.74	0.74	0.58	0.68	0.65
Turkey	0.77	52	0.67	0.75	0.69	0.74	0.75
Ukraine	0.68	44	0.56	0.68	0.63	0.70	0.74
United Arab Emirates	0.74	50	0.71	0.71	0.72	0.71	0.68
United States	0.77	53	0.73	0.78	0.72	0.71	0.69
Ninth Grade Participants							
Botswana	0.66	43	0.59	0.71	0.51	0.72	0.71
Honduras	0.78	53	0.74	0.74	0.73	0.70	0.73
South Africa	0.78	54	0.75	0.81	0.65	0.75	0.69
Benchmarking Participants							
Alberta, Canada	0.77	53	0.63	0.72	0.79	0.80	0.70
Ontario, Canada	0.75	50	0.63	0.75	0.73	0.70	0.72
Quebec, Canada	0.78	54	0.64	0.76	0.76	0.76	0.74
Abu Dhabi, UAE	0.75	51	0.72	0.72	0.74	0.71	0.67
Dubai, UAE	0.77	53	0.76	0.69	0.73	0.72	0.72
Alabama, US	0.81	58	0.73	0.74	0.80	0.75	0.79
California, US	0.78	55	0.75	0.76	0.79	0.71	0.67
Colorado, US	0.79	56	0.76	0.79	0.75	0.73	0.69
Connecticut, US	0.76	52	0.65	0.71	0.75	0.76	0.72
Florida, US	0.76	51	0.75	0.79	0.75	0.66	0.62
Indiana, US	0.69	46	0.72	0.75	0.64	0.59	0.67
Massachusetts, US	0.75	51	0.55	0.79	0.64	0.74	0.81
Minnesota, US	0.72	49	0.56	0.73	0.80	0.71	0.67
North Carolina, US	0.76	53	0.77	0.84	0.84	0.57	0.54

Exhibit 6: Relationship Between the TIMSS 2011 School Emphasis on Academic Success–Teacher Reports Scale, Eighth Grade, and TIMSS 2011 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		
Armenia	0.13	0.08	0.02	0.01	0.01	0.01
Australia	0.36	0.35	0.13	0.12	0.12	0.07
Bahrain	0.33	0.33	0.11	0.11	0.10	0.10
Chile	0.26	0.24	0.07	0.06	0.08	0.03
Chinese Taipei	0.21	0.17	0.05	0.03	0.04	0.01
England	0.27	0.17	0.07	0.03	0.02	0.02
Finland	0.08	0.11	0.01	0.01	0.00	0.01
Georgia	0.12	0.12	0.01	0.01	0.01	0.02
Ghana	0.20	0.11	0.04	0.01	0.03	0.03
Hong Kong SAR	0.40	0.32	0.16	0.10	0.13	0.07
Hungary	0.24	0.20	0.06	0.04	0.06	0.04
Indonesia	0.05	0.02	0.00	0.00	0.01	0.00
Iran, Islamic Rep. of	0.25	0.25	0.06	0.06	0.05	0.07
Israel	0.27	0.20	0.07	0.04	0.06	0.04
Italy	0.11	0.10	0.01	0.01	0.01	0.00
Japan	0.16	0.16	0.03	0.02	0.02	0.02
Jordan	0.18	0.17	0.03	0.03	0.02	0.01
Kazakhstan	-0.02	-0.09	0.00	0.01	0.00	0.01
Korea, Rep. of	0.08	0.10	0.01	0.01	0.00	0.00
Lebanon	0.28	0.31	0.08	0.10	0.08	0.09
Lithuania	0.14	0.15	0.02	0.02	0.01	0.02
Macedonia, Rep. of	0.14	0.17	0.02	0.03	0.01	0.02
Malaysia	0.19	0.25	0.04	0.06	0.03	0.06
Morocco	0.21	0.17	0.05	0.03	0.03	0.03
New Zealand	0.23	0.16	0.05	0.03	0.03	0.02
Norway	0.17	0.12	0.03	0.01	0.03	0.01
Oman	0.25	0.24	0.06	0.06	0.06	0.06
Palestinian Nat'l Auth.	0.03	0.04	0.00	0.00	0.00	0.00
Qatar	0.18	0.21	0.03	0.04	0.03	0.03
Romania	0.22	0.18	0.05	0.03	0.04	0.03
Russian Federation	0.21	0.19	0.04	0.04	0.06	0.04
Saudi Arabia	0.16	0.15	0.03	0.02	0.02	0.03
Singapore	0.31	0.31	0.10	0.10	0.07	0.10
Slovenia	0.11	0.06	0.01	0.00	0.01	0.00
Sweden	0.18	0.17	0.03	0.03	0.02	0.02
Syrian Arab Republic	0.13	0.11	0.02	0.01	0.01	0.01
Thailand	0.15	0.14	0.02	0.02	0.03	0.01
Tunisia	0.13	0.13	0.02	0.02	0.01	0.04

Exhibit 6: Relationship Between the TIMSS 2011 School Emphasis on Academic Success–Teacher Reports Scale, Eighth Grade, and TIMSS 2011 Achievement (Continued)

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		
Turkey	0.30	0.26	0.09	0.07	0.09	0.06
Ukraine	0.18	0.16	0.03	0.03	0.04	0.02
United Arab Emirates	0.23	0.16	0.05	0.03	0.05	0.02
United States	0.21	0.25	0.05	0.06	0.04	0.06
International Median	0.19	0.17	0.03	0.03	0.03	0.02
Ninth Grade Participants						
Botswana	0.17	0.16	0.03	0.03	0.04	0.03
Honduras	0.06	0.01	0.00	0.00	0.00	0.00
South Africa	0.20	0.11	0.04	0.01	0.05	0.05
Benchmarking Participants						
Alberta, Canada	0.10	0.12	0.01	0.02	0.01	0.01
Ontario, Canada	0.14	0.16	0.02	0.02	0.01	0.02
Quebec, Canada	0.24	0.26	0.06	0.07	0.04	0.06
Abu Dhabi, UAE	0.22	0.12	0.05	0.01	0.06	0.02
Dubai, UAE	0.31	0.24	0.10	0.06	0.08	0.07
Alabama, US	0.12	0.13	0.02	0.02	0.09	0.02
California, US	0.31	0.23	0.10	0.05	0.09	0.05
Colorado, US	0.37	0.27	0.14	0.07	0.15	0.08
Connecticut, US	0.23	0.32	0.05	0.10	0.04	0.09
Florida, US	0.22	0.29	0.05	0.09	0.07	0.04
Indiana, US	0.15	0.15	0.02	0.02	0.02	0.02
Massachusetts, US	0.22	0.28	0.05	0.08	0.04	0.04
Minnesota, US	0.26	0.19	0.07	0.04	0.03	0.02
North Carolina, US	0.21	0.28	0.04	0.08	0.05	0.06