

TIMSS 2011

The TIMSS 2011 Teacher Career Satisfaction Scale, Eighth Grade

The Teacher Career Satisfaction (TCS) scale was created based on teachers' degree of agreement to the six 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 Teacher Career Satisfaction Scale

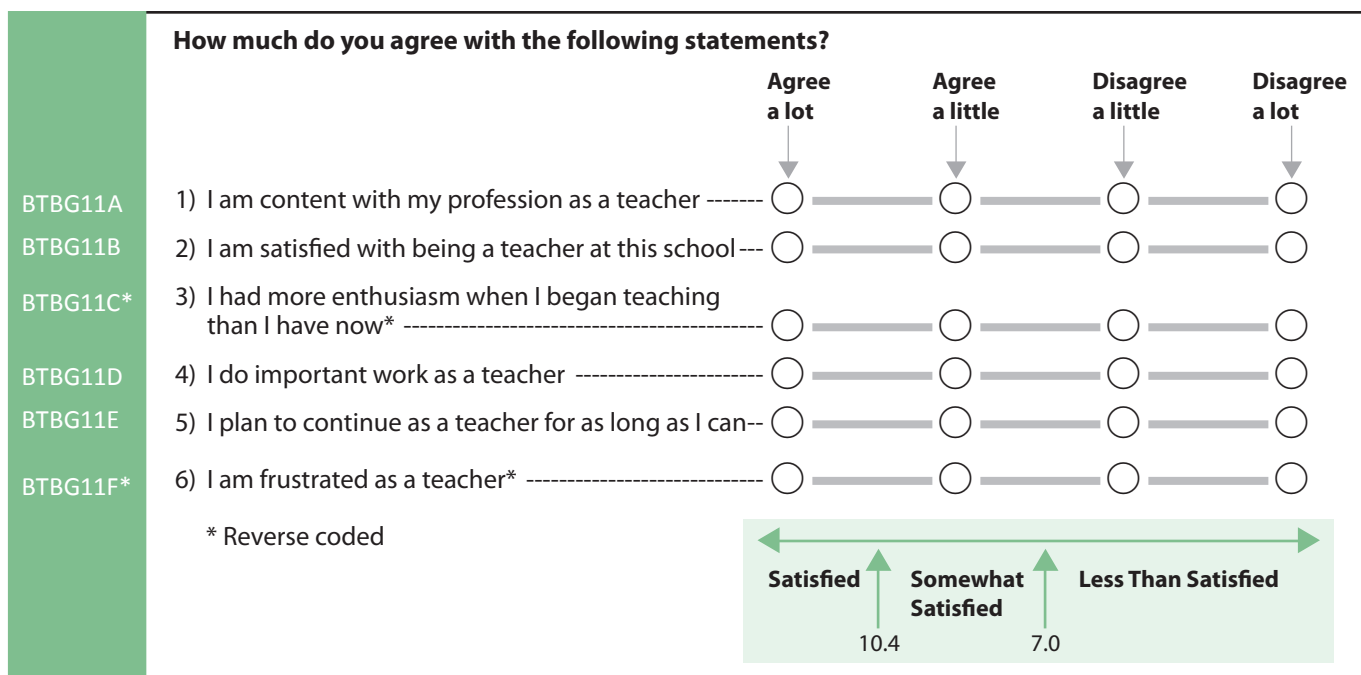


Exhibit 2: Item Parameters for the TIMSS 2011 Teacher Career Satisfaction Scale, Eighth Grade¹

Item	delta	tau_1	tau_2	tau_3
BTBG11A	-1.65873	-0.91539	0.91539	
BTBG11B	-1.47691	-0.89583	0.89583	
BTBG11C*	0.28618	-0.78094	0.13104	0.6499
BTBG11D	-2.72738	-0.92969	0.92969	
BTBG11E	-1.10108	-0.50827	0.50827	
BTBG11F*	-0.60946	0.01815	-0.01815	

* Reverse coded

¹ For the purpose of scaling, the categories "Disagree a little" and "Disagree a lot" were combined for variables BTBG11A, BTBG11B, BTBG11D, BTBG11E, and BTBG11F because there were very few respondents in each of these categories.

Exhibit 3: Scale Transformation Constants

Scale Transformation Constants

$$A = 10.05012$$

$$B = 1.63195$$

$$\text{Transformed Scale Score} = 10.05012 + 1.63195 \cdot \text{Logit Scale Score}$$

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	1.81934		7	8.72308	
1	4.02883		8	9.27081	
2	5.25573		9	9.83703	
3	6.17056		10	10.44344	10.4
4	6.92289	7.0	11	11.14837	
5	7.57616		12	12.05385	
6	8.16680		13	13.80178	

Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2011 Teacher Career Satisfaction Scale, Eighth Grade

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item					
			BTBG11A	BTBG11B	BTBG11C*	BTBG11D	BTBG11E	BTBG11F*
Armenia	0.62	39	0.73	0.65	0.49	0.45	0.63	0.71
Australia	0.75	48	0.84	0.78	0.56	0.55	0.70	0.67
Bahrain	0.76	48	0.81	0.59	0.64	0.45	0.78	0.81
Chile	0.61	38	0.75	0.65	0.61	0.33	0.55	0.72
Chinese Taipei	0.68	43	0.81	0.70	0.33	0.58	0.78	0.59
England	0.76	48	0.84	0.82	0.65	0.45	0.65	0.69
Finland	0.79	51	0.84	0.76	0.63	0.59	0.63	0.80
Georgia	0.61	39	0.75	0.68	0.50	0.41	0.62	0.70
Ghana	0.63	38	0.81	0.54	0.37	0.39	0.79	0.65
Hong Kong SAR	0.65	42	0.79	0.79	0.26	0.48	0.69	0.70
Hungary	0.77	50	0.80	0.74	0.56	0.59	0.77	0.76
Indonesia	0.55	37	0.75	0.70	0.21	0.66	0.68	0.48
Iran, Islamic Rep. of	0.64	41	0.81	0.45	0.39	0.53	0.79	0.73
Israel	0.68	43	0.76	0.73	0.53	0.48	0.65	0.72
Italy	0.75	47	0.82	0.73	0.68	0.58	0.63	0.66
Japan	0.75	47	0.85	0.78	0.45	0.53	0.79	0.65
Jordan	0.74	45	0.81	0.64	0.63	0.48	0.70	0.70
Kazakhstan	0.63	44	0.80	0.77	0.26	0.67	0.69	0.64
Korea, Rep. of	0.67	46	0.83	0.79	-0.06	0.66	0.77	0.63
Lebanon	0.61	39	0.75	0.74	0.34	0.65	0.69	0.43
Lithuania	0.74	47	0.83	0.78	0.59	0.48	0.64	0.74
Macedonia, Rep. of	0.51	36	0.80	0.78	0.29	0.53	0.74	0.15
Malaysia	0.43	35	0.73	0.67	-0.06	0.67	0.63	0.52

Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2011 Teacher Career Satisfaction Scale, Eighth Grade (Continued)

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item					
			BTBG11A	BTBG11B	BTBG11C*	BTBG11D	BTBG11E	BTBG11F*
Morocco	0.67	41	0.79	0.68	0.47	0.44	0.72	0.69
New Zealand	0.75	48	0.84	0.80	0.62	0.46	0.68	0.66
Norway	0.74	48	0.80	0.83	0.59	0.53	0.72	0.62
Oman	0.72	45	0.82	0.68	0.54	0.43	0.75	0.72
Palestinian Nat'l Auth.	0.71	45	0.83	0.68	0.53	0.51	0.70	0.71
Qatar	0.67	43	0.78	0.69	0.51	0.60	0.68	0.63
Romania	0.67	41	0.77	0.66	0.58	0.49	0.67	0.65
Russian Federation	0.74	47	0.82	0.80	0.53	0.54	0.65	0.74
Saudi Arabia	0.69	44	0.82	0.56	0.55	0.43	0.76	0.76
Singapore	0.72	48	0.86	0.78	0.17	0.69	0.79	0.66
Slovenia	0.71	43	0.80	0.73	0.61	0.49	0.64	0.60
Sweden	0.76	47	0.86	0.77	0.61	0.37	0.76	0.64
Syrian Arab Republic	0.62	38	0.74	0.57	0.60	0.43	0.66	0.64
Thailand	0.36	40	0.75	0.71	-0.20	0.64	0.69	0.62
Tunisia	0.59	36	0.73	0.55	0.51	0.52	0.60	0.68
Turkey	0.72	46	0.82	0.64	0.50	0.53	0.67	0.83
Ukraine	0.64	40	0.72	0.73	0.52	0.45	0.63	0.71
United Arab Emirates	0.68	42	0.78	0.58	0.56	0.44	0.77	0.71
United States	0.72	44	0.82	0.77	0.60	0.41	0.70	0.62
Ninth Grade Participants								
Botswana	0.60	35	0.60	0.69	0.48	0.35	0.74	0.57
Honduras	0.48	31	0.25	0.67	0.71	0.44	0.69	0.44
South Africa	0.66	41	0.76	0.75	0.36	0.53	0.72	0.60
Benchmarking Participants								
Alberta, Canada	0.74	48	0.81	0.79	0.63	0.52	0.65	0.69
Ontario, Canada	0.63	40	0.79	0.62	0.47	0.61	0.67	0.61
Quebec, Canada	0.75	47	0.82	0.70	0.71	0.52	0.68	0.63
Abu Dhabi, UAE	0.68	43	0.80	0.58	0.55	0.49	0.72	0.75
Dubai, UAE	0.69	43	0.75	0.64	0.55	0.49	0.78	0.69
Alabama, US	0.72	43	0.79	0.66	0.66	0.31	0.65	0.74
California, US	0.71	44	0.81	0.78	0.63	0.41	0.69	0.58
Colorado, US	0.74	49	0.86	0.78	0.51	0.66	0.76	0.58
Connecticut, US	0.72	44	0.77	0.78	0.66	0.53	0.56	0.63
Florida, US	0.74	44	0.82	0.72	0.65	0.39	0.67	0.67
Indiana, US	0.71	45	0.84	0.79	0.65	0.36	0.66	0.59
Massachusetts, US	0.65	40	0.78	0.69	0.51	0.49	0.64	0.63
Minnesota, US	0.73	46	0.82	0.77	0.64	0.59	0.69	0.50
North Carolina, US	0.75	47	0.83	0.85	0.56	0.49	0.76	0.54

* Reverse coded

Exhibit 6: Relationship Between the TIMSS 2011 Teacher Career Satisfaction 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	0.05	0.01	0.00	0.00	0.00	0.00
Australia	0.16	0.02	0.03	0.00	0.01	0.00
Bahrain	0.21	0.18	0.05	0.03	0.05	0.03
Chile	0.10	0.09	0.01	0.01	0.00	0.01
Chinese Taipei	0.02	-0.02	0.00	0.00	0.00	0.00
England	0.10	0.01	0.01	0.00	0.03	0.00
Finland	0.01	0.01	0.00	0.00	0.00	0.00
Georgia	0.02	0.03	0.00	0.00	0.00	0.00
Ghana	0.02	0.02	0.00	0.00	0.00	0.00
Hong Kong SAR	0.17	0.11	0.03	0.01	0.02	0.01
Hungary	0.01	0.05	0.00	0.00	0.00	0.00
Indonesia	-0.04	0.02	0.00	0.00	0.00	0.00
Iran, Islamic Rep. of	0.06	0.09	0.00	0.01	0.01	0.01
Israel	0.12	0.10	0.02	0.01	0.01	0.03
Italy	0.01	-0.01	0.00	0.00	0.00	0.00
Japan	0.13	0.03	0.02	0.00	0.02	0.00
Jordan	0.08	0.13	0.01	0.02	0.00	0.02
Kazakhstan	0.13	0.06	0.02	0.00	0.02	0.01
Korea, Rep. of	0.04	0.01	0.00	0.00	0.00	0.00
Lebanon	0.09	0.16	0.01	0.03	0.01	0.03
Lithuania	0.04	0.07	0.00	0.00	0.00	0.00
Macedonia, Rep. of	0.06	0.18	0.00	0.03	0.01	0.04
Malaysia	0.08	0.09	0.01	0.01	0.00	0.00
Morocco	0.07	0.03	0.01	0.00	0.01	0.00
New Zealand	0.03	0.02	0.00	0.00	0.01	0.00
Norway	0.05	0.02	0.00	0.00	0.01	0.00
Oman	0.18	0.05	0.03	0.00	0.03	0.00
Palestinian Nat'l Auth.	0.01	0.00	0.00	0.00	0.00	0.00
Qatar	0.02	0.05	0.00	0.00	0.02	0.01
Romania	0.04	0.04	0.00	0.00	0.00	0.00
Russian Federation	0.10	0.10	0.01	0.01	0.00	0.01
Saudi Arabia	0.07	0.11	0.01	0.01	0.01	0.01
Singapore	0.19	0.10	0.04	0.01	0.03	0.00
Slovenia	0.01	0.01	0.00	0.00	0.00	0.00
Sweden	0.05	0.06	0.00	0.00	0.00	0.00
Syrian Arab Republic	0.05	0.06	0.00	0.00	0.01	0.00
Thailand	0.15	-0.04	0.02	0.00	0.00	0.01
Tunisia	-0.01	0.07	0.00	0.00	0.00	0.00

Exhibit 6: Relationship Between the TIMSS 2011 Teacher Career Satisfaction 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	0.12	0.11	0.01	0.01	0.02	0.01
Ukraine	0.08	0.10	0.01	0.01	0.01	0.01
United Arab Emirates	0.14	0.05	0.02	0.00	0.01	0.00
United States	0.01	0.11	0.00	0.01	0.00	0.01
International Median	0.06	0.05	0.00	0.00	0.00	0.00
Ninth Grade Participants						
Botswana	0.04	0.04	0.00	0.00	0.00	0.01
Honduras	-0.14	-0.16	0.02	0.02	0.02	0.02
South Africa	0.05	-0.01	0.00	0.00	0.01	0.00
Benchmarking Participants						
Alberta, Canada	-0.01	0.05	0.00	0.00	0.00	0.01
Ontario, Canada	0.03	0.09	0.00	0.01	0.00	0.00
Quebec, Canada	0.07	0.11	0.00	0.01	0.01	0.01
Abu Dhabi, UAE	0.11	-0.03	0.01	0.00	0.00	0.01
Dubai, UAE	0.15	0.19	0.02	0.03	0.03	0.03
Alabama, US	0.09	0.06	0.01	0.00	0.01	0.00
California, US	-0.01	0.04	0.00	0.00	0.00	0.00
Colorado, US	0.24	0.06	0.06	0.00	0.02	0.00
Connecticut, US	-0.01	0.14	0.00	0.02	0.00	0.00
Florida, US	0.36	0.03	0.13	0.00	0.08	0.00
Indiana, US	-0.01	0.01	0.00	0.00	0.03	0.00
Massachusetts, US	0.01	-0.05	0.00	0.00	0.01	0.00
Minnesota, US	0.07	0.08	0.00	0.01	0.01	0.01
North Carolina, US	-0.02	0.16	0.00	0.02	0.01	0.04