

TIMSS 2011

The TIMSS 2011 Teacher Career Satisfaction Scale, Fourth Grade

The Teacher Career Satisfaction (TCS) scale was created based on teachers' degree of agreement with 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 the TIMSS 2011 Teacher Career Satisfaction Scale, Fourth Grade

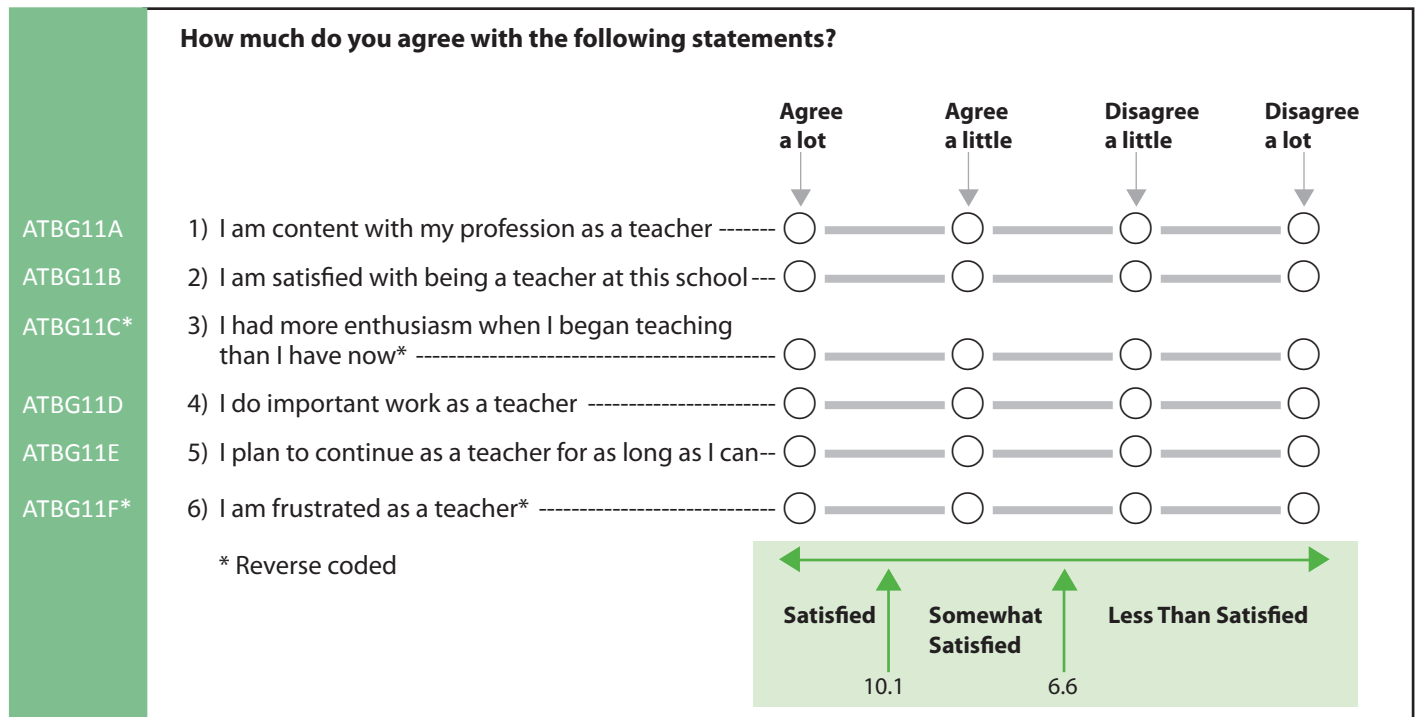


Exhibit 2: Item Parameters for the TIMSS 2011 Teacher Career Satisfaction Scale, Fourth Grade¹

Item	delta	tau_1	tau_2	tau_3
ATBG11A	-1.94157	-1.00372	1.00372	
ATBG11B	-1.79488	-0.85231	0.85231	
ATBG11C*	0.09892	-0.77234	0.19208	0.58026
ATBG11D	-3.17583	-0.90462	0.90462	
ATBG11E	-1.34078	-0.47030	0.47030	
ATBG11F*	-0.75894	-0.02528	0.02528	

*Reverse coded

¹ For the purpose of scaling, the categories "Disagree a little" and "Disagree a lot" were combined for variables ATBG11A, ATBG11B, ATBG11D, ATBG11E, and ATBG11F because there were very few respondents in each of these categories.

Exhibit 3: Scale Transformation Constants

Scale Transformation Constants

$$A = 10.07994$$

$$B = 1.61661$$

$$\text{Transformed Scale Score} = 10.07994 + 1.61661 \cdot \text{Logit Scale Score}$$

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	1.32667		7	8.38237	
1	3.54542		8	8.94450	
2	4.79451		9	9.51927	
3	5.73607		10	10.13261	10.1
4	6.51821	6.6	11	10.82513	
5	7.19551		12	11.70966	
6	7.80796		13	13.38658	

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

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item					
			ATBG11A	ATBG11B	ATBG11C*	ATBG11D	ATBG11E	ATBG11F*
Armenia	0.56	36	0.75	0.67	0.52	0.33	0.50	0.72
Australia	0.75	48	0.86	0.78	0.68	0.37	0.68	0.67
Austria	0.71	46	0.84	0.67	0.65	0.13	0.68	0.83
Azerbaijan	0.41	32	0.65	0.78	0.05	0.63	0.53	0.44
Bahrain	0.76	49	0.85	0.74	0.60	0.40	0.73	0.78
Belgium (Flemish)	0.73	45	0.83	0.70	0.69	0.41	0.66	0.68
Chile	0.63	41	0.77	0.58	0.59	0.63	0.73	0.52
Chinese Taipei	0.70	46	0.87	0.81	0.25	0.66	0.75	0.54
Croatia	0.46	35	0.61	0.68	0.45	0.36	0.59	0.75
Czech Republic	0.70	45	0.84	0.70	0.43	0.47	0.77	0.73
Denmark	0.66	42	0.80	0.78	0.65	0.30	0.51	0.68
England	0.77	49	0.81	0.77	0.75	0.28	0.73	0.70
Finland	0.76	48	0.84	0.69	0.58	0.45	0.74	0.76
Georgia	0.54	36	0.78	0.73	0.55	0.30	0.49	0.63
Germany	0.72	43	0.80	0.65	0.70	0.36	0.63	0.72
Hong Kong SAR	0.62	43	0.83	0.77	0.04	0.55	0.76	0.62
Hungary	0.65	40	0.72	0.70	0.45	0.52	0.70	0.67
Iran, Islamic Rep. of	0.54	36	0.78	0.46	0.40	0.34	0.77	0.69
Ireland	0.68	44	0.75	0.72	0.63	0.56	0.62	0.66
Italy	0.73	47	0.83	0.75	0.57	0.56	0.65	0.70
Japan	0.76	48	0.85	0.79	0.52	0.55	0.77	0.63
Kazakhstan	0.57	39	0.72	0.68	0.30	0.59	0.58	0.76
Korea, Rep. of	0.67	49	0.84	0.76	-0.22	0.74	0.79	0.64

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

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item					
			ATBG11A	ATBG11B	ATBG11C*	ATBG11D	ATBG11E	ATBG11F*
Kuwait	0.70	44	0.79	0.66	0.52	0.47	0.77	0.70
Lithuania	0.66	41	0.78	0.74	0.64	0.38	0.55	0.67
Malta	0.67	41	0.83	0.68	0.62	0.38	0.58	0.68
Morocco	0.66	41	0.83	0.70	0.35	0.56	0.69	0.64
Netherlands	0.68	41	0.79	0.68	0.76	0.35	0.44	0.68
New Zealand	0.71	43	0.82	0.69	0.60	0.31	0.71	0.70
Northern Ireland	0.72	45	0.86	0.68	0.70	0.33	0.68	0.68
Norway	0.70	43	0.77	0.74	0.57	0.31	0.70	0.71
Oman	0.68	42	0.81	0.61	0.54	0.37	0.68	0.76
Poland	0.59	36	0.69	0.71	0.63	0.41	0.50	0.60
Portugal	0.73	46	0.82	0.72	0.76	0.18	0.63	0.75
Qatar	0.68	43	0.82	0.67	0.46	0.51	0.77	0.66
Romania	0.61	38	0.78	0.62	0.49	0.47	0.70	0.55
Russian Federation	0.74	48	0.80	0.76	0.65	0.52	0.69	0.72
Saudi Arabia	0.67	42	0.80	0.50	0.55	0.39	0.75	0.78
Serbia	0.72	46	0.82	0.72	0.61	0.62	0.61	0.68
Singapore	0.70	46	0.83	0.75	0.20	0.62	0.76	0.71
Slovak Republic	0.73	46	0.80	0.69	0.52	0.38	0.80	0.77
Slovenia	0.69	42	0.83	0.72	0.50	0.49	0.71	0.60
Spain	0.73	48	0.81	0.74	0.61	0.59	0.70	0.67
Sweden	0.76	49	0.85	0.79	0.62	0.52	0.76	0.57
Thailand	0.34	40	0.83	0.57	-0.17	0.77	0.70	0.54
Tunisia	0.63	41	0.77	0.69	0.43	0.54	0.69	0.67
Turkey	0.63	43	0.80	0.58	0.44	0.65	0.59	0.82
United Arab Emirates	0.71	46	0.81	0.68	0.54	0.43	0.76	0.77
United States	0.71	44	0.83	0.74	0.65	0.37	0.65	0.66
Yemen	0.55	36	0.76	0.62	0.33	0.30	0.77	0.63
Sixth Grade Participants								
Botswana	0.57	33	0.57	0.66	0.47	0.30	0.74	0.61
Honduras	0.30	31	∅	0.25	0.66	0.51	0.45	0.76
Yemen	0.55	34	0.71	0.63	0.47	0.21	0.72	0.60
Benchmarking Participants								
Alberta, Canada	0.61	39	0.80	0.73	0.48	0.15	0.59	0.73
Ontario, Canada	0.66	42	0.79	0.69	0.65	0.56	0.61	0.55
Quebec, Canada	0.70	43	0.81	0.66	0.68	0.49	0.64	0.61
Abu Dhabi, UAE	0.68	44	0.82	0.60	0.56	0.29	0.78	0.78
Dubai, UAE	0.68	43	0.79	0.65	0.47	0.49	0.72	0.75
Florida, US	0.69	43	0.83	0.74	0.57	0.45	0.59	0.67
North Carolina, US	0.71	43	0.84	0.74	0.63	0.25	0.76	0.55

* Reverse coded.

∅ No variance among respondents—item excluded from principal components analysis.

Exhibit 6: Relationship Between the TIMSS 2011 Teacher Career Satisfaction Scale, Fourth 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	0.04	0.05	0.00	0.00	0.00	0.00
Australia	0.10	0.10	0.01	0.01	0.01	0.01
Austria	0.04	0.02	0.00	0.00	0.00	0.00
Azerbaijan	-0.02	-0.02	0.00	0.00	0.00	0.01
Bahrain	0.11	0.08	0.01	0.01	0.02	0.01
Belgium (Flemish)	0.02	0.03	0.00	0.00	0.00	0.00
Chile	0.07	0.06	0.00	0.00	0.00	0.00
Chinese Taipei	0.00	0.06	0.00	0.00	0.00	0.00
Croatia	-0.06	-0.06	0.00	0.00	0.00	0.00
Czech Republic	0.10	0.09	0.01	0.01	0.01	0.01
Denmark	0.05	-0.01	0.00	0.00	0.00	0.00
England	0.09	0.09	0.01	0.01	0.01	0.01
Finland	0.03	0.03	0.00	0.00	0.01	0.00
Georgia	0.02	-0.01	0.00	0.00	0.00	0.00
Germany	0.06	0.05	0.00	0.00	0.00	0.00
Hong Kong SAR	-0.01	0.06	0.00	0.00	0.01	0.00
Hungary	0.19	0.16	0.03	0.03	0.03	0.02
Iran, Islamic Rep. of	0.06	0.05	0.00	0.00	0.00	0.00
Ireland	0.01	0.03	0.00	0.00	0.00	0.00
Italy	0.08	0.04	0.01	0.00	0.01	0.00
Japan	0.03	0.02	0.00	0.00	0.00	0.00
Kazakhstan	0.19	0.23	0.04	0.05	0.01	0.02
Korea, Rep. of	0.03	0.04	0.00	0.00	0.00	0.00
Kuwait	0.04	0.06	0.00	0.00	0.00	0.00
Lithuania	0.02	0.02	0.00	0.00	0.00	0.00
Malta	0.09	0.06	0.01	0.00	0.01	0.01
Morocco	0.15	0.07	0.02	0.00	0.03	0.02
Netherlands	0.03	0.03	0.00	0.00	0.00	0.00
New Zealand	0.03	0.03	0.00	0.00	0.00	0.00
Northern Ireland	0.02	0.04	0.00	0.00	0.00	0.00
Norway	0.05	0.05	0.00	0.00	0.00	0.00
Oman	0.12	0.12	0.01	0.01	0.01	0.01
Poland	0.00	0.00	0.00	0.00	0.00	0.00

Exhibit 6: Relationship Between the TIMSS 2011 Teacher Career Satisfaction Scale, Fourth 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		
Portugal	0.05	0.05	0.00	0.00	0.00	0.00
Qatar	0.01	0.07	0.00	0.01	0.01	0.01
Romania	0.12	0.13	0.01	0.02	0.00	0.01
Russian Federation	0.04	0.04	0.00	0.00	0.00	0.00
Saudi Arabia	0.09	0.10	0.01	0.01	0.01	0.01
Serbia	0.03	0.03	0.00	0.00	0.00	0.00
Singapore	0.06	0.05	0.00	0.00	0.00	0.00
Slovak Republic	-0.04	-0.01	0.00	0.00	0.00	0.00
Slovenia	-0.01	-0.01	0.00	0.00	0.00	0.00
Spain	0.15	0.14	0.02	0.02	0.03	0.03
Sweden	-0.04	-0.03	0.00	0.00	0.00	0.00
Thailand	0.04	0.03	0.00	0.00	0.00	0.00
Tunisia	0.05	0.04	0.00	0.00	0.01	0.01
Turkey	0.20	0.19	0.04	0.04	0.03	0.03
United Arab Emirates	0.14	0.10	0.02	0.01	0.01	0.01
United States	0.04	0.07	0.00	0.00	0.01	0.01
Yemen	0.04	0.02	0.00	0.00	0.00	0.00
International Median	0.04	0.05	0.00	0.00	0.00	0.00
Sixth Grade Participants						
Botswana	0.07	0.05	0.00	0.00	0.01	0.00
Honduras	0.04	0.05	0.00	0.00	0.00	0.00
Yemen	-0.03	-0.03	0.00	0.00	0.01	0.00
Benchmarking Participants						
Alberta, Canada	0.09	0.08	0.01	0.01	0.02	0.01
Ontario, Canada	0.02	0.04	0.00	0.00	0.00	0.00
Quebec, Canada	0.02	0.02	0.00	0.00	0.01	0.01
Abu Dhabi, UAE	0.13	0.11	0.02	0.01	0.01	0.01
Dubai, UAE	0.16	0.13	0.02	0.02	0.01	0.00
Florida, US	-0.02	0.01	0.00	0.00	0.00	0.00
North Carolina, US	0.07	0.06	0.01	0.00	0.00	0.00