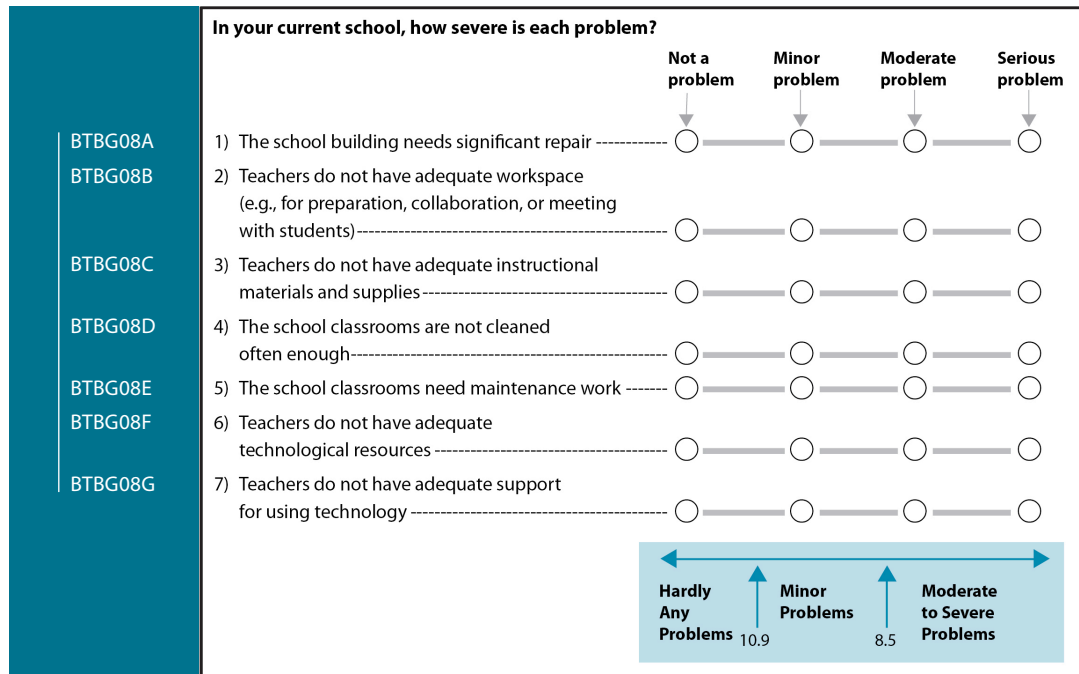


# Problems with School Conditions and Resources–Teachers’ Reports Scale, Eighth Grade

The Problems with School Conditions and Resources–Teachers’ Reports (SCR) scale was created based on teachers’ responses concerning seven conditions and resources described below.

## Items in the TIMSS 2015 Problems with School Conditions and Resources–Teachers’ Reports Scale, Eighth Grade



**Item Parameters for the TIMSS 2015 Problems with School Conditions and Resources - Teachers' Reports Scale, Eighth Grade**

Item	delta	tau_1	tau_2	tau_3	Infit
BTBG08A	0.18329	-1.18267	-0.15059	1.33326	1.18
BTBG08B	0.10371	-1.12918	0.03675	1.09243	1.13
BTBG08C	0.06452	-1.43644	-0.01153	1.44797	0.91
BTBG08D	-0.83481	-1.03008	-0.01533	1.04541	1.16
BTBG08E	0.01912	-1.27930	-0.26537	1.54467	0.94
BTBG08F	0.31141	-1.20361	-0.08650	1.29011	0.89
BTBG08G	0.15276	-1.24345	-0.12380	1.36725	0.97

**Scale Transformation Constants for the TIMSS 2015 Problems with School Conditions and Resources - Teachers' Reports Scale, Eighth Grade**

Scale Transformation Constants	
A = 8.583007	Transformed Scale Score = 8.583007 + 1.253975 • Logit Scale Score
B = 1.253975	

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

**Equivalence Table of Raw and Transformed Scale Scores for the TIMSS  
2015 Problems with School Conditions and Resources - Teachers'  
Reports Scale, Eighth Grade**

Raw Score	Transformed Scale Score	Cutpoint
0	3.65135	
1	5.09647	
2	5.80756	
3	6.30783	
4	6.70551	
5	7.04380	
6	7.34972	
7	7.63174	
8	7.89851	
9	8.15652	
10	8.41086	8.5
11	8.66588	
12	8.92566	
13	9.19445	
14	9.47709	
15	9.77810	
16	10.10696	
17	10.47588	
18	10.90666	10.9
19	11.44067	
20	12.19170	
21	13.67660	

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 Problems with School Conditions and Resources - Teachers' Reports Scale, Eighth Grade**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Component Loadings for Each Item						
			BTBC08A	BTBC08B	BTBC08C	BTBC08D	BTBC08E	BTBC08F	BTBC08G
Australia	0.84	52	0.74	0.64	0.77	0.53	0.80	0.77	0.73
Bahrain	0.87	57	0.66	0.80	0.80	0.75	0.78	0.79	0.71
Botswana (9)	0.78	43	0.73	0.70	0.65	0.59	0.71	0.66	0.53
Canada	0.84	51	0.66	0.62	0.76	0.69	0.79	0.78	0.72
Chile	0.88	58	0.70	0.76	0.83	0.63	0.77	0.83	0.81
Chinese Taipei	0.85	54	0.60	0.72	0.76	0.62	0.79	0.81	0.81
Egypt	0.86	55	0.64	0.75	0.80	0.66	0.73	0.76	0.81
England	0.82	48	0.74	0.59	0.73	0.56	0.75	0.73	0.71
Georgia	0.85	52	0.73	0.70	0.75	0.62	0.77	0.79	0.69
Hong Kong SAR	0.85	54	0.59	0.73	0.76	0.73	0.75	0.80	0.75
Hungary	0.85	54	0.72	0.75	0.81	0.51	0.79	0.81	0.69
Iran, Islamic Rep. of	0.86	55	0.72	0.75	0.79	0.56	0.78	0.81	0.76
Ireland	0.83	51	0.74	0.69	0.81	0.60	0.79	0.67	0.66
Israel	0.87	56	0.70	0.71	0.80	0.67	0.78	0.79	0.79
Italy	0.85	53	0.72	0.63	0.79	0.66	0.72	0.76	0.77
Japan	0.80	46	0.69	0.69	0.72	0.47	0.72	0.73	0.71
Jordan	0.90	62	0.74	0.78	0.81	0.70	0.81	0.84	0.83
Kazakhstan	0.88	58	0.72	0.79	0.81	0.63	0.81	0.81	0.76
Korea, Rep. of	0.87	57	0.72	0.73	0.78	0.60	0.78	0.83	0.82
Kuwait	0.90	62	0.70	0.78	0.81	0.77	0.79	0.85	0.80
Lebanon	0.87	58	0.67	0.80	0.82	0.65	0.74	0.81	0.80
Lithuania	0.81	48	0.60	0.65	0.81	0.48	0.70	0.80	0.74
Malaysia	0.85	53	0.67	0.68	0.75	0.66	0.76	0.79	0.76
Malta	0.84	52	0.73	0.62	0.79	0.65	0.82	0.69	0.72
Morocco	0.83	50	0.65	0.71	0.74	0.57	0.74	0.77	0.74
New Zealand	0.84	51	0.68	0.68	0.75	0.63	0.77	0.77	0.70
Norway (9)	0.83	50	0.80	0.63	0.75	0.56	0.80	0.72	0.63
Oman	0.86	55	0.68	0.69	0.79	0.66	0.74	0.81	0.79
Qatar	0.88	58	0.62	0.67	0.76	0.75	0.82	0.84	0.85
Russian Federation	0.86	54	0.67	0.72	0.83	0.53	0.73	0.83	0.80
Saudi Arabia	0.90	62	0.74	0.76	0.79	0.72	0.82	0.85	0.83
Singapore	0.85	54	0.70	0.73	0.75	0.65	0.78	0.77	0.74
Slovenia	0.86	55	0.69	0.72	0.83	0.60	0.76	0.82	0.76
South Africa (9)	0.91	66	0.82	0.80	0.80	0.72	0.87	0.84	0.81
Sweden	0.82	49	0.68	0.67	0.72	0.61	0.78	0.75	0.68
Thailand	0.87	56	0.67	0.70	0.83	0.69	0.79	0.81	0.75
Turkey	0.88	59	0.69	0.76	0.82	0.59	0.81	0.85	0.82
United Arab Emirates	0.88	58	0.75	0.72	0.80	0.69	0.78	0.79	0.79
United States	0.84	51	0.72	0.69	0.74	0.64	0.79	0.71	0.72
<b>Benchmarking Participants</b>									
Buenos Aires, Argentina	0.91	65	0.77	0.82	0.74	0.73	0.87	0.84	0.86
Ontario, Canada	0.83	50	0.65	0.56	0.76	0.66	0.80	0.80	0.71
Quebec, Canada	0.86	54	0.70	0.63	0.80	0.74	0.82	0.75	0.71
Norway (8)	0.82	48	0.72	0.72	0.74	0.60	0.77	0.71	0.59
Abu Dhabi, UAE	0.87	58	0.73	0.72	0.80	0.67	0.78	0.82	0.81
Dubai, UAE	0.85	53	0.79	0.69	0.79	0.56	0.74	0.72	0.75
Florida, US	0.83	51	0.60	0.64	0.72	0.71	0.80	0.78	0.74

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

**Relationship Between the TIMSS 2015 Problems with School Conditions and Resources - Teachers' 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 ( $\eta^2$ )	
	(r)		(r <sup>2</sup> )		Mathematics	Science
	Mathematics	Science	Mathematics	Science		
Australia	0.17	0.10	0.03	0.01	0.02	0.01
Bahrain	0.07	0.11	0.00	0.01	0.01	0.01
Botswana (9)	0.13	0.13	0.02	0.02	0.01	0.03
Canada	0.05	0.09	0.00	0.01	0.01	0.01
Chile	0.18	0.22	0.03	0.05	0.03	0.03
Chinese Taipei	0.13	0.08	0.02	0.01	0.02	0.01
Egypt	0.14	0.13	0.02	0.02	0.01	0.02
England	0.02	0.07	0.00	0.00	0.01	0.01
Georgia	0.06	0.07	0.00	0.00	0.00	0.00
Hong Kong SAR	0.10	0.01	0.01	0.00	0.01	0.01
Hungary	-0.01	-0.07	0.00	0.01	0.00	0.00
Iran, Islamic Rep. of	0.23	0.23	0.05	0.05	0.06	0.04
Ireland	0.06	0.06	0.00	0.00	0.00	0.00
Israel	0.01	0.00	0.00	0.00	0.01	0.01
Italy	0.01	0.02	0.00	0.00	0.01	0.01
Japan	0.02	0.04	0.00	0.00	0.00	0.00
Jordan	0.23	0.19	0.05	0.04	0.03	0.03
Kazakhstan	0.08	0.08	0.01	0.01	0.01	0.01
Korea, Rep. of	0.05	0.01	0.00	0.00	0.00	0.00
Kuwait	0.07	0.09	0.00	0.01	0.00	0.01
Lebanon	0.13	0.20	0.02	0.04	0.02	0.03
Lithuania	0.07	-0.02	0.00	0.00	0.01	0.00
Malaysia	0.07	0.05	0.01	0.00	0.00	0.02
Malta	0.07	0.10	0.01	0.01	0.01	0.01
Morocco	0.12	0.12	0.01	0.01	0.01	0.02
New Zealand	0.08	0.14	0.01	0.02	0.01	0.01
Norway (9)	0.06	0.02	0.00	0.00	0.00	0.00
Oman	0.04	0.07	0.00	0.00	0.00	0.00
Qatar	-0.08	-0.13	0.01	0.02	0.01	0.01
Russian Federation	0.05	0.09	0.00	0.01	0.00	0.01
Saudi Arabia	0.18	0.16	0.03	0.03	0.02	0.03
Singapore	0.07	0.12	0.00	0.01	0.00	0.02
Slovenia	0.02	0.04	0.00	0.00	0.00	0.00
South Africa (9)	0.41	0.41	0.17	0.17	0.19	0.15
Sweden	-0.01	0.01	0.00	0.00	0.01	0.00
Thailand	0.12	0.14	0.01	0.02	0.01	0.02
Turkey	0.16	0.20	0.03	0.04	0.01	0.02
United Arab Emirates	0.18	0.17	0.03	0.03	0.02	0.02
United States	0.08	0.12	0.01	0.01	0.00	0.02
<b>International Median</b>	<b>0.07</b>	<b>0.09</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>
<b>Benchmarking Participants</b>						
Buenos Aires, Argentina	0.32	0.18	0.10	0.03	0.11	0.01
Ontario, Canada	0.03	0.05	0.00	0.00	0.00	0.00
Quebec, Canada	0.03	0.12	0.00	0.02	0.01	0.02
Norway (8)	0.02	0.01	0.00	0.00	0.00	0.00
Abu Dhabi, UAE	0.10	0.02	0.01	0.00	0.00	0.00
Dubai, UAE	0.23	0.24	0.05	0.06	0.05	0.05
Florida, US	0.12	0.15	0.02	0.02	0.02	0.02

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