

TIMSS 2011

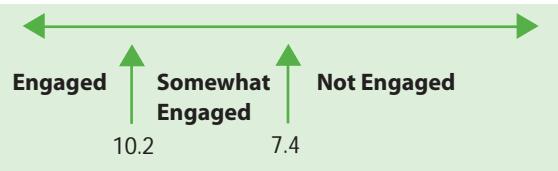
The TIMSS 2011 Student Mathematics Scale, Fourth Grade

The Student Engagement in Mathematics Lessons (EML) scale was created based on the degree of engagement in the mathematics lessons described below. See [Creating and Interpreting TIMSS and PIRLS 2011 Context Questionnaire Scales](#) for more information on the scale development.

How much do you agree with these statements about your mathematics lessons?

- | | Agree
a lot | Agree
a little | Disagree
a little | Disagree
a lot |
|---|----------------|-------------------|----------------------|-------------------|
| 1) I know what my teacher expects me to do ----- | A | A | A | A |
| 2) I think of things not related to the lesson* ----- | A | A | A | A |
| 3) My teacher is easy to understand ----- | A | A | A | A |
| 4) I am interested in what my teacher says ----- | A | A | A | A |
| 5) My teacher gives me interesting things to do ----- | A | A | A | A |

* Reverse coded



**Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the
TIMSS 2011 Students Engaged in Mathematics Lessons Scale, Fourth Grade**



Exhibit 6: Relationship Between the TIMSS 2011 Students Engaged in Mathematics Lessons Scale, Fourth Grade, and TIMSS 2011 Mathematics Achievement

Country	A		B (r^2)
	(r)	(r^2)	
Armenia	0.25	0.06	0.06
Australia	0.16	0.03	0.03
Austria	0.04	0.00	0.00
Azerbaijan	0.24	0.06	0.04
Bahrain	0.17	0.03	0.04
Belgium (Flemish)	0.09	0.01	0.01
Chile	0.19	0.04	0.04
Chinese Taipei	0.12	0.01	0.01
Croatia	0.06	0.00	0.01
Czech Republic	0.05	0.00	0.01
Denmark	0.11	0.01	0.01
England	0.01	0.00	0.00
Finland	0.10	0.01	0.01
Georgia	0.17	0.03	0.04
Germany	0.08	0.01	0.01
Hong Kong SAR	0.16	0.03	0.03
Hungary	0.22	0.05	0.06
Iran, Islamic Rep. of	0.13	0.02	0.02
Ireland	0.11	0.01	0.01
Italy	0.13	0.02	0.02
Japan	0.07	0.00	0.01
Kazakhstan	0.17	0.03	0.04
Korea, Rep. of	0.20	0.04	0.03
Kuwait	0.17	0.03	0.04
Lithuania	0.11	0.01	0.02
Malta	0.24	0.06	0.06
Morocco	0.25	0.06	0.06
Netherlands	0.09	0.01	0.01
New Zealand	0.04	0.00	0.01
Northern Ireland	0.09	0.01	0.01
Norway	0.07	0.00	0.01
Oman	0.27	0.07	0.08
Poland	0.15	0.02	0.03
Portugal	0.20	0.04	0.03
Qatar	0.24	0.06	0.08
Romania	0.25	0.06	0.08
Russian F0.084			

Country	A		B
	(r)	(r ²)	(r ²)
Serbia	0.11	0.01	0.01
Singapore	0.18	0.03	0.04
Slovak Republic	0.12	0.01	0.02
Slovenia	0.10	0.01	0.02
Spain	0.18	0.03	0.04
Sweden	0.04	0.00	0.00
Thailand	0.15	0.02	0.03
Tunisia	0.23	0.05	0.05
Turkey	0.33	0.11	0.13
United Arab Emirates	0.18	0.03	0.05
United States	0.14	0.02	0.03
Yemen	0.21	0.05	0.04
Average	0.15	0.02	0.03
B			
Botswana	0.35	0.12	0.12
Honduras	0.03	0.00	0.00
Yemen	0.12	0.01	0.02
Alberta, Canada	0.14	0.02	0.02
Ontario, Canada	0.11	0.01	0.02
Quebec, Canada	0.16	0.03	0.03
Abu Dhabi, UAE	0.18	0.03	0.04
Dubai, UAE	0.16	0.02	0.04