

The School Discipline and Safety (DAS) scale was created based on principals' responses to the ten statements described below. See





Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2011 School Discipline and Safety Scale, Fourth Grade

METHODS AND PROCEDURES
CREATING AND INTERPRETING CONTEXT QUESTIONNAIRE SCALES

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

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item									
			ACBG13AA	ACBG13AB	ACBG13AC	ACBG13AD	ACBG13AE	ACBG13AF	ACBG13AG	ACBG13AH	ACBG13AI	ACBG13AJ
South Grade Participants												
Botswana	0.87	46	0.54	0.54	0.60	0.75	0.71	0.79	0.78	0.70	0.70	0.60
Honduras	0.95	70	0.72	0.73	0.80	0.81	0.84	0.93	0.89	0.91	0.86	0.87
Yemen	0.93	63	0.50	0.60	0.69	0.85	0.85	0.92	0.86	0.85	0.82	0.88
Benchmarking Participants												
Alberta, Canada	0.80	37	0.53	0.54	0.69	0.57	0.65	0.65	0.66	0.70	0.54	0.50
Ontario, Canada	0.86	46	0.44	0.52	0.74	0.57	0.81	0.83	0.75	0.69	0.64	0.66
Quebec, Canada	0.83	42	0.53	0.57	0.59	0.63	0.75	0.75	0.64	0.67	0.65	0.63
Abu Dhabi, UAE	0.95	70	0.67	0.72	0.83	0.90	0.84	0.90	0.87	0.86	0.87	0.88
Dubai, UAE	0.97	77	0.68	0.77	0.86	0.91	0.92	0.94	0.93	0.87	0.92	0.91
Florida, US	0.88	51	0.53	0.65	0.79	0.77	0.81	0.72	0.83	0.76	0.64	0.61
North Carolina, US	0.85	45	0.62	0.60	0.81	0.74	0.73	0.61	0.69	0.59	0.74	0.52

Country	Pearson Correlation with Achievement				Variation in Achievement Across Education Sector by Region of the Scale (r^2)	
	(r)		(r ²)		Background Region of the Scale (r^2)	Science
	Mathematic	Science	Mathematic	Science	Mathematic	Science
Armenia	0.01	0.01	0.00	0.00	0.01	0.01
Australia	0.22	0.23	0.05	0.05	0.02	0.02
Austria	0.08	0.09	0.01	0.01	0.01	0.01
Azerbaijan	0.04	0.06	0.00	0.00	0.00	0.00
Bahrain	0.09	0.10	0.01	0.01	0.00	0.01
Belgium (Flemish)	0.09	0.10	0.01	0.01	0.01	0.01
Chile	0.16	0.15	0.03	0.02	0.03	0.03
Chinese HF						

METHODS AND PROCEDURES

C	Pea r' C elai i h Achie emer				Va iace in Achie emer Acc i ed f b Diffe er ce Be eer Regi i f he Scale (