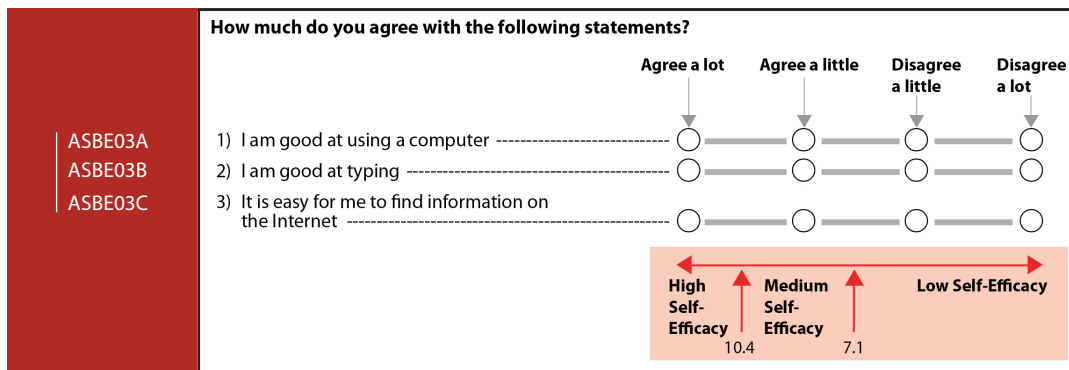# Appendix 14B: ePIRLS 2016 Context Questionnaire Scale

Self-Efficacy for Computer Use Scale

The *Self-Efficacy for Computer Use* (SEC) scale was created based on students' degree of agreement with the three statements described below.

Items in the ePIRLS 2016 *Self-Efficacy for Computer Use* Scale

	How much do you agree with the following statements?				
		Agree a lot	**Agree a little**	**Disagree a little**	**Disagree a lot**
ASBE03A	1) I am good at using a computer	○	○	○	○
ASBE03B	2) I am good at typing	○	○	○	○
ASBE03C	3) It is easy for me to find information on the Internet	○	○	○	○

High Self-Efficacy ← 10.4 → Medium Self-Efficacy ← 7.1 → Low Self-Efficacy

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Item Parameters for the ePIRLS 2016 *Self-Efficacy for Computer Use* Scale

Item	delta	tau_1	tau_2	tau_3	Infit
ASBE03A	-0.30146	-0.63034	-0.70712	1.33746	0.95
ASBE03B	0.28602	-0.73511	-0.61080	1.34591	0.97
ASBE03C	0.01544	-0.88525	-0.38788	1.27313	1.04

Scale Transformation Constants for the ePIRLS 2016 *Self-Efficacy for Computer Use* Scale

Scale Transformation Constants
A = 7.582113
B = 1.557903

Transformed Scale Score $= 7.582113 + 1.557903 \cdot$ Logit Scale Score

Equivalence Table of the Raw Score and Transformed Scale Scores for the ePIRLS 2016 *Self-Efficacy for Computer Use* Scale

Raw Score	Transformed Scale Score	Cutpoint
0	3.53502	
1	5.02075	
2	5.81380	
3	6.43388	
4	7.02434	7.1
5	7.63722	
6	8.34823	
7	9.25796	
8	10.49854	10.4
9	12.62271	

Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the ePIRLS 2016 *Self-Efficacy for Computer Use* Scale

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Component Loadings for Each Item		
			ASBE03A	ASBE03B	ASBE03C
Canada	0.57	54	0.78	0.77	0.65
Chinese Taipei	0.66	60	0.77	0.79	0.76
Denmark	0.68	61	0.79	0.81	0.75
Georgia	0.51	52	0.78	0.61	0.77
Ireland	0.67	61	0.82	0.81	0.70
Israel	0.63	58	0.79	0.79	0.71
Italy	0.69	63	0.82	0.80	0.75
Norway (5)	0.66	60	0.81	0.79	0.72
Portugal	0.66	60	0.84	0.81	0.67
Singapore	0.64	59	0.81	0.78	0.69
Slovenia	0.68	62	0.83	0.79	0.74
Sweden	0.71	64	0.85	0.83	0.71
United Arab Emirates	0.57	54	0.76	0.75	0.69
United States	0.58	55	0.78	0.75	0.69
Benchmarking Participants					
Abu Dhabi, UAE	0.55	53	0.75	0.76	0.67
Dubai, UAE	0.58	54	0.76	0.77	0.68

SOURCE: IEA's Progress in International Reading Literacy Study – PIRLS 2016

Relationship Between the ePIRLS 2016 *Self-Efficacy for Computer Use* **Scale and ePIRLS 2016 Online Informational Reading Achievement**

Country	Pearson's Correlation with ePIRLS Achievement		Variance in ePIRLS Achievement Accounted for by Difference Between Regions of the Scale (η^2)
	(r)	(r^2)	
Canada	0.08	0.01	0.01
Chinese Taipei	0.08	0.01	0.01
Denmark	0.14	0.02	0.03
Georgia	0.14	0.02	0.02
Ireland	0.06	0.00	0.01
Israel	0.12	0.01	0.02
Italy	0.03	0.00	0.00
Norway (5)	0.12	0.01	0.02
Portugal	0.10	0.01	0.01
Singapore	0.10	0.01	0.01
Slovenia	0.06	0.00	0.00
Sweden	0.07	0.01	0.02
United Arab Emirates	0.16	0.03	0.03
United States	0.07	0.00	0.01
International Median	0.09	0.01	0.01
Benchmarking Participants			
Abu Dhabi, UAE	0.17	0.03	0.04
Dubai, UAE	0.14	0.02	0.02

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