

Appendix 4B: Summary Statistics and Standard Errors for Proficiency in Physics

Summary Statistics and Standard Errors for Proficiency in Overall Physics

Country	Sample Size	Overall Physics				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
France	3958	373.057	13.761	2.110	15.871	3.984
Italy	3424	373.925	43.465	4.287	47.753	6.910
Lebanon	1156	410.159	13.009	7.231	20.240	4.499
Norway	2472	507.262	19.351	1.523	20.874	4.569
Portugal	1783	466.609	19.187	2.186	21.373	4.623
Russian Federation	3822	507.534	48.865	0.923	49.788	7.056
Slovenia	1106	531.033	5.624	0.741	6.365	2.523
Sweden	3727	454.667	33.430	1.327	34.756	5.895
United States	2932	437.338	91.101	2.411	93.512	9.670

Summary Statistics and Standard Errors for Proficiency in Mechanics and Thermodynamics

Country	Sample Size	Mechanics and Thermodynamics				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
France	3958	327.429	21.783	10.630	32.413	5.693
Italy	3424	375.967	40.310	0.553	40.863	6.392
Lebanon	1156	395.429	12.283	7.401	19.685	4.437
Norway	2472	502.581	14.897	1.834	16.731	4.090
Portugal	1783	489.030	19.817	3.639	23.456	4.843
Russian Federation	3822	514.150	44.622	0.524	45.146	6.719
Slovenia	1106	541.431	5.662	1.363	7.025	2.651
Sweden	3727	455.121	35.172	2.015	37.188	6.098
United States	2932	462.238	88.973	3.677	92.650	9.625

Summary Statistics and Standard Errors for Proficiency in Electricity and Magnetism

Country	Sample Size	Electricity and Magnetism				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
France	3958	339.441	12.889	8.845	21.734	4.662
Italy	3424	425.180	40.728	2.913	43.642	6.606
Lebanon	1156	399.127	16.801	9.928	26.729	5.170
Norway	2472	514.368	25.508	4.344	29.852	5.464
Portugal	1783	431.308	21.707	12.508	34.215	5.849
Russian Federation	3822	515.395	58.447	6.236	64.684	8.043
Slovenia	1106	530.263	7.431	10.767	18.198	4.266
Sweden	3727	455.336	34.133	1.319	35.452	5.954
United States	2932	379.529	144.254	4.934	149.187	12.214

Summary Statistics and Standard Errors for Proficiency in Wave Phenomena and Atomic/Nuclear Physics

Country	Sample Size	Wave Phenomena and Atomic/Nuclear Physics				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
France	3958	417.815	14.584	5.345	19.928	4.464
Italy	3424	329.071	54.069	8.577	62.646	7.915
Lebanon	1156	430.516	16.397	30.229	46.626	6.828
Norway	2472	507.447	25.546	1.899	27.445	5.239
Portugal	1783	455.513	20.954	16.939	37.893	6.156
Russian Federation	3822	490.105	54.418	1.300	55.718	7.464
Slovenia	1106	510.914	8.774	11.558	20.332	4.509
Sweden	3727	450.915	38.095	1.638	39.733	6.303
United States	2932	430.688	75.283	0.952	76.235	8.731

Summary Statistics and Standard Errors for Proficiency in Physics Knowing

Country	Sample Size	Physics Knowing				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
France	3958	374.787	14.150	0.928	15.078	3.883
Italy	3424	367.266	38.479	5.396	43.874	6.624
Lebanon	1156	378.083	17.288	4.842	22.130	4.704
Norway	2472	529.308	14.771	2.728	17.499	4.183
Portugal	1783	474.028	19.368	2.277	21.646	4.653
Russian Federation	3822	516.718	50.279	6.026	56.305	7.504
Slovenia	1106	521.009	8.776	8.695	17.472	4.180
Sweden	3727	451.645	33.491	2.964	36.455	6.038
United States	2932	444.055	88.814	6.639	95.453	9.770

Summary Statistics and Standard Errors for Proficiency in Physics Applying

Country	Sample Size	Physics Applying				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
France	3958	358.066	14.742	16.803	31.545	5.617
Italy	3424	371.133	47.889	6.133	54.022	7.350
Lebanon	1156	432.517	14.148	15.471	29.618	5.442
Norway	2472	484.133	24.229	3.701	27.930	5.285
Portugal	1783	452.100	20.317	11.804	32.121	5.668
Russian Federation	3822	508.196	55.652	1.411	57.063	7.554
Slovenia	1106	543.490	6.340	8.035	14.374	3.791
Sweden	3727	454.326	36.800	3.648	40.448	6.360
United States	2932	420.403	100.159	3.241	103.400	10.169

Summary Statistics and Standard Errors for Proficiency in Physics Reasoning

Country	Sample Size	Physics Reasoning				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
France	3958	396.765	15.028	2.986	18.013	4.244
Italy	3424	374.825	50.115	2.628	52.743	7.262
Lebanon	1156	374.762	19.943	18.998	38.941	6.240
Norway	2472	518.935	19.645	12.832	32.477	5.699
Portugal	1783	480.645	14.479	0.525	15.004	3.873
Russian Federation	3822	493.011	42.047	2.365	44.412	6.664
Slovenia	1106	514.024	9.735	23.082	32.818	5.729
Sweden	3727	450.388	34.302	3.564	37.866	6.154
United States	2932	454.761	76.075	1.210	77.285	8.791