

Appendix E

Mongolia—Mathematics Achievement

Exhibit E.1 Mongolia – Selected Mathematics Achievement Results*

TIMSS2007
Mathematics 4th Grade

Distribution of Mathematics Achievement									
Mean Achievement	Years of Formal Schooling**	Average Age at Time of Testing	5th Percentile (Scale Score)	10th Percentile (Scale Score)	25th Percentile (Scale Score)	50th Percentile (Scale Score)	75th Percentile (Scale Score)	90th Percentile (Scale Score)	95th Percentile (Scale Score)
436 (4.1)	4	11	289 (5.1)	321 (3.7)	378 (4.1)	440 (3.8)	497 (5.4)	542 (4.1)	569 (4.3)

Mathematics Achievement by Gender		
Mean Achievement	Girls' Mean	Boys' Mean
436 (4.1)	436 (4.3)	435 (4.6)

Average Achievement in Mathematics Content Domains by Gender			
Content Domain	Girls' Mean	Boys' Mean	Overall Mean
Number	463 (4.2)	463 (4.2)	463 (3.9)
Geometric Shapes and Measures	390 (4.7)	391 (5.4)	390 (4.6)
Data Display	424 (4.1)	423 (5.1)	424 (3.8)

Average Achievement in Mathematics Cognitive Domains by Gender			
Content Domain	Girls' Mean	Boys' Mean	Overall Mean
Knowing	451 (4.7)	455 (4.7)	454 (4.1)
Applying	428 (5.1)	424 (6.1)	426 (4.9)
Reasoning	429 (5.0)	432 (4.4)	431 (4.4)

Percentages of Students Reaching International Benchmarks in Mathematics			
Advanced International Benchmark (625)	High International Benchmark (550)	Intermediate International Benchmark (475)	Low International Benchmark (400)
1 (0.3)	8 (1.1)	34 (1.9)	67 (1.9)

SOURCE: IEA's Trends in International Mathematics and Science Study (TIMSS) 2007

* Because characteristics of their samples and data are not completely known, selected achievement results for Mongolia at the fourth and eighth grades are presented in Appendix E.

** Represents years of schooling counting from the first year of ISCED Level 1.

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Exhibit E.1 **Mongolia – Selected Mathematics Achievement Results* (Continued)**

TIMSS2007
Mathematics 8th Grade

Distribution of Mathematics Achievement									
Mean Achievement	Years of Formal Schooling**	Average Age at Time of Testing	5th Percentile (Scale Score)	10th Percentile (Scale Score)	25th Percentile (Scale Score)	50th Percentile (Scale Score)	75th Percentile (Scale Score)	90th Percentile (Scale Score)	95th Percentile (Scale Score)
432 (3.8)	8	15	295 (6.5)	326 (5.4)	377 (4.0)	435 (4.4)	490 (6.1)	536 (5.5)	563 (5.2)

Mathematics Achievement by Gender		
Mean Achievement	Girls' Mean	Boys' Mean
432 (3.8)	428 (3.8)	437 (4.4) ⬆

Average Achievement in Mathematics Content Domains by Gender			
Content Domain	Girls' Mean	Boys' Mean	Overall Mean
Number	441 (4.1)	453 (3.8) ⬆	447 (3.5)
Algebra	433 (3.9)	437 (4.7)	435 (3.9)
Geometry	408 (4.9)	418 (4.6) ⬆	413 (4.3)
Data and Chance	417 (3.3)	420 (4.5)	418 (3.5)

Average Achievement in Mathematics Cognitive Domains by Gender			
Cognitive Domain	Girls' Mean	Boys' Mean	Overall Mean
Knowing	439 (4.3)	445 (4.6)	442 (4.1)
Applying	415 (4.5)	426 (4.7) ⬆	420 (4.1)
Reasoning	444 (3.5)	453 (4.3) ⬆	449 (3.5)

Percentages of Students Reaching International Benchmarks in Mathematics			
Advanced International Benchmark (625)	High International Benchmark (550)	Intermediate International Benchmark (475)	Low International Benchmark (400)
1 (0.2)	7 (0.9)	31 (1.9)	66 (1.8)

⬆ Significantly higher than other gender

SOURCE: IEA's Trends in International Mathematics and Science Study (TIMSS) 2007

* Because characteristics of their samples and data are not completely known, selected achievement results for Mongolia at the fourth and eighth grades are presented in Appendix E.

** Represents years of schooling counting from the first year of ISCED Level 1.

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

