

## Exhibit 3.1.4: Home Educational Resources

### About the Scale

Students were scored according to their reports regarding the availability of three resources on the *Home Educational Resources* scale. Cut scores divide the scale into three categories. Students with **Many Resources** had a score at or above the cut score corresponding to reporting they had more than 25 books and both study supports in their home and that at least one parent finished university, on average. Students with **Few Resources** had a score at or below the cut score corresponding to reporting they had 10 or fewer books and both study supports in the home and that neither parent had gone beyond upper-secondary education, on average. All other students had **Some Resources**.

#### Number of books in the home:

- 1) 0–10
- 2) 11–25
- 3) 26–100
- 4) 101–200
- 5) More than 200

#### Number of home study supports:

- 1) Neither internet access nor own room
- 2) Either internet access or own room
- 3) Both internet access and own room

#### Highest level of education of either parent:

- 1) Finished some primary or lower-secondary or did not go to school
- 2) Finished lower-secondary
- 3) Finished upper-secondary
- 4) Finished post-secondary education
- 5) Finished university or higher



Exhibit 3.1.5: Home Educational Resources

Country	Many Resources		Some Resources		Few Resources		Average Scale Score
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Australia	42 (1.2)	550 (3.1)	45 (0.9)	495 (3.9)	13 (0.8)	440 (7.0)	11.1 (0.04)
Austria	36 (1.1)	544 (2.3)	44 (0.9)	511 (2.3)	19 (1.0)	456 (5.1)	10.8 (0.04)
Azerbaijan	12 (0.6)	534 (6.0)	50 (1.0)	491 (3.4)	38 (1.2)	450 (5.6)	9.7 (0.04)
Bahrain	20 (0.7)	476 (4.2)	48 (0.8)	430 (2.7)	33 (0.8)	398 (3.6)	10.1 (0.02)
Brazil	8 (0.8)	466 (14.2)	34 (0.8)	403 (3.2)	58 (1.0)	354 (2.0)	9.3 (0.03)
Chile	16 (0.8)	472 (4.9)	51 (0.9)	422 (3.2)	34 (1.0)	383 (4.3)	10.0 (0.03)
Chinese Taipei	36 (1.0)	644 (3.9)	43 (0.8)	598 (3.2)	21 (0.8)	539 (3.9)	10.7 (0.04)
Cote d'Ivoire	2 ~	~ ~	15 (1.3)	293 (13.5)	82 (1.9)	257 (2.3)	7.5 (0.10)
Cyprus	42 (1.0)	532 (3.8)	43 (0.9)	483 (3.0)	15 (0.7)	430 (4.4)	10.9 (0.03)
Czech Republic	32 (1.0)	559 (2.6)	53 (0.8)	511 (2.2)	15 (0.8)	459 (4.0)	10.7 (0.03)
England	36 (1.6)	575 (4.5)	44 (1.2)	518 (5.2)	20 (1.1)	459 (6.0)	10.8 (0.05)
Finland	42 (1.2)	536 (2.7)	46 (0.9)	493 (2.4)	12 (0.6)	448 (4.4)	11.0 (0.03)
France	32 (1.3)	527 (2.6)	46 (1.0)	471 (2.8)	22 (1.1)	424 (4.7)	10.7 (0.05)
Georgia	36 (1.1)	495 (3.6)	47 (0.9)	459 (3.6)	17 (0.8)	431 (8.2)	10.8 (0.04)
Hong Kong SAR	26 (1.0)	623 (8.7)	42 (0.8)	574 (4.9)	32 (0.9)	542 (6.1)	10.3 (0.04)
Hungary	42 (1.4)	554 (3.3)	41 (1.2)	494 (2.9)	17 (1.4)	415 (6.3)	10.9 (0.05)
Iran, Islamic Rep. of	16 (0.9)	487 (5.5)	39 (0.9)	436 (3.5)	44 (1.4)	391 (3.5)	9.6 (0.05)
Ireland	39 (1.3)	559 (2.6)	45 (1.1)	515 (2.4)	16 (0.8)	459 (5.8)	10.9 (0.04)
Israel <sup>s</sup>	29 (1.3)	548 (5.8)	60 (1.2)	486 (3.9)	11 (0.7)	412 (6.6)	11.0 (0.04)
Italy	33 (1.5)	541 (2.9)	42 (0.9)	499 (3.1)	25 (1.4)	451 (3.9)	10.5 (0.06)
Japan	43 (1.1)	621 (4.2)	46 (0.9)	585 (3.4)	12 (0.7)	541 (4.8)	11.0 (0.03)
Jordan	11 (0.6)	419 (6.4)	49 (0.8)	396 (3.4)	39 (1.0)	371 (3.6)	9.7 (0.03)
Kazakhstan	13 (0.8)	495 (7.5)	58 (0.8)	458 (3.1)	30 (1.0)	431 (4.0)	10.0 (0.03)
Korea, Rep. of	56 (1.2)	625 (3.1)	34 (0.9)	573 (3.0)	10 (0.7)	518 (6.3)	11.4 (0.04)
Kuwait	13 (1.0)	429 (11.1)	50 (1.0)	409 (4.9)	37 (1.2)	379 (6.0)	9.8 (0.04)
Lithuania	31 (1.3)	558 (3.9)	53 (0.9)	504 (2.8)	16 (0.9)	456 (4.1)	10.7 (0.04)
Malaysia	13 (0.7)	473 (4.8)	55 (0.7)	415 (3.1)	32 (1.0)	378 (3.7)	9.9 (0.03)
Malta	32 (0.7)	542 (2.4)	47 (0.7)	498 (1.6)	21 (0.6)	444 (2.9)	10.7 (0.02)
Morocco	5 (0.4)	426 (6.3)	30 (0.8)	395 (3.8)	65 (1.0)	367 (3.0)	8.6 (0.05)
Norway (9)	47 (1.1)	533 (2.5)	42 (0.8)	486 (2.4)	12 (0.6)	438 (3.5)	11.2 (0.03)
Oman	16 (0.6)	449 (4.2)	48 (0.6)	420 (3.1)	36 (0.7)	388 (3.0)	9.8 (0.03)
Palestinian Nat'l Auth.	12 (0.5)	410 (4.8)	48 (0.7)	395 (3.0)	41 (0.8)	361 (3.6)	9.6 (0.03)
Portugal	26 (1.2)	524 (2.9)	42 (0.9)	480 (2.6)	32 (1.3)	433 (2.8)	10.3 (0.05)
Qatar	24 (1.2)	494 (6.5)	51 (1.0)	458 (4.1)	25 (1.1)	408 (4.5)	10.3 (0.05)
Romania	28 (1.7)	553 (5.5)	48 (1.2)	496 (4.5)	24 (1.4)	437 (7.1)	10.4 (0.06)
Saudi Arabia	12 (0.6)	427 (5.0)	48 (0.8)	408 (3.8)	40 (0.9)	377 (3.4)	9.7 (0.03)
Singapore	33 (1.3)	649 (4.7)	47 (0.9)	601 (5.5)	20 (1.2)	545 (9.2)	10.6 (0.05)
South Africa (9)	5 (0.5)	468 (11.2)	39 (1.0)	405 (3.4)	56 (1.2)	383 (2.9)	9.1 (0.05)
Sweden	42 (1.5)	559 (2.8)	43 (1.1)	503 (2.3)	15 (0.7)	459 (3.2)	11.0 (0.04)
Türkiye	27 (1.4)	584 (5.5)	42 (1.0)	500 (3.9)	31 (1.4)	453 (5.5)	10.2 (0.06)
United Arab Emirates	24 (0.4)	537 (2.6)	50 (0.5)	490 (1.9)	25 (0.5)	447 (2.4)	10.3 (0.02)
United States	31 (1.4)	545 (4.2)	45 (0.9)	479 (3.6)	23 (1.0)	437 (4.8)	10.6 (0.04)
Uzbekistan	12 (0.8)	457 (8.0)	54 (1.0)	428 (4.6)	34 (1.3)	399 (4.0)	9.8 (0.04)
<b>International Average</b>	<b>26 (0.2)</b>	<b>524 (0.9)</b>	<b>45 (0.1)</b>	<b>474 (0.6)</b>	<b>28 (0.2)</b>	<b>429 (0.7)</b>	
<b>Benchmarking Participants</b>							
Abu Dhabi, UAE	22 (0.6)	503 (3.4)	50 (0.7)	459 (2.8)	28 (0.7)	418 (3.1)	10.2 (0.03)
Dubai, UAE	33 (0.8)	584 (2.8)	48 (0.9)	541 (3.1)	19 (1.2)	495 (5.5)	10.7 (0.04)
Sharjah, UAE	22 (1.2)	529 (9.9)	53 (1.1)	497 (4.0)	25 (0.8)	467 (4.8)	10.2 (0.03)

This TIMSS context questionnaire scale was established in 2011 based on the combined response distribution of countries that participated in TIMSS 2011. To provide a point of reference for country comparisons, the scale centerpoint of 10 was located at the mean of the combined distribution. The units of the scale were chosen so that 2 scale score points corresponded to the standard deviation of the distribution.

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

An "s" indicates data are available for at least 50% but less than 70% of the students.

A tilde (~) indicates insufficient data to report result.

## Exhibit 3.1.6: Home Educational Resources

Country	Many Resources		Some Resources		Few Resources		Average Scale Score
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Australia	42 (1.2)	564 (2.8)	45 (0.9)	508 (3.4)	13 (0.8)	443 (6.9)	11.1 (0.04)
Austria	36 (1.1)	554 (2.5)	44 (0.9)	509 (2.6)	19 (1.0)	441 (5.1)	10.8 (0.04)
Azerbaijan	12 (0.6)	457 (5.1)	50 (1.0)	421 (3.0)	38 (1.2)	387 (3.8)	9.7 (0.04)
Bahrain	20 (0.7)	506 (5.1)	48 (0.8)	457 (2.8)	33 (0.8)	419 (3.5)	10.1 (0.02)
Brazil	8 (0.8)	499 (11.6)	34 (0.8)	446 (3.3)	58 (1.0)	397 (1.7)	9.3 (0.03)
Chile	16 (0.8)	509 (4.1)	51 (0.9)	463 (2.7)	34 (1.0)	422 (3.6)	10.0 (0.03)
Chinese Taipei	36 (1.0)	612 (2.9)	43 (0.8)	567 (2.7)	21 (0.8)	513 (3.4)	10.7 (0.04)
Cote d'Ivoire	2 ~	~ ~	15 (1.3)	243 (22.1)	82 (1.9)	171 (4.3)	7.5 (0.10)
Cyprus	42 (1.0)	504 (3.6)	43 (0.9)	452 (3.1)	15 (0.7)	401 (4.9)	10.9 (0.03)
Czech Republic	32 (1.0)	566 (2.3)	53 (0.8)	521 (1.9)	15 (0.8)	467 (3.8)	10.7 (0.03)
England	36 (1.6)	584 (4.6)	44 (1.2)	523 (4.5)	20 (1.1)	461 (5.7)	10.8 (0.05)
Finland	42 (1.2)	570 (3.0)	46 (0.9)	518 (3.2)	12 (0.6)	458 (5.4)	11.0 (0.03)
France	32 (1.3)	536 (2.9)	46 (1.0)	479 (2.8)	22 (1.1)	429 (4.4)	10.7 (0.05)
Georgia	36 (1.1)	474 (2.7)	47 (0.9)	443 (3.5)	17 (0.8)	410 (8.4)	10.8 (0.04)
Hong Kong SAR	26 (1.0)	572 (8.9)	42 (0.8)	525 (4.5)	32 (0.9)	501 (5.6)	10.3 (0.04)
Hungary	42 (1.4)	565 (2.7)	41 (1.2)	512 (2.8)	17 (1.4)	438 (5.9)	10.9 (0.05)
Iran, Islamic Rep. of	16 (0.9)	484 (4.9)	39 (0.9)	433 (3.3)	44 (1.4)	386 (3.7)	9.6 (0.05)
Ireland	39 (1.3)	567 (2.8)	45 (1.1)	516 (4.1)	16 (0.8)	460 (5.6)	10.9 (0.04)
Israel <sup>s</sup>	29 (1.3)	541 (5.7)	60 (1.2)	480 (3.8)	11 (0.7)	407 (6.3)	11.0 (0.04)
Italy	33 (1.5)	541 (2.8)	42 (0.9)	499 (3.3)	25 (1.4)	450 (3.8)	10.5 (0.06)
Japan	43 (1.1)	581 (4.0)	46 (0.9)	549 (3.3)	12 (0.7)	508 (4.4)	11.0 (0.03)
Jordan	11 (0.6)	446 (6.9)	49 (0.8)	423 (3.9)	39 (1.0)	393 (3.9)	9.7 (0.03)
Kazakhstan	13 (0.8)	484 (6.4)	58 (0.8)	446 (2.8)	30 (1.0)	420 (3.3)	10.0 (0.03)
Korea, Rep. of	56 (1.2)	569 (2.3)	34 (0.9)	527 (2.7)	10 (0.7)	481 (5.9)	11.4 (0.04)
Kuwait	13 (1.0)	460 (10.8)	50 (1.0)	434 (5.5)	37 (1.2)	394 (6.2)	9.8 (0.04)
Lithuania	31 (1.3)	561 (3.5)	53 (0.9)	511 (2.6)	16 (0.9)	463 (4.2)	10.7 (0.04)
Malaysia	13 (0.7)	491 (4.4)	55 (0.7)	432 (3.4)	32 (1.0)	390 (4.1)	9.9 (0.03)
Malta	32 (0.7)	554 (2.7)	47 (0.7)	498 (2.1)	21 (0.6)	435 (3.8)	10.7 (0.02)
Morocco	5 (0.4)	375 (7.6)	30 (0.8)	346 (4.0)	65 (1.0)	315 (3.6)	8.6 (0.05)
Norway (9)	47 (1.1)	526 (2.6)	42 (0.8)	473 (2.5)	12 (0.6)	413 (4.3)	11.2 (0.03)
Oman	16 (0.6)	499 (3.9)	48 (0.6)	466 (2.9)	36 (0.7)	432 (3.1)	9.8 (0.03)
Palestinian Nat'l Auth.	12 (0.5)	424 (5.0)	48 (0.7)	407 (3.2)	41 (0.8)	370 (3.2)	9.6 (0.03)
Portugal	26 (1.2)	551 (2.9)	42 (0.9)	512 (2.3)	32 (1.3)	464 (2.6)	10.3 (0.05)
Qatar	24 (1.2)	527 (6.2)	51 (1.0)	488 (4.3)	25 (1.1)	435 (4.6)	10.3 (0.05)
Romania	28 (1.7)	512 (4.8)	48 (1.2)	470 (3.8)	24 (1.4)	418 (5.8)	10.4 (0.06)
Saudi Arabia	12 (0.6)	452 (5.9)	48 (0.8)	434 (4.0)	40 (0.9)	396 (3.3)	9.7 (0.03)
Singapore	33 (1.3)	652 (4.2)	47 (0.9)	602 (5.2)	20 (1.2)	542 (8.5)	10.6 (0.05)
South Africa (9)	5 (0.5)	468 (14.6)	39 (1.0)	379 (4.4)	56 (1.2)	341 (3.7)	9.1 (0.05)
Sweden	42 (1.5)	574 (3.1)	43 (1.1)	503 (2.8)	15 (0.7)	444 (4.3)	11.0 (0.04)
Türkiye	27 (1.4)	590 (4.3)	42 (1.0)	523 (3.3)	31 (1.4)	484 (5.2)	10.2 (0.06)
United Arab Emirates	24 (0.4)	543 (2.7)	50 (0.5)	490 (2.3)	25 (0.5)	435 (2.3)	10.3 (0.02)
United States	31 (1.4)	571 (3.7)	45 (0.9)	506 (3.5)	23 (1.0)	459 (4.2)	10.6 (0.04)
Uzbekistan	12 (0.8)	431 (5.6)	54 (1.0)	403 (3.8)	34 (1.3)	374 (3.8)	9.8 (0.04)
<b>International Average</b>	<b>26 (0.2)</b>	<b>525 (0.8)</b>	<b>45 (0.1)</b>	<b>473 (0.7)</b>	<b>28 (0.2)</b>	<b>425 (0.7)</b>	
<b>Benchmarking Participants</b>							
Abu Dhabi, UAE	22 (0.6)	506 (4.4)	50 (0.7)	452 (3.9)	28 (0.7)	394 (4.0)	10.2 (0.03)
Dubai, UAE	33 (0.8)	589 (2.9)	48 (0.9)	544 (3.6)	19 (1.2)	485 (5.0)	10.7 (0.04)
Sharjah, UAE	22 (1.2)	540 (10.3)	53 (1.1)	501 (4.1)	25 (0.8)	464 (4.6)	10.2 (0.03)

This TIMSS context questionnaire scale was established in 2011 based on the combined response distribution of countries that participated in TIMSS 2011. To provide a point of reference for country comparisons, the scale centerpoint of 10 was located at the mean of the combined distribution. The units of the scale were chosen so that 2 scale score points corresponded to the standard deviation of the distribution.

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

An "s" indicates data are available for at least 50% but less than 70% of the students.

A tilde (~) indicates insufficient data to report result.