

Exhibit 4.4: Students Look Back at Prior Webpages when Answering Integrate Items

To collect information about how well students could integrate information across websites, there were six items that specifically required students to provide information from prior websites together with information from the current website. Exhibit 4.4 provides the averages in "looking back" navigation across the six items, and then three examples from the released tasks are provided in Exhibits 4.4.1 through 4.4.3.

Exhibit 4.4 contains a considerable amount of information, so it is accompanied by a diagram. The first set of columns in Exhibit 4.4 show that on average, only 17 percent of the students looked back when answering the integrate questions and their average achievement was 558. The "look back" students were among the better achieving ePIRLS students (referencing top-performing Singapore with average achievement of 588). Interestingly, of the 17 percent that looked back, 7 percent answered correctly on average and 10 percent did not. The achievement for these groups was 589 (similar to Singapore) for the students that answered correctly and 540 for the students who answered incorrectly despite looking back.

The second set of columns show that, on average, the 83 percent of the students that did not look back had average achievement of 535. This is lower than the students who did look back by 23 points. However, it is not low performance, so it is likely that some students either knew or could remember information across websites. Still, only 28 percent of the "did not look back" students answered these questions correctly, on average, and their average achievement was 572. It is clear, that looking back could have helped some students. In total, 55 percent of the students, on average, did not look back to prior webpages and did not answer correctly. These students had lower achievement than their counterparts (517).

In summary, the students that looked back and answered correctly, either because they were double checking or because they successfully found the answer, had the highest achievement (589) followed by the students who knew the answer without looking back (572). Next were the students who tried to look back but were not successful in answering correctly (540). Unfortunately, the majority of students did not look back when it may have helped. On average, the students who did not look back and answered incorrectly had the lowest average achievement on ePIRLS (517).

Example Item 4.4.1 is from the "Mars" task. Students needed to remember or look back to an earlier webpage to find that scientists were looking at Mars through telescopes, even in the days before space exploration. Perhaps most students thought they remembered, because hardly any of them "looked back"—only 6 percent. Ninety-four percent did not look back, but only 22 percent actually answered correctly.

On Example Item 4.4.2 from "Elizabeth Blackwell", one-third of the students "looked back" and it helped 8 percent answer correctly. This 8 percent had very high ePIRLS achievement (610). Of the



67 percent that did not look back, only 10 percent answered correctly. So once again, the majority (58%) did not look back and did not answer correctly.

Finally, results were similar on another item about Elizabeth Blackwell's accomplishments. Twenty-seven percent "looked back" and 7 percent answered correctly compared to 20 percent who did not (average achievement 597 and 545, respectively). Of the 73 percent who did not look back, 12 percent answered correctly (average achievement 575) and the remaining 60 percent did not (average achievement 522).

Exhibit 4.4: Students Look Back at Prior Webpages when Answering Integrate Items

Note: Results based on students who participated in both PIRLS and ePIRLS.

			Students W	ho Looked Back			Students Who Did Not Look Back						
Country	Percent of	Average	Answered Look Back Items Correctly		Answered Look Back Items Incorrectly		D	Average	Answered Look Back Items Correctly			d Look Back Incorrectly	
	Students	ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Percent of Students	ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Percent of Students	Average ePIRLS Achievemer	
Canada	14 (0.6)	563 (4.9)	5 (0.3)	592 (4.9)	9 (0.4)	546 (5.6)	86 (0.6)	540 (3.1)	31 (0.6)	575 (2.9)	55 (0.8)	520 (2.9)	
Chinese Taipei	37 (0.7)	560 (2.0)	16 (0.4)	581 (1.9)	21 (0.5)	544 (2.3)	63 (0.7)	536 (2.2)	17 (0.4)	568 (1.9)	46 (0.7)	523 (2.3)	
Denmark	14 (0.5)	571 (3.3)	5 (0.4)	597 (3.8)	9 (0.4)	557 (4.0)	86 (0.5)	557 (2.3)	31 (0.8)	589 (2.1)	55 (0.8)	539 (2.4)	
Georgia	9 (0.4)	500 (5.3)	3 (0.2)	547 (5.9)	6 (0.3)	481 (5.6)	91 (0.4)	475 (3.3)	18 (0.7)	522 (2.9)	73 (0.8)	464 (3.3)	
Ireland	17 (0.6)	586 (3.7)	8 (0.4)	613 (3.3)	9 (0.4)	562 (4.5)	83 (0.6)	563 (2.7)	35 (0.7)	593 (2.4)	48 (0.8)	541 (2.8)	
Israel	18 (0.5)	558 (2.9)	8 (0.4)	592 (3.4)	10 (0.4)	533 (3.4)	82 (0.5)	531 (2.4)	28 (0.6)	579 (2.3)	54 (0.8)	507 (2.5)	
Italy	16 (0.7)	548 (2.6)	6 (0.3)	573 (3.0)	10 (0.4)	535 (2.9)	84 (0.7)	530 (2.2)	26 (0.5)	559 (1.9)	58 (0.8)	517 (2.3)	
Norway (5)	16 (0.6)	586 (2.7)	6 (0.4)	607 (3.4)	9 (0.4)	571 (2.8)	84 (0.6)	564 (2.4)	34 (0.7)	591 (2.2)	51 (0.9)	546 (2.5)	
Portugal	20 (0.5)	534 (2.9)	6 (0.2)	559 (2.7)	14 (0.4)	524 (3.4)	80 (0.5)	519 (2.3)	22 (0.5)	552 (2.6)	58 (0.6)	507 (2.1)	
Singapore	23 (0.5)	619 (2.8)	13 (0.5)	641 (2.7)	10 (0.3)	591 (3.2)	77 (0.5)	579 (3.2)	34 (0.5)	612 (2.6)	43 (0.9)	552 (3.5)	
Slovenia	17 (0.7)	540 (2.3)	5 (0.2)	567 (4.1)	12 (0.6)	530 (2.6)	83 (0.7)	521 (2.0)	23 (0.5)	557 (2.0)	60 (0.8)	507 (2.1)	
Sweden	13 (0.6)	579 (2.5)	5 (0.3)	600 (3.1)	8 (0.4)	567 (3.0)	87 (0.6)	557 (2.4)	35 (0.7)	585 (2.1)	52 (1.0)	537 (2.4)	
United Arab Emirates	13 (0.3)	497 (3.3)	4 (0.1)	569 (2.4)	9 (0.2)	467 (3.7)	87 (0.3)	464 (2.2)	18 (0.4)	538 (1.8)	69 (0.5)	445 (2.2)	
United States	14 (0.5)	577 (3.6)	6 (0.4)	604 (4.0)	8 (0.3)	555 (4.0)	86 (0.5)	553 (2.6)	38 (0.7)	586 (2.1)	48 (0.9)	528 (2.6)	
International Avg.	17 (0.2)	558 (0.9)	7 (0.1)	589 (1.0)	10 (0.1)	540 (1.0)	83 (0.2)	535 (0.7)	28 (0.2)	572 (0.6)	55 (0.2)	517 (0.7)	
chmarking Participants													
Abu Dhabi, UAE	13 (0.4)	453 (6.1)	3 (0.2)	550 (6.0)	10 (0.3)	426 (5.9)	87 (0.4)	429 (4.0)	14 (0.5)	513 (4.3)	74 (0.7)	414 (3.7)	
Dubai, UAE	17 (0.4)	559 (2.2)	7 (0.2)	595 (2.5)	10 (0.2)	533 (2.7)	83 (0.4)	522 (1.6)	27 (0.5)	568 (1.3)	56 (0.4)	499 (1.9)	

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

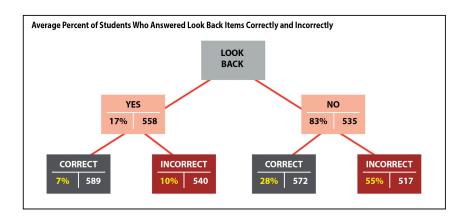




Exhibit 4.4.1: Students Look Back at Prior Webpages when Answering Integrate Items – Example Item 1

Note: Results based on students who participated in both PIRLS and ePIRLS.

			Students W	ho Looked Bacl	ζ.		Students Who Did Not Look Back					
Country	Percent of	Average	Answered Look Back Item Correctly		Answered Look Back Item Incorrectly		Percent of	Average	Answered Look Back Item Correctly			d Look Back ncorrectly
	Students	ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Students	ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement
Canada	3 (0.4)	554 (13.8)	1 (0.2)	611 (13.3)	2 (0.3)	539 (16.1)	97 (0.4)	542 (3.2)	25 (1.4)	598 (3.5)	71 (1.4)	523 (3.5)
Chinese Taipei	14 (1.2)	555 (4.3)	2 (0.4)	605 (5.6)	11 (1.0)	545 (4.4)	86 (1.2)	540 (2.5)	11 (0.9)	599 (3.6)	75 (1.4)	531 (2.4)
Denmark	9 (1.3)	559 (9.9)	2 (0.4)	618 (9.1)	7 (1.3)	544 (9.8)	91 (1.3)	556 (3.0)	22 (1.7)	612 (3.5)	69 (1.7)	538 (2.8)
Georgia	2 (0.3)	462 (15.3)	0 (0.2)	522 (16.9)	2 (0.3)	449 (17.5)	98 (0.3)	476 (3.8)	8 (1.2)	559 (7.1)	90 (1.2)	469 (3.5)
Ireland	4 (0.8)	570 (8.5)	1 (0.3)	612 (9.9)	3 (0.7)	557 (10.7)	96 (0.8)	569 (3.3)	36 (2.1)	613 (3.5)	60 (2.0)	541 (3.0)
Israel	2 (0.4)	557 (19.8)	0 (0.2)	621 (26.6)	1 (0.3)	534 (23.7)	98 (0.4)	534 (2.8)	15 (1.2)	600 (4.1)	83 (1.2)	523 (3.0)
Italy	4 (0.6)	555 (7.9)	0 (0.2)	604 (19.3)	3 (0.6)	548 (8.1)	96 (0.6)	532 (2.5)	16 (1.1)	582 (3.6)	80 (1.2)	522 (2.6)
Norway (5)	6 (0.8)	587 (6.2)	1 (0.3)	612 (9.1)	4 (0.7)	579 (7.2)	94 (0.8)	570 (2.7)	28 (1.3)	617 (3.3)	66 (1.4)	550 (2.8)
Portugal	7 (0.6)	525 (4.9)	2 (0.3)	564 (9.5)	6 (0.6)	513 (5.8)	93 (0.6)	522 (2.6)	22 (1.3)	571 (3.3)	71 (1.2)	508 (2.5)
Singapore	7 (0.6)	608 (5.6)	2 (0.4)	649 (6.4)	4 (0.5)	585 (6.0)	93 (0.6)	585 (3.3)	28 (1.3)	642 (2.8)	65 (1.4)	561 (3.5)
Slovenia	5 (0.7)	557 (7.7)	2 (0.4)	593 (9.7)	4 (0.6)	539 (8.2)	95 (0.7)	526 (2.7)	24 (1.4)	582 (2.9)	71 (1.6)	507 (2.8)
Sweden	6 (1.0)	578 (9.3)	2 (0.5)	629 (9.5)	4 (0.7)	546 (9.6)	94 (1.0)	560 (3.0)	31 (1.9)	607 (2.8)	63 (1.8)	536 (3.2)
United Arab Emirates	6 (0.5)	503 (7.9)	1 (0.2)	605 (7.1)	5 (0.4)	482 (8.7)	94 (0.5)	467 (2.5)	11 (0.6)	591 (3.1)	83 (0.6)	451 (2.7)
United States	3 (0.4)	572 (13.3)	1 (0.2)	647 (15.5)	2 (0.3)	547 (15.0)	97 (0.4)	556 (2.8)	26 (1.3)	613 (3.0)	72 (1.4)	535 (3.0)
International Avg.	6 (0.2)	553 (2.8)	1 (0.1)	606 (3.5)	4 (0.2)	536 (3.2)	94 (0.2)	538 (0.8)	22 (0.4)	599 (1.0)	73 (0.4)	521 (0.8)
nchmarking Participants												
Abu Dhabi, UAE	6 (0.7)	463 (18.2)	1 (0.2)	588 (15.7)	5 (0.7)	440 (18.8)	94 (0.7)	428 (4.7)	6 (0.8)	580 (8.4)	89 (1.0)	419 (4.3)
Dubai, UAE	9 (0.7)	556 (6.1)	2 (0.3)	610 (8.1)	7 (0.6)	539 (7.0)	91 (0.7)	528 (2.0)	20 (0.8)	607 (2.5)	71 (0.8)	505 (2.7)

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

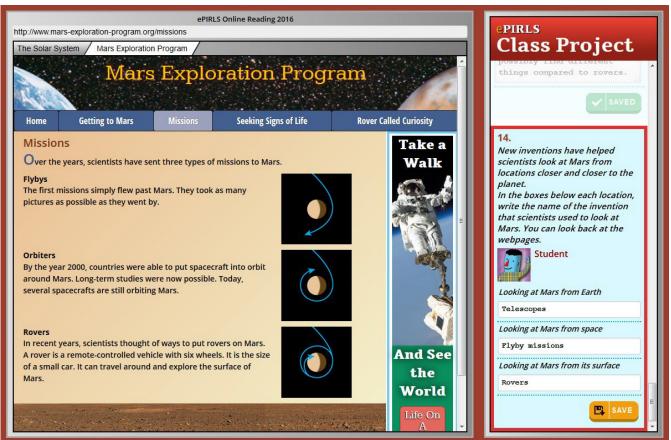




Exhibit 4.4.2: Students Look Back at Prior Webpages when Answering Integrate Items – Example Item 2

Note: Results based on students who participated in both PIRLS and ePIRLS.

			Students W	ho Looked Bacl	(Students Who Did Not Look Back						
Country	Percent of	Average ePIRLS Achievement	Answered Look Back Item Correctly		Answered Look Back Item Incorrectly			Average	Answered Look Back Item Correctly			ed Look Back ncorrectly	
	Students		Percent of Students	Average ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Percent of Students	ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Percent of Students	Average ePIRLS Achievemen	
Canada	31 (1.9)	572 (5.0)	8 (1.1)	607 (8.9)	22 (1.4)	559 (5.9)	69 (1.9)	531 (3.4)	11 (1.1)	601 (5.4)	59 (1.8)	518 (3.3)	
Chinese Taipei	50 (1.6)	569 (2.4)	7 (0.6)	618 (5.0)	42 (1.5)	560 (2.8)	50 (1.6)	518 (3.2)	2 (0.3)	592 (13.1)	49 (1.6)	515 (3.2)	
Denmark	31 (1.4)	578 (4.5)	7 (0.8)	612 (6.7)	24 (1.3)	569 (5.2)	69 (1.4)	551 (3.4)	12 (1.2)	607 (6.1)	57 (1.6)	539 (3.7)	
Georgia	18 (1.2)	508 (5.6)	4 (0.6)	563 (10.3)	14 (1.1)	492 (6.3)	82 (1.2)	474 (4.4)	13 (1.3)	537 (5.3)	68 (1.8)	461 (4.4)	
Ireland	28 (1.9)	600 (4.5)	9 (1.0)	638 (6.1)	19 (1.4)	584 (6.0)	72 (1.9)	557 (4.0)	13 (1.1)	615 (4.5)	59 (1.9)	544 (4.3)	
Israel	37 (1.1)	569 (3.9)	15 (1.0)	609 (4.2)	22 (1.1)	542 (4.4)	63 (1.1)	515 (3.2)	14 (1.1)	593 (5.0)	49 (1.2)	492 (3.5)	
Italy	27 (1.5)	554 (3.5)	5 (0.7)	593 (6.9)	22 (1.2)	545 (3.5)	73 (1.5)	526 (2.7)	11 (0.9)	569 (5.2)	63 (1.5)	519 (2.7)	
Norway (5)	26 (1.4)	592 (4.3)	6 (0.8)	631 (7.8)	20 (1.2)	581 (4.1)	74 (1.4)	557 (3.4)	9 (0.7)	611 (4.5)	64 (1.4)	550 (3.6)	
Portugal	44 (1.2)	539 (3.3)	5 (0.6)	584 (6.1)	38 (1.3)	533 (3.8)	56 (1.2)	506 (2.7)	7 (0.8)	560 (6.8)	49 (1.4)	499 (2.7)	
Singapore	54 (1.5)	621 (2.6)	30 (1.2)	645 (2.6)	24 (1.0)	592 (3.3)	46 (1.5)	550 (4.1)	13 (0.6)	601 (4.4)	33 (1.6)	531 (4.4)	
Slovenia	36 (1.8)	545 (3.3)	3 (0.4)	596 (9.1)	33 (1.7)	541 (3.5)	64 (1.8)	509 (2.3)	4 (0.7)	558 (10.5)	60 (1.6)	506 (2.3)	
Sweden	23 (1.4)	585 (3.9)	2 (0.5)	625 (9.1)	21 (1.3)	581 (4.1)	77 (1.4)	551 (3.0)	4 (0.7)	623 (7.2)	72 (1.6)	547 (2.9)	
United Arab Emirates	22 (0.6)	511 (4.0)	5 (0.4)	597 (4.4)	17 (0.6)	485 (4.7)	78 (0.6)	459 (2.7)	12 (0.6)	541 (3.3)	66 (0.8)	444 (2.6)	
United States	32 (1.5)	581 (4.4)	10 (1.1)	617 (6.9)	22 (1.1)	564 (4.9)	68 (1.5)	542 (3.1)	13 (0.9)	600 (5.1)	55 (1.7)	529 (2.9)	
International Avg.	33 (0.4)	566 (1.1)	8 (0.2)	610 (1.9)	24 (0.3)	552 (1.2)	67 (0.4)	525 (0.9)	10 (0.2)	586 (1.8)	58 (0.4)	514 (0.9)	
nchmarking Participants													
Abu Dhabi, UAE	21 (1.1)	472 (6.9)	4 (0.5)	586 (8.1)	17 (1.0)	444 (7.3)	79 (1.1)	424 (4.9)	9 (0.9)	527 (6.9)	70 (1.4)	411 (4.6)	
Dubai, UAE	30 (0.7)	566 (3.5)	10 (0.8)	609 (4.2)	20 (0.8)	544 (5.0)	70 (0.7)	514 (2.2)	17 (1.2)	570 (3.9)	53 (1.0)	496 (2.0)	

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





Exhibit 4.4.3: Students Look Back at Prior Webpages when Answering Integrate Items – Example Item 3

Note: Results based on students who participated in both PIRLS and ePIRLS.

			Students W	ho Looked Back	(Students Who Did Not Look Back					
Country	Percent of	Average		Answered Look Back Item Correctly		Answered Look Back Item Incorrectly		Average	Answered Look Back Item Correctly		Answered Look Ba Item Incorrectly	
	Students	ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Percent of Students	ePIRLS Achievement	Percent of Students	Average ePIRLS Achievement	Percent of Students	Average ePIRLS Achievemen
Canada	22 (1.6)	566 (5.9)	4 (0.5)	605 (7.7)	18 (1.4)	557 (6.3)	78 (1.6)	537 (3.4)	12 (1.2)	581 (5.1)	66 (1.9)	529 (3.4)
Chinese Taipei	57 (1.4)	555 (2.6)	13 (0.9)	582 (4.4)	44 (1.3)	547 (3.0)	43 (1.4)	527 (3.4)	5 (0.6)	551 (5.4)	38 (1.4)	523 (3.6)
Denmark	17 (1.4)	567 (6.2)	3 (0.5)	606 (12.1)	14 (1.3)	558 (6.5)	83 (1.4)	558 (3.3)	17 (1.3)	593 (5.4)	65 (1.7)	548 (3.5)
Georgia	12 (1.1)	497 (11.8)	2 (0.6)	570 (16.0)	10 (0.8)	482 (10.7)	88 (1.1)	478 (3.9)	9 (1.1)	536 (6.2)	78 (1.1)	470 (4.2)
Ireland	32 (1.8)	588 (7.1)	13 (1.3)	623 (6.0)	19 (1.6)	564 (9.1)	68 (1.8)	560 (3.8)	19 (1.6)	601 (4.9)	49 (2.0)	545 (4.7)
Israel	27 (1.6)	561 (4.2)	8 (0.8)	595 (6.2)	18 (1.2)	545 (5.6)	73 (1.6)	526 (3.1)	13 (1.1)	591 (5.0)	60 (1.7)	512 (3.1)
Italy	26 (1.5)	544 (4.1)	6 (0.7)	575 (8.2)	21 (1.2)	535 (4.4)	74 (1.5)	529 (2.5)	12 (0.9)	564 (5.1)	62 (1.6)	523 (2.6)
Norway (5)	26 (1.6)	580 (4.7)	8 (1.0)	613 (6.9)	18 (1.3)	565 (4.7)	74 (1.6)	562 (3.2)	18 (1.1)	591 (4.1)	56 (1.7)	552 (3.5)
Portugal	31 (1.7)	536 (4.8)	4 (0.6)	574 (7.3)	27 (1.6)	530 (5.4)	69 (1.7)	514 (2.5)	5 (0.6)	565 (7.2)	64 (1.8)	510 (2.5)
Singapore	39 (1.3)	623 (3.2)	17 (0.9)	645 (4.6)	23 (1.0)	607 (3.7)	61 (1.3)	566 (3.6)	20 (0.9)	600 (3.4)	41 (1.2)	550 (4.2)
Slovenia	28 (1.4)	537 (3.8)	5 (0.6)	567 (9.3)	22 (1.4)	530 (4.4)	72 (1.4)	516 (2.5)	6 (0.7)	563 (6.5)	66 (1.5)	512 (2.5)
Sweden	22 (1.6)	579 (4.2)	3 (0.6)	613 (9.1)	18 (1.6)	573 (4.4)	78 (1.6)	554 (3.0)	9 (0.8)	594 (4.6)	69 (1.7)	549 (3.2)
United Arab Emirates	20 (0.7)	500 (4.7)	4 (0.3)	577 (5.4)	16 (0.7)	478 (5.4)	80 (0.7)	463 (2.5)	10 (0.5)	536 (4.6)	70 (0.8)	453 (2.6)
United States	22 (1.2)	577 (5.4)	7 (0.7)	615 (6.4)	15 (1.0)	561 (6.1)	78 (1.2)	548 (3.2)	19 (1.1)	586 (4.9)	59 (1.4)	536 (3.4)
International Avg.	27 (0.4)	558 (1.5)	7 (0.2)	597 (2.2)	20 (0.3)	545 (1.6)	73 (0.4)	531 (0.8)	12 (0.3)	575 (1.4)	60 (0.4)	522 (0.9)
nchmarking Participants												
Abu Dhabi, UAE	19 (1.3)	448 (9.1)	3 (0.5)	545 (14.0)	16 (1.1)	430 (10.1)	81 (1.3)	431 (4.7)	7 (0.8)	495 (10.0)	74 (1.5)	424 (4.7)
Dubai, UAE	26 (1.0)	567 (2.7)	8 (0.6)	604 (4.4)	17 (0.8)	548 (3.6)	74 (1.0)	517 (2.3)	16 (0.9)	571 (3.4)	59 (1.1)	502 (2.7)

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

