



LITERACY AND NUMERACY TEST FOR INITIAL TEACHER EDUCATION STUDENTS

2022 Technical Report

FOR THE AUSTRALIAN GOVERNMENT
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1. OVERVIEW

1.1 Administration

The Literacy and Numeracy Test for Initial Teacher Education students ('the test') was conducted across Australia for the seventh year, in four test windows, from February 2022 to November 2022. In this period, 22,950 unique candidates attempted one or both components of the test (literacy and numeracy), of whom 12 had initially registered for the test in 2016, 69 in 2017, 142 in 2018, 333 in 2019, 493 in 2020 and 1506 in 2021.

In 2022, 20,395 candidates registered for the test and attempted one or both components of the test for the first time, compared to 21,967 in 2021.

In 2022, 19,263 candidates (1628 less than in 2021) sat the literacy component for the first time and 19,163 candidates (1557 less than in 2021) sat the numeracy component for the first time.

During 2022, there were 2,628 resits of the literacy component for a second, third, fourth or fifth time. This included 1,766 second attempts and 628 third attempts. There were 2,306 resits of the numeracy component in 2022 for a second, third, fourth or fifth time. This included 1,565 second attempts and 560 third attempts. These resit numbers included candidates who did not achieve one standard or more in the years 2016 to 2021.

As for the previous three years, in 2022, approximately three-quarters (74%) of the candidates were female. Most (64%) were aged between 17 and 25 and slightly more candidates (43%) were enrolled in primary courses than in secondary courses (38%), similar to 2021 (42% and 40% respectively). Those enrolled in Early Childhood courses made up 7% of the candidates in 2022.

COVID-19 continued to pose significant challenges to the administration of the test in 2022. One key challenge was the ever-evolving COVID-19 regulations as the federal and state/territory governments transitioned towards living with COVID-19. There were changes in the rules on masks, check in, testing, isolation/quarantine, and vaccination processes. These changes were sometimes implemented at short notice. ACER kept abreast of the changing requirements in each jurisdiction and worked closely with all the test venues to ensure the prevailing regulations at the point of testing were adhered to. All necessary COVID-safe measures were undertaken to ensure the safety and well-being of all candidates.

As restrictions eased and lock-down was no longer in place, the persistently high number of COVID-19 cases in the community caused by the new omicron variant (especially during the first half of the year) posed a different challenge and there was still apprehension amongst candidates in relation to attending test centre sessions. As such, candidate numbers at test centres were significantly lower in the first half of the year and then gradually recovered in the second half. ACER had to anticipate and ensure adequate places were provided at test centres and by remote proctoring for each test window. Remote proctoring played a vital role in this challenging environment by enabling a significant proportion of students (50% to 60%) to complete the tests at home.

ACER expanded the pool of suitable trained test supervisors in many locations to ensure that replacements were readily available should some test supervisors be furloughed due to COVID-19 related reasons. ACER was able to engage replacement test supervisors at short notice on several occasions and this enabled the test to continue without disruption at test centres.

ACER exercised flexibility in its test policy during this difficult time by allowing candidates to switch to sit the test via remote proctoring for COVID-19 related reasons and offering full refunds to candidates who were unable to sit the test at a centre. These enabled candidates needing to sit the test within a certain time frame due to graduation, placement, or teacher registration purposes to do so, facilitating their progression. The cost to ACER in terms of refunds and additional payments for the remote proctoring sessions was significant.

Students from 47 higher education providers sat the test in 2022. The providers were the same as in 2021. The test was offered at 24 test centres (8 capital cities and 16 regional cities) in all states and territories, or via remote proctoring under prescribed conditions.

Just under half (46%) of first-attempt candidates in 2022 sat the test at a test centre, and 54% chose remote proctoring. Candidates resitting the test in 2022 were more likely to do so via remote proctoring with further attempts. In 2022, 63% of second-attempt candidates, 67% of third-attempt candidates and 62% of fourth-attempt candidates sat the test remotely.

Table 1 shows the number of sittings by location for each test window (TW). The proportion of sittings by remote proctoring in 2022 was 62%, the same proportion as in 2021. By comparison, 23% of sittings were by remote proctoring in 2019 (pre-COVID).

Table 1: Number of sittings by location and by test window, including resits¹

Location of testing	TW1		TW2		TW3		TW4	
	Literacy	Numeracy	Literacy	Numeracy	Literacy	Numeracy	Literacy	Numeracy
Capital cities	2083	2044	2114	2096	2205	2151	2249	2108
Regional cities	318	320	414	393	503	491	0	0
Remote proctoring	3195	3191	2646	2627	2786	2727	3378	3325
Total sittings	5596	5555	5174	5116	5494	5369	5627	5433

At each test window, a proportion of candidates (31–35%) chose to attempt only one of the test components, as shown in Table 2. In 2022, the proportions of sittings were similar across the four test windows (24–26%).

Table 2: Summary of sittings by test window, including resits

Test	TW1	TW2	TW3	TW4	Total
Both literacy and numeracy	4471	4187	4371	4371	17400
Literacy only	1125	987	1123	1256	4491
Numeracy only	1084	929	998	1062	4073
Total sittings	6680	6103	6492	6689	25964

Testing conditions were modified to accommodate 710 candidates with special needs in 2022, compared to 674 in 2021. Accessible versions of the test were also available for candidates who required supportive technology, such as a screen reader. The online accessible versions of the test were used on several occasions. Fifteen candidates were provided with a paper version of the test in 2022; seven of them sitting in the November 2022 test window. The number of requests to accommodate anxiety disorder and dyslexia has remained stable in the last couple of years. The number of requests for test modifications due to Attention Deficit Hyperactivity Disorder and dyscalculia has increased over the last three years. Accommodations are further described in Section 2 of this report.

¹ Tables 1 and 2 include resit candidates in all test windows.

1.2 Candidate results

Table 3 shows the number of candidates attempting each component and both components and their pass rates at the end of 2022. The table shows how the pass rates increase over time as candidates resit and achieve the standard. For example:

- Of those candidates who initially registered for the literacy component in 2016, the pass rate increased by 2.1% from 95.2% at the end of 2016 to 97.3% at the end of 2017, but only by a further 0.3% to 97.6% at the end of 2018 and a further 0.2% at the end of 2019. At the end of 2022, the pass rate remained at the 2020 rate of 97.8%.
- Of those candidates who initially registered for the numeracy component in 2018, the pass rate increased from 90.0% at the end of 2018 to 94.5% at the end of 2020 and 95.3% at the end of 2022.

First-time candidate numbers include anyone who has sat the test for the first time in a particular year. They may have also sat the test a second, third or fourth time in that year in order to meet the standard.

By the end of 2022, some resitting candidates had attempted the test up to five times.

In the seven-year period from 2016 to 2022, the number of unique candidates participating in one or more components of the test was 137,147. Of these, 135,864 sat the literacy component and 135,143 sat the numeracy component. Almost all candidates (134,170) attempted both components of the test while 1,694 attempted literacy only and 1,283 attempted numeracy only. At the end of 2022, of the 134,170 candidates who had attempted both components, 126,142 candidates had achieved both standards – an overall pass rate of 94% (slightly better than the overall pass rate of 93.3% at the end of 2021).

By the end of 2022, nearly 98% of the 2016 cohort had met the literacy standard and 97% had met the numeracy standard. Of the 2020 cohort, 96% had met the literacy standard and 97% had met the numeracy standard.

Table 3: Summary of candidate results

Component	Year of registration	At end of year	Number of unique candidates	Standard achieved	Standard not achieved	Cancelled due to misconduct	Pass rate
Literacy	2016	2016	13083	12461	622	0	95.2
	2016	2017	13083	12733	350	0	97.3
	2016	2018	13083	12774	309	0	97.6
	2016	2019	13083	12789	294	0	97.8
	2016	2020	13083	12792	291	0	97.8
	2016	2021	13083	12794	289	0	97.8
	2016	2022	13083	12797	286	0	97.8
	2017	2017	23387	21520	1867	0	92.0
	2017	2018	23387	22213	1174	0	95.0
	2017	2019	23387	22386	1001	0	95.7
	2017	2020	23387	22452	935	0	96.0
	2017	2021	23387	22492	895	0	96.2
	2017	2022	23387	22511	876	0	96.3
	2018	2018	22060	19954	2106	0	90.5
	2018	2019	22060	20734	1326	0	94.0
	2018	2020	22060	20939	1121	0	94.9
	2018	2021	22060	21060	1000	0	95.5
	2018	2022	22060	21109	951	0	95.7
	2019	2019	20670	18955	1715	0	91.7

Component	Year of registration	At end of year	Number of unique candidates	Standard achieved	Standard not achieved	Cancelled due to misconduct	Pass rate
	2019	2020	20670	19548	1122	0	94.6
	2019	2021	20670	19801	869	0	95.8
	2019	2022	20670	19927	743	0	96.4
	2020	2020	16510	15164	1346	0	91.8
	2020	2021	16510	15747	763	0	95.4
	2020	2022	16510	15918	591	1	96.4
	2021	2021	20891	19399	1492	0	92.9
	2021	2022	20891	20032	859	0	95.9
	2022	2022	19263	17921	1342	0	93.0
	2016–22	2022	135864	130215	5648	1	95.8
Numeracy	2016	2016	13084	12327	757	0	94.2
	2016	2017	13084	12622	462	0	96.5
	2016	2018	13084	12661	423	0	96.8
	2016	2019	13084	12676	408	0	96.9
	2016	2020	13084	12687	397	0	97.0
	2016	2021	13084	12691	393	0	97.0
	2016	2022	13084	12695	389	0	97.0
	2017	2017	23465	21655	1810	0	92.3
	2017	2018	23465	22240	1225	0	94.8
	2017	2019	23465	22410	1055	0	95.5
	2017	2020	23465	22494	971	0	95.9
	2017	2021	23465	22539	926	0	96.1
	2017	2022	23465	22562	903	0	96.2
	2018	2018	22006	19814	2192	0	90.0
	2018	2019	22006	20544	1462	0	93.4
	2018	2020	22006	20804	1202	0	94.5
	2018	2021	22006	20918	1088	0	95.1
	2018	2022	22006	20980	1026	0	95.3
	2019	2019	20702	18773	1929	0	90.7
	2019	2020	20702	19489	1213	0	94.1
	2019	2021	20702	19774	928	0	95.5
	2019	2022	20702	19899	803	0	96.1
	2020	2020	16313	14991	1322	0	91.9
	2020	2021	16313	15574	739	0	95.5
	2020	2022	16313	15773	540	0	96.7
	2021	2021	20720	19264	1456	0	93.0
	2021	2022	20720	19848	871	1	95.8
	2022	2022	19163	18055	1108	0	94.2
	2016–22	2022	135453	129812	5640	1	95.8
Both	2016–22	2022	134170	126142	8028	0	94.0

Table 4 shows the percentage of candidates by the number of attempts they had had at each component of the test by the end of 2022. It can be seen that across the seven years, for both components, approximately 92% of candidates had attempted the test once, approximately 5.3% of candidates had attempted the test twice, and approximately 2.6% of candidates had attempted the test three or more times.

For literacy, by the end of 2022, 5.6% of the candidates who registered in 2016 had resat the test (the same as at the end of 2021), compared to 9.4% of the 2017 cohort, 10.6% of the 2018 cohort, 9.3% of the 2019 cohort, 8.6% of the 2020 cohort and 7.1% of the 2021 cohort. Of the candidates who registered in 2022, 4% resat the test in 2022.

For numeracy, by the end of 2022, approximately 6.4% of the candidates who registered in 2016 had resat the test (the same percentage as for 2021), compared to 8.6% of the 2017 cohort, 10.6% of the 2018 cohort, 10.2% of the 2019 cohort, 8.6% of the 2020 cohort and 6.8% of the 2021 cohort. Of the candidates who registered in 2022, 3% resat the test in 2022.

Table 4: Summary of resit rates by year of registration and overall

Domain	Year of registration	Number of unique candidates	Unique candidates who had 1 attempt only (%)	Unique candidates who had 2 attempts only (%)	Unique candidates who had 3 attempts only (%)	Unique candidates who had 4 attempts only (%)	Unique candidates who had 5 attempts only (%)	Unique candidates who had 6 attempts only (%)	Unique candidates who had 7 attempts only (%)	Unique candidates who had 8 attempts only (%)
Literacy	2016	13083	94.4	3.9	1.1	0.5	0.1	0.0 (1)*	n.a.	n.a.
	2017	23387	90.6	5.6	2.6	1.0	0.2	0.0 (2)*	n.a.	0.0 (1)*
	2018	22060	89.4	6.8	2.7	0.9	0.2	n.a.	n.a.	n.a.
	2019	20670	90.5	6.4	2.4	0.5	0.2	n.a.	n.a.	n.a.
	2020	16510	91.4	5.8	2.1	0.6	0.1	n.a.	n.a.	n.a.
	2021	20891	92.9	5.2	1.7	0.2	0.0 (9)*	n.a.	n.a.	n.a.
	2022	19263	95.9	3.6	0.4	0.0 (5)*	n.a.	n.a.	n.a.	n.a.
	2016–22	135864	92.0	5.4	1.9	0.6	0.1	0.0 (3)*	n.a.	0.0 (1)*
Numeracy	2016	13084	93.6	4.0	1.4	0.7	0.3	n.a.	n.a.	0.0 (1)*
	2017	23465	91.4	4.9	2.4	1.0	0.3	0.0 (2)*	n.a.	n.a.
	2018	22006	89.5	6.4	3.0	1.0	0.2	0.0 (1)*	n.a.	n.a.
	2019	20702	89.7	6.6	2.8	0.7	0.1	n.a.	n.a.	n.a.
	2020	16313	91.4	6.0	2.1	0.4	0.1	n.a.	n.a.	n.a.
	2021	20720	93.2	5.1	1.6	0.1	0.0 (2)*	n.a.	n.a.	n.a.
	2022	19163	97.0	2.7	0.3	0.0 (1)*	n.a.	n.a.	n.a.	n.a.
	2016–22	135453	92.1	5.2	2.0	0.6	0.1	0.0 (3)*	n.a.	0.0 (1)*

*The zero percentages are rounded and relate to the small numbers shown in brackets.

Table 5 shows that 90.3% of the 19,263 candidates who attempted the literacy component for the first time in 2022 achieved the standard at their first sitting, compared to 89.6% in 2020 and 90.6% in 2021. For numeracy in 2022, 92.1% of the 19,162 candidates achieved the standard at their first sitting, compared to 89.7% in 2020 and 90.7% in 2021.

Under the standard resit allowance, candidates who do not achieve the standard on their first attempt are permitted up to two additional sittings. In a small number of cases, more than two resits may be granted in exceptional circumstances.

The numbers of resitting candidates in 2022 for both literacy and numeracy decreased from 2021. The pass rate for literacy increased, but the pass rate for numeracy did not change. For literacy, there were 2,685 resits (pass rate 53%) in 2021 and 2,628 resits (pass rate 59%) in 2022. For numeracy, there were 2,572 resits (pass rate 57%) in 2021 and 2,311 resits (pass rate 57%) in 2022.

Table 5: Pass rates by attempt and by test window in 2022

Domain	Attempt	TW1	Pass rate	TW2	Pass rate	TW3	Pass rate	TW4	Pass rate	Total	Pass rate
Literacy	1st	4908	90.8	4612	89.4	4888	90.6	4855	90.4	19263	90.3
	2nd	459	64.9	366	55.5	444	62.4	497	60.2	1766	61.0
	3rd	169	55.6	142	46.5	115	56.5	202	53.5	628	53.0
	4th	52	53.8	41	56.1	34	67.6	52	57.7	179	58.1
	5th	8	87.5	12	33.3	11	45.5	21	52.4	52	51.9
	6th	0	n.a.	1	100.0	2	50.0	0	n.a.	3	66.7
	Total	5596		5174		5494		5627		21891	
Numeracy	1st	4918	91.6	4592	90.6	4852	93.8	4800	92.2	19162	92.1
	2nd	441	54.4	362	53.6	355	71.3	407	65.4	1565	60.9
	3rd	151	60.3	115	55.7	122	67.2	173	58.4	561	60.2
	4th	34	58.8	37	67.6	31	87.1	40	72.5	142	71.1
	5th	9	66.7	9	33.3	9	88.9	12	66.7	39	64.1
	6th	1	100.0	0	n.a.	0	n.a.	1	100.0	2	100.0
	7th	1	0.0	0	n.a.	0	n.a.	0	n.a.	1	0.0
	8th	0	n.a.	1	0.0	0	n.a.	0	n.a.	1	0.0
	Total	5555		5116		5369		5433		21473	

Candidates' results for 2022 are described in more detail in Section 3 of this report.

1.3 Test design and in-test trialling for replenishment of item pool

In test windows 1 and 2, in the first half of 2022, there were 18 equivalent test forms for literacy and 18 equivalent test forms for numeracy. In test windows 3 and 4, in the second half of 2022, a proportion of the test forms were refreshed using items that had been trialled in 2021. In these test windows, there were 18 equivalent test forms for literacy and 18 equivalent test forms for numeracy.

For literacy, each test form comprised five 12-item clusters (C1 to C5) totalling 60 items. For numeracy, the test was divided into two sections as follows: section 1 ('calculator available' – CA) comprising four 12-item clusters (48 items), and section 2 ('calculator not available' – CN) comprising two 6-item clusters (12 items), totalling 60 items.

In order to augment and replenish the pool of items available for the test in future administrations, items were trial-tested within the live instruments. These items were administered in small clusters (one to five items) and did not contribute to the candidates' scores. Eighty-seven (87) literacy items and 89 numeracy items were administered in the in-test trial clusters. Approximately 800 candidates were administered each of these trial items. Examples of one literacy test and one numeracy test with in-test trial clusters are shown below.

Literacy	C1	C2	C3	C4	C5	Trial C
-----------------	----	----	----	----	----	---------

	Section 1					Section 2		
Numeracy	CA1	CA2	CA3	CA4	Trial CA	CN1	CN2	Trial CN

In the second half of 2022 and the first half of 2023, 87 Phase 8 literacy items and 89 Phase 8 numeracy items were in-test trialled. A sufficient number of items were well targeted for difficulty across the three reporting bands, as required by the test construct and assessment framework, thereby ensuring adequate test replenishment.

The Phase 8 trial items revealed some differential item functioning (DIF). For example, for the Age variable, only 2 literacy trial items favoured candidates aged 17–25 years, while 4 literacy trial items favoured candidates aged 26+ years. For numeracy, 2 items favoured candidates aged 17–25 years, while 4 items favoured candidates aged 26+ years. For the Gender variable, 1 literacy trial item favoured male candidates, and 5 literacy trial items favoured female candidates. For numeracy, 2 trial items favoured males and 3 favoured females.

For more detail, see Section 5.

1.4 Comparison of 2018, 2019, 2020, 2021 and 2022 results

Table 6 shows that the mean scale scores of first-attempt candidates changed little across the most recent five years. Following a steady decline in pass rates for both domains, the pass rate for both increased slightly in 2020 and again in 2021. For literacy, from 2016 to 2019, the pass rates of first-attempt candidates declined from 93.3% in 2016 to 89.2% in 2017, appeared to stabilise in 2018 and 2019 to 87.5% and 88.7% respectively, increased to 89.6% in 2020, then to 90.6% in 2021 and 90.3% in 2022. For numeracy, from 2016 to 2019, the pass rates of first-attempt candidates declined from 92.4% in 2016 to 90.0% in 2017, stabilised at 87.4% in 2018 and 87.7% in 2019, and then increased to 89.7% in 2020, 90.7% in 2021 and 92.1% in 2022. The decline in the pass rates of first-attempt candidates from 2016 to 2018 reflects the introduction of the revised standards mid-2017.

In 2022, the number of second-, third-, and fourth-attempt candidates decreased from 2021 for both components of the test. For the fifth-attempt candidates there was small increase in number for both literacy and numeracy. The mean scale scores of several resit cohorts, overall and across several strands for each component, increased from 2021 to 2022 and is reported in Table 31, Section 3.

Table 6: Comparison of performance by attempt number, overall and by subscale

Component	Attempt number	Whole test and subscale	2018			2019			2020			2021			2022		
			Number of sittings ²	Mean	Pass rate	Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate
Literacy	1st	Overall	22061	116.8	87.5	20670	116.8	88.7	16511	116.9	89.6	20891	117.4	90.6	19262	117.4	90.3
		Reading		117.1			117.1			117.0			117.5			117.5	
		Technical skills of writing		116.2			116.3			116.9			117.3			117.2	
	2nd	Overall	2022	106.6	51.3	2044	106.9	55.2	1487	107.2	57.4	1792	107.4	57.3	1766	107.6	61.0
		Reading		106.6			107.2			107.0			107.3			107.3	
		Technical skills of writing		106.6			106.5			107.9			107.8			108.2	
	3rd	Overall	647	106.0	46.1	748	106.3	47.2	546	106.7	53.3	657	106.1	47.5	628	106.9	53.0
		Reading		105.6			106.3			106.0			105.8			106.1	
		Technical skills of writing		106.6			106.5			108.0			106.7			108.5	
	4th	Overall	158	104.8	32.9	201	106.4	45.3	171	106.7	46.8	190	107.2	54.7	179	108.1	58.1
		Reading		104.2			105.8			105.9			106.7			106.8	
		Technical skills of writing		105.8			107.8			108.3			108.1			110.4	
	5th	Overall	13	105.0	23.1	36	106.1	44.4	33	107.5	60.6	46	106.1	50.0	52	107.7	51.9
		Reading		104.7			106.0			107.3			105.4			106.8	
		Technical skills of writing		105.2			106.6			107.8			107.2			109.5	
	6th ³	Overall	1	NA	NA	0	NA	NA	0	NA	NA	0	NA	NA	3	106.7	66.7
		Reading		NA			NA			NA			NA			105.3	
		Technical skills of writing		NA			NA			NA			NA			108.7	
	7th	Overall	0	NA	NA	1	NA	NA	0	NA	NA	0	NA	NA	0	NA	NA
		Reading		NA			NA			NA			NA			NA	
		Technical skills of writing		NA			NA			NA			NA			NA	

² Sittings beyond the first attempt include candidates who first registered in previous years

³ The 6th, 7th and 8th attempts indicated are for candidates who have been reset after meeting the 'test reset' requirement but have been recorded as a 6th, 7th or 8th attempt, or candidates who created multiple accounts using slightly different names or other personal details, sat the tests and have been detected afterwards.

Component	Attempt number	Whole test and subscale	2018			2019			2020			2021			2022		
			Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate
Numeracy	1st	Overall	22007	122.8	87.4	20702	122.7	87.7	16313	124.3	89.7	20720	125.3	90.7	19162	125.9	92.1
		Number & algebra		122.5			123.2			125.0			125.6			125.6	
		Measurement & geometry		122.6			121.6			122.7			124.4			125.5	
		Statistics & probability		122.6			122.2			123.6			124.5			125.7	
		Calculator available		123.1			122.9			124.4			125.5			126.2	
		Calculator not available		120.6			121.7			123.4			124.1			124.4	
	2nd	Overall	1995	108.6	45.3	2058	109.1	49.3	1578	110.4	55.6	1720	110.5	57.5	1565	111.3	60.9
		Number & algebra		107.1			108.1			109.7			109.6			110.4	
		Measurement & geometry		109.1			109.3			110.3			110.6			111.3	
		Statistics & probability		110.7			110.8			111.8			111.8			112.8	
		Calculator available		109.8			109.7			111.0			111.3			112.0	
		Calculator not available		103.9			106.8			108.3			107.4			108.4	
	3rd	Overall	658	107.7	36.8	776	109.0	49.5	673	110.9	57.4	640	110.7	55.9	561	112.1	60.2
		Number & algebra		106.2			108.3			110.8			110.1			111.3	
		Measurement & geometry		108.4			109.2			110.3			110.3			111.9	
		Statistics & probability		109.7			110.3			111.8			111.7			113.6	
		Calculator available		108.5			109.6			111.3			111.3			112.7	
		Calculator not available		104.6			106.9			109.4			108.3			109.6	
	4th	Overall	175	107.3	31.4	231	110.3	50.2	212	112.6	62.3	173	113.0	68.8	142	112.9	71.1
		Number & algebra		106.0			109.9			113.1			113.1			112.7	
		Measurement & geometry		107.9			110.7			111.3			111.8			112.4	
		Statistics & probability		108.8			111.0			112.7			113.6			113.6	
		Calculator available		107.9			110.5			112.4			113.5			113.5	
		Calculator not available		104.8			109.6			113.2			111.6			110.9	
	5th	Overall	28	109.3	35.7	41	110.6	46.3	49	114.9	69.4	37	112.7	78.4	39	113.9	64.1
		Number & algebra		107.5			111.2			114.6			112.9			113.6	
		Measurement & geometry		109.9			110.3			113.8			112.2			112.2	
		Statistics & probability		112.0			109.7			115.5			112.8			114.3	
		Calculator available		109.9			110.3			114.7			113.0			113.4	
		Calculator not available		106.3			111.4			115.9			111.5			114.6	

Component	Attempt number	Whole test and subscale	2018			2019			2020			2021			2022		
			Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate	Number of sittings	Mean	Pass rate
Numeracy	6th	Overall	1	NA	NA	0	NA	NA	0	NA	NA	1	NA	NA	2	116.0	100.0
		Number & algebra		NA			NA			NA			NA			113.5	
		Measurement & geometry		NA			NA			NA			NA			120.5	
		Statistics & probability		NA			NA			NA			NA			114.5	
		Calculator available		NA			NA			NA			NA			116.5	
		Calculator not available		NA			NA			NA			NA			113.0	
	7th	Overall	0	NA	NA	0	NA	NA	0	NA	NA	0	NA	NA	1	108.0	0.0
		Number & algebra		NA			NA			NA			NA			104.0	
		Measurement & geometry		NA			NA			NA			NA			115.0	
		Statistics & probability		NA			NA			NA			NA			106.0	
		Calculator available		NA			NA			NA			NA			106.0	
		Calculator not available		NA			NA			NA			NA			113.0	
	8th	Overall	0	NA	NA	0	NA	NA	0	NA	NA	0	NA	NA	1	108.0	0.0
		Number & algebra		NA			NA			NA			NA			108.0	
		Measurement & geometry		NA			NA			NA			NA			107.0	
		Statistics & probability		NA			NA			NA			NA			108.0	
		Calculator available		NA			NA			NA			NA			106.0	
		Calculator not available		NA			NA			NA			NA			114.0	

2. TEST ADMINISTRATION WINDOWS 1–4 IN 2022

This section covers the demographic characteristics of candidates who sat the test in 2022. Details on test centres, remote proctoring and other administrative matters can be found in each of the four 2022 test window administration reports submitted separately throughout 2022.

2.1 Demographic characteristics of candidates

Just under 23,000 candidates from 47 institutions sat the test in 2022. The institutions were the same as in 2021.

Alphacrucis College	Queensland University of Technology
Australian Catholic University	RMIT University
Australian College of Physical Education	Southern Cross University
Avondale University	Swinburne University of Technology
Central Queensland University	Tabor Adelaide
Charles Darwin University	The University of Adelaide
Charles Sturt University	The University of Melbourne
Christian Heritage College	The University of New England
Curtin University	The University of New South Wales
Deakin University	The University of Newcastle
Eastern College Australia	The University of Notre Dame Australia
Edith Cowan University	The University of Queensland
Excelsia College	The University of Sydney
Federation University Australia	The University of Western Australia
Flinders University	University of Canberra
Griffith University	University of South Australia
Holmesglen TAFE	University of Southern Queensland
James Cook University	University of Tasmania
La Trobe University	University of Technology Sydney
Macquarie University	University of the Sunshine Coast
Melbourne Polytechnic	University of Wollongong
Monash University	Victoria University
Montessori World Educational Institute	Western Sydney University
Murdoch University	

Table 7 shows the demographic characteristics of all candidates who sat the test in 2022. This includes candidates who first registered for the test in 2022, and those who registered in the period 2016–2021 and resat the test in 2022. It shows that the majority of candidates (74%)⁴ were female, resided in metropolitan areas (81%) and most (64%) were in the age group 17–25. The majority of candidates (65%) were enrolled in an undergraduate course. The greatest number of undergraduate candidates were those in their third year. Over half of the postgraduate candidates who sat the test in 2022 were those in their first year. In regard to course category, candidates were mainly enrolled in primary teacher education courses (43%), followed by secondary (38%), other teacher education courses (12%), early childhood (7%) and special education (less than 1%).

The proportion of international candidates attempting the test in 2022 was 5–6%, similar to 2021. The proportion of candidates identifying as Indigenous (2%) and the proportion of candidates from regional areas (17%) were very similar to previous years.

Table 7: Demographic characteristics of unique candidates who sat the test in 2022 (including 2016–21 resitters)

Characteristic	Category	Literacy		Numeracy	
		N	%	N	%
Gender	Female	15333	73.8	15277	74.0
	Male	5417	26.1	5327	25.8
	Indeterminate/intersex	39	0.2	36	0.2
Age	17–25	13369	64.3	13227	64.1
	26–30	3128	15.0	3158	15.3
	31–35	1630	7.8	1590	7.7
	36–40	1150	5.5	1137	5.5
	41–45	812	3.9	792	3.8
	46+	700	3.4	736	3.6
International Students	No	19491	93.8	19535	94.6
	Yes	1298	6.2	1105	5.4
English as First Language	Yes	17738	85.3	17855	86.5
	No	3051	14.7	2785	13.5
Indigenous	No	20133	96.8	19987	96.8
	Yes	398	1.9	406	2.0
	Not disclosed	258	1.2	247	1.2
Residential Area ⁵	Metropolitan areas	16908	81.3	16817	81.5
	Regional areas	3602	17.3	3546	17.2
	Remote areas	149	0.7	157	0.8
	International	90	0.4	81	0.4
	Invalid or Missing	40	0.2	39	0.2
Program Type	Undergraduate	13455	64.7	13350	64.7
	Postgraduate	7248	34.9	7213	34.9
	Pathway	86	0.4	77	0.4
Program Type by Year Level	Undergraduate 1st year	1458	7.0	1429	6.9
	Undergraduate 2nd year	4232	20.4	4192	20.3
	Undergraduate 3rd year	4461	21.5	4373	21.2
	Undergraduate 4th year	2551	12.3	2558	12.4

⁴ In the descriptive text accompanying the tables throughout the report, most percentages are rounded to the nearest whole per cent.

⁵ The residential area classification is based on the Australian Statistical Geography Standard [ASGS] and is mapped from a candidate's jurisdiction and postcode. 'Metropolitan' areas include Major cities of Australia, Major cities to Inner and Outer Regional Australia. 'Regional' areas include Inner and Outer Regional Australia. 'Remote' areas include Remote to Very Remote Australia.

Characteristic	Category	Literacy		Numeracy	
		N	%	N	%
Program Type by Year Level	Undergraduate 5th year or above	431	2.1	472	2.3
	Undergraduate graduated	322	1.5	326	1.6
	Postgraduate 1st year	3642	17.5	3613	17.5
	Postgraduate 2nd year	2610	12.6	2588	12.5
	Postgraduate 3rd year	312	1.5	314	1.5
	Postgraduate 4th year	234	1.1	242	1.2
	Postgraduate 5th year or above	240	1.2	240	1.2
	Postgraduate graduated	210	1.0	216	1.0
	Pathway 1st year	66	0.3	59	0.3
	Pathway 2nd year	9	0.0	9	0.0
	Pathway 3rd year	1	0.0	1	0.0
	Pathway 4th year	0	0.0	0	0.0
	Pathway 5th year or above	0	0.0	0	0.0
	Pathway graduated	10	0.0	8	0.0
Course Category	Teacher education: early childhood	1390	6.7	1375	6.7
	Teacher education: primary	8846	42.6	8819	42.7
	Teacher education: secondary	7985	38.4	7924	38.4
	Teacher education: special education	150	0.7	141	0.7
	Teacher education: other	2418	11.6	2381	11.5

The following demographic analysis separates the 2022 candidates into five groups for each component of the test: first-attempt candidates, second-attempt candidates (first resit), third-attempt candidates (second resit), fourth-attempt candidates (third resit), fifth-attempt candidates (fourth resit) and candidates who achieved no standard.

Table 8 shows the demographic characteristics of the first-attempt candidates for each component of the test in 2022. The demographic characteristics of this cohort are very similar to those described in Table 7 above.

Table 8: Demographic characteristics of first-attempt candidates who sat the test in 2022

Characteristic	Category	Literacy		Numeracy	
		N	%	N	%
Gender	Female	14045	72.9	13958	72.8
	Male	5179	26.9	5169	27.0
	Indeterminate/intersex	39	0.2	35	0.2
Age	17–25	12438	64.6	12366	64.5
	26–30	2877	14.9	2874	15.0
	31–35	1505	7.8	1475	7.7
	36–40	1064	5.5	1064	5.6
	41–45	735	3.8	728	3.8
	46+	644	3.3	655	3.4
International Students	No	18195	94.5	18118	94.6
	Yes	1068	5.5	1044	5.4
English as First Language	Yes	16747	86.9	16660	86.9
	No	2516	13.1	2502	13.1
Indigenous	No	18653	96.8	18559	96.9
	Yes	366	1.9	364	1.9
	Not disclosed	244	1.3	239	1.2

Characteristic	Category	Literacy		Numeracy	
		N	%	N	%
Residential Area	Metropolitan areas	15658	81.3	15583	81.3
	Regional areas	3353	17.4	3334	17.4
	Remote areas	132	0.7	131	0.7
	International	82	0.4	79	0.4
	Invalid or Missing	38	0.2	35	0.2
Program Type	Undergraduate	12320	64.0	12243	63.9
	Postgraduate	6866	35.6	6848	35.7
	Pathway	77	0.4	71	0.4
Program Type by Year Level	Undergraduate 1st year	1460	7.6	1431	7.5
	Undergraduate 2nd year	4117	21.4	4123	21.5
	Undergraduate 3rd year	4142	21.5	4073	21.3
	Undergraduate 4th year	2065	10.7	2071	10.8
	Undergraduate 5th year or above	310	1.6	322	1.7
	Undergraduate graduated	226	1.2	223	1.2
	Postgraduate 1st year	3617	18.8	3597	18.8
	Postgraduate 2nd year	2404	12.5	2397	12.5
	Postgraduate 3rd year	279	1.4	271	1.4
	Postgraduate 4th year	193	1.0	204	1.1
	Postgraduate 5th year or above	215	1.1	216	1.1
	Postgraduate graduated	158	0.8	163	0.9
	Pathway 1st year	62	0.3	57	0.3
	Pathway 2nd year	6	0.0	7	0.0
	Pathway 3rd year	0	0.0	0	0.0
	Pathway 4th year	0	0.0	0	0.0
	Pathway 5th year or above	0	0.0	0	0.0
	Pathway graduated	9	0.0	7	0.0
Course Category	Teacher education: early childhood	1159	6.0	1158	6.0
	Teacher education: primary	8157	42.3	8109	42.3
	Teacher education: secondary	7629	39.6	7599	39.7
	Teacher education: special education	132	0.7	129	0.7
	Teacher education: other	2186	11.3	2167	11.3

In 2022, there were fewer resits than in 2021. In literacy, there were 2,628 resits in 2022, compared to 2,685 resits in 2021. There were 1,766 second attempts, 628 third attempts, 179 fourth attempts and 52 fifth attempts (compared to 1,792, 657, 190 and 46 respectively in 2021). In numeracy, there were 2,306 resits in 2022, compared to 2,573 in 2021. There were 1,565 second attempts, 560 third attempts, 142 fourth attempts and 39 fifth attempts (compared to 1,720, 641, 173 and 39 respectively in 2021). These resit numbers include candidates who did not achieve one standard or more in the years 2016 to 2021.

A small number of candidates in 2022 had a sixth attempt (3 for literacy, 2 for numeracy), a 7th attempt (1 for numeracy) or an 8th attempt (1 for numeracy).

Table 9 shows the demographic characteristics of the candidates who sat the test twice (first resit) during 2022. It shows that, as for previous years, the overwhelming majority of these resit candidates were female (82% for literacy, 89% for numeracy) and mostly in the age group 17–25 (66% for literacy, 62% for numeracy). The proportion of females in the second-attempt cohort exceeded the proportion in the first-attempt cohort (73%). The majority of second-attempt candidates were enrolled in an undergraduate course (72% for literacy, 74% for numeracy), similar to 2021. These proportions exceed the proportion of undergraduate candidates in the first-attempt cohort (64%).

Table 9 also shows that the proportion of literacy candidates whose first language was not English was more than twice as much in the second attempt (32%) as in the first attempt (13%). For numeracy, the proportions were much closer (17% and 13% respectively).

It can also be seen that the proportion of literacy candidates from early childhood courses was nearly twice as much in the second-attempt cohort (14%) as in the first-attempt cohort (6%). For numeracy the proportions were 12% and 6% respectively.

Table 9: Demographic characteristics of second-attempt candidates who sat the test in 2022⁶

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sittings	N	%	% of Total Sittings
Gender	Female	1441	81.6	6.6	1393	89.0	6.5
	Male	324	18.3	1.5	170	10.9	0.8
	Indeterminate/intersex	1	0.1	0.0	2	0.1	0.0
Age	17–25	1163	65.9	5.3	977	62.4	4.5
	26–30	233	13.2	1.1	253	16.2	1.2
	31–35	137	7.8	0.6	125	8.0	0.6
	36–40	99	5.6	0.5	81	5.2	0.4
	41–45	79	4.5	0.4	55	3.5	0.3
	46+	55	3.1	0.3	74	4.7	0.3
International Students	No	1486	84.1	6.8	1506	96.2	7.0
	Yes	280	15.9	1.3	59	3.8	0.3
English as First Language	Yes	1197	67.8	5.5	1292	82.6	6.0
	No	569	32.2	2.6	273	17.4	1.3
Indigenous	No	1713	97.0	7.8	1514	96.7	7.1
	Yes	36	2.0	0.2	46	2.9	0.2
	Not disclosed	17	1.0	0.1	5	0.3	0.0

⁶ Includes candidates who registered from 2016 to 2021. Some unsuccessful candidates from Table 8 are included.

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sittings	N	%	% of Total Sittings
Residential Area	Metropolitan areas	1443	81.7	6.6	1295	82.7	6.0
	Regional areas	292	16.5	1.3	242	15.5	1.1
	Remote areas	13	0.7	0.1	23	1.5	0.1
	International	15	0.8	0.1	2	0.1	0.0
	Invalid or Missing	3	0.2	0.0	3	0.2	0.0
Program Type	Undergraduate	1274	72.1	5.8	1154	73.7	5.4
	Postgraduate	472	26.7	2.2	400	25.6	1.9
	Pathway	20	1.1	0.1	11	0.7	0.1
Program Type by Year Level	Undergraduate 1st year	44	2.5	0.2	25	1.6	0.1
	Undergraduate 2nd year	233	13.2	1.1	164	10.5	0.8
	Undergraduate 3rd year	455	25.8	2.1	378	24.2	1.8
	Undergraduate 4th year	422	23.9	1.9	440	28.1	2.0
	Undergraduate 5th year or above	60	3.4	0.3	79	5.0	0.4
	Undergraduate graduated	60	3.4	0.3	68	4.3	0.3
	Postgraduate 1st year	119	6.7	0.5	51	3.3	0.2
	Postgraduate 2nd year	223	12.6	1.0	220	14.1	1.0
	Postgraduate 3rd year	34	1.9	0.2	42	2.7	0.2
	Postgraduate 4th year	25	1.4	0.1	26	1.7	0.1
	Postgraduate 5th year or above	24	1.4	0.1	26	1.7	0.1
	Postgraduate graduated	47	2.7	0.2	35	2.2	0.2
	Pathway 1st year	13	0.7	0.1	7	0.4	0.0
	Pathway 2nd year	4	0.2	0.0	3	0.2	0.0
	Pathway 3rd year	0	0.0	0.0	0	0.0	0.0
	Pathway 4th year	0	0.0	0.0	0	0.0	0.0
	Pathway 5th year or above	0	0.0	0.0	0	0.0	0.0
	Pathway graduated	3	0.2	0.0	1	0.1	0.0
Course Category	Teacher education: early childhood	238	13.5	1.1	180	11.5	0.8
	Teacher education: primary	756	42.8	3.5	779	49.8	3.6
	Teacher education: secondary	469	26.6	2.1	347	22.2	1.6
	Teacher education: special educ.	15	0.8	0.1	10	0.6	0.0
	Teacher education: other	288	16.3	1.3	249	15.9	1.2

Table 10 shows the demographic characteristics of the third-attempt candidates in 2022. As for the second-attempt candidates, this cohort tended to be mostly female, undergraduates, and aged 17–25. As for the second-attempt cohort, these categories are more highly represented than in the first-attempt cohort.

Table 10 also shows that, for literacy, English was not the first language of 41% of the third-attempt candidates, whereas the proportion was only 13% for the first-attempt candidates (as shown in Table 8). For numeracy, English was not the first language of 18% of the third-attempt candidates, also higher than the proportion (13%) of the first-attempt candidates. It can also be seen that the proportion of candidates from early childhood courses in the third-attempt cohort was 15% for literacy, more than twice the proportion for literacy (6%) in the first-attempt cohort. The proportion of candidates from early childhood courses in the third-attempt cohort for numeracy was 16%, more than twice that of the first-attempt cohort (6%).

Table 10: Demographic characteristics of third-attempt candidates who sat the test in 2022⁷

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sittings	N	%	% of Total Sittings
Gender	Female	525	83.6	2.4	506	90.2	2.4
	Male	103	16.4	0.5	54	9.6	0.3
	Indeterminate/intersex	0	0.0	0.0	1	0.2	0.0
Age	17–25	375	59.7	1.7	333	59.4	1.6
	26–30	118	18.8	0.5	103	18.4	0.5
	31–35	42	6.7	0.2	43	7.7	0.2
	36–40	33	5.3	0.2	30	5.3	0.1
	41–45	37	5.9	0.2	22	3.9	0.1
	46+	23	3.7	0.1	30	5.3	0.1
International Students	No	496	79.0	2.3	537	95.7	2.5
	Yes	132	21.0	0.6	24	4.3	0.1
English as First Language	Yes	371	59.1	1.7	461	82.2	2.1
	No	257	40.9	1.2	100	17.8	0.5
Indigenous	No	607	96.7	2.8	548	97.7	2.6
	Yes	12	1.9	0.1	10	1.8	0.0
	Not disclosed	9	1.4	0.0	3	0.5	0.0
Residential Area	Metropolitan areas	517	82.3	2.4	476	84.8	2.2
	Regional areas	98	15.6	0.4	79	14.1	0.4
	Remote areas	8	1.3	0.0	4	0.7	0.0
	International	4	0.6	0.0	0	0.0	0.0
	Invalid or Missing	1	0.2	0.0	2	0.4	0.0
Program Type	Undergraduate	444	70.7	2.0	408	72.7	1.9
	Postgraduate	181	28.8	0.8	151	26.9	0.7
	Pathway	3	0.5	0.0	2	0.4	0.0
Program Type by Year Level	Undergraduate 1st year	2	0.3	0.0	3	0.5	0.0
	Undergraduate 2nd year	37	5.9	0.2	19	3.4	0.1
	Undergraduate 3rd year	107	17.0	0.5	87	15.5	0.4
	Undergraduate 4th year	215	34.2	1.0	210	37.4	1.0
	Undergraduate 5th year or above	49	7.8	0.2	59	10.5	0.3
	Undergraduate graduated	34	5.4	0.2	30	5.3	0.1
	Postgraduate 1st year	28	4.5	0.1	8	1.4	0.0
	Postgraduate 2nd year	93	14.8	0.4	84	15.0	0.4
	Postgraduate 3rd year	9	1.4	0.0	15	2.7	0.1

⁷ Includes candidates who registered from 2016 to 2021. Some unsuccessful candidates from Tables 8 and 9 are included.

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sittings	N	%	% of Total Sittings
	Postgraduate 4th year	23	3.7	0.1	14	2.5	0.1
	Postgraduate 5th year or above	10	1.6	0.0	11	2.0	0.1
	Postgraduate graduated	18	2.9	0.1	19	3.4	0.1
	Pathway 1st year	1	0.2	0.0	1	0.2	0.0
	Pathway 2nd year	0	0.0	0.0	0	0.0	0.0
	Pathway 3rd year	1	0.2	0.0	1	0.2	0.0
	Pathway 4th year	0	0.0	0.0	0	0.0	0.0
	Pathway 5th year or above	0	0.0	0.0	0	0.0	0.0
	Pathway graduated	1	0.2	0.0	0	0.0	0.0
Course Category	Teacher education: early childhood	92	14.6	0.4	88	15.7	0.4
	Teacher education: primary	279	44.4	1.3	271	48.3	1.3
	Teacher education: secondary	156	24.8	0.7	123	21.9	0.6
	Teacher education: special educ.	8	1.3	0.0	6	1.1	0.0
	Teacher education: other	93	14.8	0.4	73	13.0	0.3

Table 11 shows demographic characteristics of the small number of candidates (155 literacy, 126 numeracy) who were authorised to sit the test for the fourth time in 2022. Again, this cohort was mostly female candidates (87% literacy and 89% numeracy). For literacy, the proportion of candidates in this cohort for whom English was not their first language (55%) was considerably higher than the proportion in the first-attempt cohort (13%). For numeracy, the proportion of candidates in this cohort for whom English was not their first language (19%) was somewhat higher than the proportions of the first-attempt cohort (13%).

Table 11: Demographic characteristics of fourth-attempt candidates who sat the test in 2022⁸

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sittings	N	%	% of Total Sittings
Gender	Female	155	86.6	0.7	126	88.7	0.6
	Male	24	13.4	0.1	16	11.3	0.1
	Indeterminate/intersex	0	0.0	0.0	0	0.0	0.0
Age	17–25	92	51.4	0.4	72	50.7	0.3
	26–30	42	23.5	0.2	37	26.1	0.2
	31–35	16	8.9	0.1	9	6.3	0.0
	36–40	13	7.3	0.1	6	4.2	0.0
	41–45	8	4.5	0.0	8	5.6	0.0
	46+	8	4.5	0.0	10	7.0	0.0
International Students	No	115	64.2	0.5	136	95.8	0.6
	Yes	64	35.8	0.3	6	4.2	0.0
English as First Language	Yes	80	44.7	0.4	115	81.0	0.5
	No	99	55.3	0.5	27	19.0	0.1
Indigenous	No	175	97.8	0.8	136	95.8	0.6
	Yes	3	1.7	0.0	5	3.5	0.0

⁸ Includes candidates who registered from 2016 to 2021. Some unsuccessful candidates from Tables 8–10 are included.

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sitzings	N	%	% of Total Sitzings
	Not disclosed	1	0.6	0.0	1	0.7	0.0
Residential Area	Metropolitan areas	140	78.2	0.6	124	87.3	0.6
	Regional areas	31	17.3	0.1	14	9.9	0.1
	Remote areas	1	0.6	0.0	4	2.8	0.0
	International	6	3.4	0.0	0	0.0	0.0
	Invalid or Missing	1	0.6	0.0	0	0.0	0.0
Program Type	Undergraduate	105	58.7	0.5	106	74.6	0.5
	Postgraduate	74	41.3	0.3	36	25.4	0.2
	Pathway	0	0.0	0.0	0	0.0	0.0
Program Type by Year Level	Undergraduate 1st year	1	0.6	0.0	0	0.0	0.0
	Undergraduate 2nd year	4	2.2	0.0	0	0.0	0.0
	Undergraduate 3rd year	6	3.4	0.0	8	5.6	0.0
	Undergraduate 4th year	48	26.8	0.2	50	35.2	0.2
	Undergrad 5th year or above	30	16.8	0.1	31	21.8	0.1
	Undergraduate graduated	16	8.9	0.1	17	12.0	0.1
	Postgraduate 1st year	8	4.5	0.0	1	0.7	0.0
	Postgraduate 2nd year	45	25.1	0.2	15	10.6	0.1
	Postgraduate 3rd year	5	2.8	0.0	3	2.1	0.0
	Postgraduate 4th year	7	3.9	0.0	7	4.9	0.0
	Postgrad 5th year or above	3	1.7	0.0	2	1.4	0.0
	Postgraduate graduated	6	3.4	0.0	8	5.6	0.0
	Pathway 1st year	0	0.0	0.0	0	0.0	0.0
	Pathway 2nd year or above	0	0.0	0.0	0	0.0	0.0
	Pathway graduated	0	0.0	0.0	0	0.0	0.0
Course Category	Teacher education: early childhood	40	22.3	0.2	27	19.0	0.1
	Teacher education: primary	59	33.0	0.3	61	43.0	0.3
	Teacher education: secondary	48	26.8	0.2	37	26.1	0.2
	Teacher education: special educ.	4	2.2	0.0	1	0.7	0.0
	Teacher education: other	28	15.6	0.1	16	11.3	0.1

In 2022, a very small number of candidates (50 for literacy, 35 for numeracy) were granted fifth attempts. While the demographic characteristics of the fifth-attempt cohort are presented in Table 12, the numbers are too small to make any meaningful observations. However, almost all of the fifth-attempt candidates were female and were undertaking a primary or secondary course.

Table 12: Demographic characteristics of fifth-attempt candidates who sat the test in 2022

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sitzings	N	%	% of Total Sitzings
Gender	Female	50	96.2	0.2	35	89.7	0.2
	Male	2	3.8	0.0	4	10.3	0.0
	Indeterminate/intersex	0	0.0	0.0	0	0.0	0.0
Age	17–25	27	51.9	0.1	10	25.6	0.0
	26–30	9	17.3	0.0	12	30.8	0.1
	31–35	3	5.8	0.0	6	15.4	0.0
	36–40	5	9.6	0.0	3	7.7	0.0
	41–45	3	5.8	0.0	4	10.3	0.0
	46+	5	9.6	0.0	4	10.3	0.0
International Students	No	39	75.0	0.2	38	97.4	0.2
	Yes	13	25.0	0.1	1	2.6	0.0
English as First Language	Yes	26	50.0	0.1	31	79.5	0.1
	No	26	50.0	0.1	8	20.5	0.0
Indigenous	No	51	98.1	0.2	36	92.3	0.2
	Yes	1	1.9	0.0	2	5.1	0.0
	Not disclosed	0	0.0	0.0	1	2.6	0.0
Residential Area	Metropolitan areas	40	76.9	0.2	32	82.1	0.1
	Regional areas	9	17.3	0.0	6	15.4	0.0
	Remote areas	0	0.0	0.0	1	2.6	0.0
	International	3	5.8	0.0	0	0.0	0.0
	Invalid or Missing	0	0.0	0.0	0	0.0	0.0
Program Type	Undergraduate	31	59.6	0.1	28	71.8	0.1
	Postgraduate	21	40.4	0.1	11	28.2	0.1
	Pathway	0	0.0	0.0	0	0.0	0.0
Program Type by Year Level	Undergraduate 1st year	0	0.0	0.0	0	0.0	0.0
	Undergraduate 2nd year	1	1.9	0.0	0	0.0	0.0
	Undergraduate 3rd year	1	1.9	0.0	0	0.0	0.0
	Undergraduate 4th year	10	19.2	0.0	10	25.6	0.0
	Undergrad 5th year or above	15	28.8	0.1	8	20.5	0.0
	Undergraduate graduated	4	7.7	0.0	10	25.6	0.0
	Postgraduate 1st year	2	3.8	0.0	0	0.0	0.0
	Postgraduate 2nd year	10	19.2	0.0	4	10.3	0.0
	Postgraduate 3rd year	2	3.8	0.0	2	5.1	0.0
	Postgraduate 4th year	2	3.8	0.0	2	5.1	0.0
	Postgrad 5th year or above	3	5.8	0.0	0	0.0	0.0
	Postgraduate graduated	2	3.8	0.0	3	7.7	0.0
	Pathway 1st year	0	0.0	0.0	0	0.0	0.0
	Pathway 2nd year or above	0	0.0	0.0	0	0.0	0.0
	Pathway graduated	0	0.0	0.0	0	0.0	0.0
Course Category	Teacher education: early childhood	11	21.2	0.1	4	10.3	0.0
	Teacher education: primary	23	44.2	0.1	18	46.2	0.1
	Teacher education: secondary	13	25.0	0.1	14	35.9	0.1
	Teacher education: special educ.	0	0.0	0.0	0	0.0	0.0
	Teacher education: other	5	9.6	0.0	3	7.7	0.0

Table 13 shows the demographic characteristics for the candidates who had achieved no standard by the end of 2022. There were 1,856 candidates who had not achieved the literacy standard and 1576 candidates who had not achieved the numeracy standard. The demographics of this group were similar to those of the previously described resit cohorts except that this group had the highest proportion of candidates from early childhood courses (15% for literacy, 13% for numeracy), compared to 6% of the first-attempt cohort.

Table 13: Demographic characteristics of candidates who achieved no standard by the end of 2022

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sitings	N	%	% of Total Sitings
Gender	Female	1555	83.8	7.1	1423	90.1	6.6
	Male	301	16.2	1.4	153	9.7	0.7
	Indeterminate/intersex	0	0.0	0.0	3	0.2	0.0
Age	17–25	1155	62.2	5.3	1010	64.0	4.7
	26–30	251	13.5	1.1	245	15.5	1.1
	31–35	161	8.7	0.7	115	7.3	0.5
	36–40	112	6.0	0.5	77	4.9	0.4
	41–45	99	5.3	0.5	59	3.7	0.3
	46+	78	4.2	0.4	73	4.6	0.3
International Students	No	1578	85.0	7.2	1520	96.3	7.1
	Yes	278	15.0	1.3	59	3.7	0.3
English as First Language	Yes	1199	64.6	5.5	1274	80.7	5.9
	No	657	35.4	3.0	305	19.3	1.4
Indigenous	No	1794	96.7	8.2	1518	96.1	7.1
	Yes	48	2.6	0.2	46	2.9	0.2
	Not disclosed	14	0.8	0.1	15	0.9	0.1
Residential Area	Metropolitan areas	1522	82.0	7.0	1321	83.7	6.2
	Regional areas	302	16.3	1.4	233	14.8	1.1
	Remote areas	15	0.8	0.1	20	1.3	0.1
	International	14	0.8	0.1	2	0.1	0.0
	Invalid or Missing	3	0.2	0.0	3	0.2	0.0
Program Type	Undergraduate	1425	76.8	6.5	1231	78.0	5.7
	Postgraduate	408	22.0	1.9	332	21.0	1.5
	Pathway	23	1.2	0.1	16	1.0	0.1
Program Type by Year Level	Undergraduate 1st year	157	8.5	0.7	109	6.9	0.5
	Undergraduate 2nd year	451	24.3	2.1	362	22.9	1.7
	Undergraduate 3rd year	411	22.1	1.9	337	21.3	1.6
	Undergraduate 4th year	252	13.6	1.2	283	17.9	1.3
	Undergrad 5th year or above	75	4.0	0.3	73	4.6	0.3
	Undergrad graduated	79	4.3	0.4	67	4.2	0.3
	Postgraduate 1st year	131	7.1	0.6	91	5.8	0.4
	Postgraduate 2nd year	166	8.9	0.8	127	8.0	0.6
	Postgraduate 3rd year	30	1.6	0.1	30	1.9	0.1
	Postgraduate 4th year	19	1.0	0.1	24	1.5	0.1
	Postgrad 5th year or above	16	0.9	0.1	24	1.5	0.1
	Postgraduate graduated	46	2.5	0.2	36	2.3	0.2
	Pathway 1st year	17	0.9	0.1	11	0.7	0.1
	Pathway 2nd year	3	0.2	0.0	3	0.2	0.0
	Pathway 3rd year	0	0.0	0.0	1	0.1	0.0
	Pathway 4th year	0	0.0	0.0	0	0.0	0.0
	Pathway 5th year or above	0	0.0	0.0	0	0.0	0.0
	Pathway graduated	3	0.2	0.0	1	0.1	0.0
Course Category	Early childhood	276	14.9	1.3	201	12.7	0.9
	Primary	802	43.2	3.7	787	49.8	3.7
	Secondary	446	24.0	2.0	316	20.0	1.5
	Special education	21	1.1	0.1	18	1.1	0.1
	Other	311	16.8	1.4	257	16.3	1.2

Those candidates who had achieved no standard by the end of 2022 had up to five attempts at the test, as shown in Table 14. It is expected that some of these candidates will resit the test again in 2023.

Table 14: Number of attempts by candidates who achieved no standard by the end of 2022

Component	Year of registration	At end of	Number of 1-attempt candidates	Number of 2-attempt candidates	Number of 3-attempt candidates	Number of 4-attempt candidates	Number of 5-attempt candidates	Number of 6-attempt candidates	Number of 7-attempt candidates	Number of 8-attempt candidates
Literacy	2016	2017	137	51	20	10	0	0	0	0
	2016	2018	0	6	5	17	4	0	0	0
	2016	2019	0	3	11	4	6	0	0	0
	2016	2020	0	0	1	4	0	0	0	0
	2016	2021	0	1	2	2	1	0	0	0
	2016	2022	0	0	1	0	0	0	0	0
	2017	2018	332	147	125	45	3	0	0	0
	2017	2019	0	23	58	45	14	0	0	0
	2017	2020	0	6	15	15	6	0	0	0
	2017	2021	0	2	8	10	3	0	0	0
	2017	2022	0	4	5	6	3	1	0	0
	2018	2019	421	204	114	26	0	0	0	0
	2018	2020	0	18	38	30	6	0	0	0
	2018	2021	0	15	33	10	8	0	0	0
	2018	2022	0	7	10	10	1	0	0	0
	2019	2020	371	137	68	6	1	0	0	0
	2019	2021	0	24	46	13	8	0	0	0
	2019	2022	0	16	37	9	7	0	0	0
	2020	2021	299	102	65	12	2	0	0	0
	2020	2022	0	39	45	19	8	0	0	0
	2021	2022	473	217	151	13	5	0	0	0
	2022	2022	1089	220	31	2	0	0	0	0
Numeracy	2016	2017	160	78	41	9	0	0	0	0
	2016	2018	0	8	13	22	13	0	0	0
	2016	2019	0	6	7	13	6	0	0	0
	2016	2020	0	0	1	3	0	0	0	0
	2016	2021	0	2	2	1	1	0	0	0
	2016	2022	0	0	0	0	2	0	0	1

Component	Year of registration	At end of	Number of 1-attempt candidates	Number of 2-attempt candidates	Number of 3-attempt candidates	Number of 4-attempt candidates	Number of 5-attempt candidates	Number of 6-attempt candidates	Number of 7-attempt candidates	Number of 8-attempt candidates
	2017	2018	345	179	125	37	3	0	0	0
	2017	2019	0	28	54	36	15	0	0	0
	2017	2020	0	9	15	10	5	0	0	0
	2017	2021	0	4	12	6	3	0	0	0
	2017	2022	0	5	6	5	1	0	0	0
	2018	2019	463	241	115	23	0	0	0	0
	2018	2020	0	26	52	22	8	0	0	0
	2018	2021	0	16	23	9	3	0	0	0
	2018	2022	0	10	6	6	3	0	0	0
	2019	2020	412	159	67	5	1	0	0	0
	2019	2021	0	34	47	10	1	0	0	0
	2019	2022	0	25	28	10	4	0	0	0
	2020	2021	280	112	57	5	0	0	0	0
	2020	2022	0	35	40	9	2	0	0	0
	2021	2022	512	239	113	5	2	0	0	0
	2022	2022	950	140	17	1	0	0	0	0

Table 15 groups the location of testing into capital cities, regional cities and remote proctoring. It shows that 54% of candidates in 2022 completed the test by remote proctoring, compared to 61% in 2021 and 22% in 2019. A more detailed breakdown by individual test centre may be found in Appendix 1.

Table 15: Number and proportion of first-attempt candidates who participated at test centres and by remote proctoring

Location of Testing	First Attempt			
	Literacy		Numeracy	
	N	%	N	%
Test Centres	8884	46.1	8797	45.9
– Capital Cities	7728	40.1	7650	39.9
– Regional Cities	1156	6.0	1147	6.0
Remote Proctoring	10379	53.9	10365	54.1
Total	19263	100.0	19162	100.0

Table 16 shows how resit candidates were distributed by location of testing in 2022. As in previous years, remote proctoring was used more often, proportionally, by resit candidates than by first-attempt candidates. For example, in the literacy component, while 54% of first-attempt candidates used remote proctoring in 2022, this rose to 61% of second-attempt candidates, 64% of third-attempt candidates, 69% of fourth-attempt candidates and 58% of fifth-attempt candidates. For numeracy, remote proctoring was used by 64% of second-attempt candidates, 69% of third-attempt candidates, 65% of fourth-attempt candidates and 56% of fifth-attempt candidates.

Table 16: Number and proportion of resit candidates who participated at test centres and by remote proctoring

Location of Testing		Test Centres						Remote Proctoring		TOTAL	
		Capital cities		Regional		Total		N	%	N	%
Literacy	Attempt	N	%	N	%	N	%	N	%	N	%
	2nd	635	36.0	53	3.0	688	39.0	1078	61.0	1766	100.0
	3rd	209	33.3	18	2.9	227	36.2	401	63.9	628	100.0
	4th	57	31.8	6	3.4	63	35.2	116	64.8	179	100.0
	5th	20	38.5	2	3.8	22	42.3	30	57.7	52	100.0
	6th	2		0		2		1		3	100.0
Numeracy	Attempt	N	%	N	%	N	%	N	%	N	%
	2nd	518	33.1	43	2.7	561	2.7	1004	64.2	1565	100.0
	3rd	166	29.6	6	1.1	172	1.1	389	69.3	561	100.0
	4th	51	35.9	5	3.5	56	3.5	86	60.6	142	100.0
	5th	14	35.9	3	7.7	17	7.7	22	56.4	39	100.0
	6th	0		0		0		2		2	100.0
	7th	0		0		0		1		1	100.0
	8th	0		0		0		1		1	100.0

2.2 Demographic characteristics of candidates by test windows

In 2022, the number of candidates presenting at each test window for literacy were similar across the four windows. There were minimal differences between subgroups, as can be seen in Table 17.

Table 17: Demographic characteristics of candidates by test windows – Literacy

Characteristic	Category	TW1		TW2		TW3		TW4	
		N	%	N	%	N	%	N	%
Gender	Female	4135	73.9	3732	72.1	4133	75.2	4219	75.0
	Male	1451	25.9	1429	27.6	1356	24.7	1396	24.8
	Indeterminate/intersex	10	0.2	13	0.3	5	0.1	12	0.2
Age	17–25	3558	63.6	3333	64.4	3509	63.9	3695	65.7
	26–30	847	15.1	835	16.1	822	15.0	778	13.8
	31–35	454	8.1	366	7.1	425	7.7	458	8.1
	36–40	331	5.9	278	5.4	321	5.8	284	5.0
	41–45	219	3.9	199	3.8	212	3.9	232	4.1
	46+	187	3.3	163	3.2	205	3.7	180	3.2
International Students	No	5251	93.8	4793	92.6	5039	91.7	5251	93.3
	Yes	345	6.2	381	7.4	455	8.3	376	6.7
English as a First Language	Yes	4756	85.0	4363	84.3	4575	83.3	4729	84.0
	No	840	15.0	811	15.7	919	16.7	898	16.0
Indigenous	No	5441	97.2	5004	96.7	5322	96.9	5435	96.6
	Yes	93	1.7	104	2.0	102	1.9	119	2.1
	Not disclosed	62	1.1	66	1.3	70	1.3	73	1.3
Residential Area	Metropolitan areas	4506	80.5	4241	82.0	4421	80.5	4633	82.3
	Regional areas	1002	17.9	857	16.6	1007	18.3	917	16.3
	Remote areas	32	0.6	39	0.8	35	0.6	48	0.9
	International	42	0.8	25	0.5	21	0.4	22	0.4
	Invalid or Missing	14	0.3	12	0.2	10	0.2	7	0.1
Program Type	Undergraduate	3636	65.0	3123	60.4	3541	64.5	3875	68.9
	Postgraduate	1947	34.8	2018	39.0	1924	35.0	1727	30.7
	Pathway	13	0.2	33	0.6	29	0.5	25	0.4
Program Type by Year Level	Undergraduate 1st year	168	3.0	338	6.5	441	8.0	560	10.0
	Undergraduate 2nd year	989	17.7	949	18.3	1061	19.3	1393	24.8
	Undergraduate 3rd year	1180	21.1	1020	19.7	1259	22.9	1252	22.2
	Undergraduate 4th year	1079	19.3	645	12.5	576	10.5	460	8.2
	Undergrad 5th year or above	139	2.5	121	2.3	110	2.0	94	1.7
	Undergraduate graduated	81	1.4	50	1.0	94	1.7	116	2.1
	Postgraduate 1st year	612	10.9	1135	21.9	1059	19.3	968	17.2
	Postgraduate 2nd year	1048	18.7	643	12.4	579	10.5	507	9.0
	Postgraduate 3rd year	91	1.6	67	1.3	87	1.6	84	1.5
	Postgraduate 4th year	62	1.1	65	1.3	71	1.3	52	0.9
	Postgrad 5th year or above	84	1.5	63	1.2	57	1.0	51	0.9
	Postgraduate graduated	50	0.9	45	0.9	71	1.3	65	1.2
	Pathway 1st year	7	0.1	28	0.5	22	0.4	19	0.3
	Pathway 2nd year	2	0.0	2	0.0	3	0.1	3	0.1
	Pathway 3rd year	1	0.0	0	0.0	0	0.0	0	0.0
	Pathway 4th year	0	0.0	0	0.0	0	0.0	0	0.0
	Pathway 5th year or above	0	0.0	0	0.0	0	0.0	0	0.0
	Pathway graduated	3	0.1	3	0.1	4	0.1	3	0.1
Course Category	Early childhood	423	7.6	320	6.2	454	8.3	344	6.1
	Primary	2306	41.2	1976	38.2	2409	43.8	2585	45.9
	Secondary	2153	38.5	2280	44.1	1944	35.4	1938	34.4
	Special education	37	0.7	17	0.3	32	0.6	73	1.3
	Other	677	12.1	581	11.2	655	11.9	687	12.2

The observations and patterns described above for literacy candidates across the four test windows are also pertinent for numeracy, as shown in Table 19.

Table 18: Demographic characteristics of candidates by test windows – Numeracy

Characteristic	Category	TW1		TW2		TW3		TW4	
		N	%	N	%	N	%	N	%
Gender	Female	4147	74.7	3733	73.0	4016	74.8	4124	75.9
	Male	1399	25.2	1369	26.8	1349	25.1	1298	23.9
	Indeterminate/intersex	9	0.2	14	0.3	4	0.1	11	0.2
Age	17–25	3518	63.3	3240	63.3	3398	63.3	3602	66.3
	26–30	871	15.7	836	16.3	821	15.3	753	13.9
	31–35	447	8.0	380	7.4	407	7.6	424	7.8
	36–40	310	5.6	291	5.7	324	6.0	259	4.8
	41–45	205	3.7	189	3.7	203	3.8	220	4.0
	46+	204	3.7	180	3.5	216	4.0	175	3.2
International Students	No	5293	95.3	4807	94.0	5040	93.9	5199	95.7
	Yes	262	4.7	309	6.0	329	6.1	234	4.3
English as a First Language	Yes	4822	86.8	4389	85.8	4593	85.5	4757	87.6
	No	733	13.2	727	14.2	776	14.5	676	12.4
Indigenous	No	5390	97.0	4957	96.9	5202	96.9	5248	96.6
	Yes	105	1.9	107	2.1	101	1.9	114	2.1
	Not disclosed	60	1.1	52	1.0	66	1.2	71	1.3
Residential Area	Metropolitan areas	4506	81.1	4204	82.2	4340	80.8	4464	82.2
	Regional areas	970	17.5	845	16.5	963	17.9	897	16.5
	Remote areas	42	0.8	35	0.7	36	0.7	50	0.9
	International	25	0.5	20	0.4	19	0.4	17	0.3
	Invalid or Missing	12	0.2	12	0.2	11	0.2	5	0.1
Program Type	Undergraduate	3598	64.8	3085	60.3	3478	64.8	3781	69.6
	Postgraduate	1948	35.1	2014	39.4	1862	34.7	1623	29.9
	Pathway	9	0.2	17	0.3	29	0.5	29	0.5
Program Type by Year Level	Undergraduate 1st year	153	2.8	319	6.2	445	8.3	543	10.0
	Undergraduate 2nd year	979	17.6	933	18.2	1057	19.7	1337	24.6
	Undergraduate 3rd year	1189	21.4	969	18.9	1182	22.0	1206	22.2
	Undergraduate 4th year	1040	18.7	670	13.1	586	10.9	485	8.9
	Undergrad 5th year or above	145	2.6	132	2.6	120	2.2	103	1.9
	Undergraduate graduated	92	1.7	62	1.2	88	1.6	107	2.0
	Postgraduate 1st year	616	11.1	1107	21.6	1019	19.0	916	16.9
	Postgraduate 2nd year	1044	18.8	649	12.7	558	10.4	469	8.6
	Postgraduate 3rd year	98	1.8	71	1.4	84	1.6	80	1.5
	Postgraduate 4th year	56	1.0	80	1.6	73	1.4	44	0.8
	Postgrad 5th year or above	75	1.4	63	1.2	63	1.2	54	1.0
	Postgraduate graduated	59	1.1	44	0.9	65	1.2	60	1.1
	Pathway 1st year	6	0.1	13	0.3	22	0.4	24	0.4
	Pathway 2nd year	2	0.0	2	0.0	3	0.1	3	0.1
	Pathway 3rd year	0	0.0	1	0.0	0	0.0	0	0.0
	Pathway 4th year	0	0.0	0	0.0	0	0.0	0	0.0
	Pathway 5th year or above	0	0.0	0	0.0	0	0.0	0	0.0
	Pathway graduated	1	0.0	1	0.0	4	0.1	2	0.0
Course Category	Early childhood	406	7.3	337	6.6	396	7.4	318	5.9
	Primary	2291	41.2	1984	38.8	2412	44.9	2553	47.0
	Secondary	2159	38.9	2232	43.6	1890	35.2	1840	33.9
	Special education	37	0.7	16	0.3	27	0.5	66	1.2
	Other	662	11.9	547	10.7	644	12.0	656	12.1

Table 19 and Table 20 show the numbers and proportions of candidates participating in test centres and by remote proctoring in each test window for literacy and numeracy respectively. In 2022, for each test window, more than half of the candidates participated by remote proctoring.

A more detailed breakdown by test centre can be found in Appendix 2.

Table 19: Number and proportion of candidates in test centres and by remote proctoring by Test Window – Literacy

Location of Testing	TW1		TW2		TW3		TW4	
	N	%	N	%	N	%	N	%
Test Centres	2401	42.9	2528	48.9	2708	49.3	2249	40.0
– Capital Cities	2083	37.2	2114	40.9	2205	40.1	2249	40.0
– Regional Cities	318	5.7	414	8.0	503	9.2	0	0.0
Remote Proctoring	3195	57.1	2646	51.1	2786	50.7	3378	60.0
Total	5596	100.0	5174	100.0	5494	100.0	5627	100.0

Table 20: Number and proportion of candidates in test centres and by remote proctoring by Test Window – Numeracy

Location of Testing	TW1		TW2		TW3		TW4	
	N	%	N	%	N	%	N	%
Test Centres	2364	42.6	2489	48.7	2642	49.2	2108	38.8
– Capital Cities	2044	36.8	2096	41.0	2151	40.1	2108	38.8
– Regional Cities	320	5.8	393	7.7	491	9.1	0	0.0
Remote Proctoring	3191	57.4	2627	51.3	2727	50.8	3325	61.2
Total	5555	100.0	5116	100.0	5369	100.0	5433	100.0

2.3 Accessibility and accommodations

In 2022, testing conditions were modified to accommodate 710 candidates who required reasonable adjustments. This was an increase of 5.5% on the 674 candidates in 2020. Table 21 indicates the number of accommodations made for the most common conditions. A complete list of the types of conditions for which adjustments were made follows.

Table 21: Largest accommodation groups*

Condition	Literacy					Numeracy				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Anxiety disorder (inc. panic attacks and test anxiety)	30	72	143	219	210	50	151	230	302	285
Dyslexia	48	31	27	35	43	57	36	26	41	34
Diabetes	12	2	4	13	7	13	3	7	9	5
Epilepsy / Seizures	3	2	0	2	3	3	2	3	5	3
Attention Deficit Hyperactivity Disorder	6	2	10	25	27	6	4	10	31	38
Hearing impairment	1	2	6	4	5	5	2	4	3	6
Visual impairment / Eye conditions	7	16	12	13	10	4	13	11	13	7
Dyscalculia	NA	NA	NA	3	6	2	8	5	7	16

*Refer to 2021 Technical report for 2016 and 2017 accommodation data

Types of conditions for which reasonable adjustments were made:

- Acquired/Traumatic Brain Injury
- Adjustment Disorder
- Allergic rhinoconjunctivitis
- Agoraphobia, Anxiety, Depression, Panic Attacks
- Arthritis
- Asperger's Syndrome (High functioning – ASD)
- Asthma
- Attention Deficit Hyperactivity Disorder (ADHD) / Attention Deficit Disorder (ADD)
- Autoimmune Disorder / Crohn's Disease
- Auditory Processing Disorder and Visual–Perceptual Dysfunction (Scotopic Sensitivity / Irlen Syndrome)
- Auditory–Verbal Memory Disorder / Language Learning Disability
- Autism Spectrum Disorder
- Bilateral Tendinopathy
- Bipolar Disorder
- Cancer-related health conditions
- Carpal Tunnel Syndrome
- Cerebral Palsy
- Chronic Fatigue Syndrome
- Chronic Pain
- Congenital Nystagmus (an eye disorder)
- Diabetes

- Dyslexia, Dyscalculia
- Endometriosis
- Epilepsy
- Fibromyalgia
- Functional Neurological Disorder (FND)
- Heart arrhythmia
- Hypotension
- Irritable Bowel Syndrome
- Irlen Syndrome
- Long COVID
- Low Working Memory
- Migraine
- Multiple Sclerosis
- Narcolepsy
- Nerve pain
- Neurocysticercosis
- Neurofibromatosis 1 (NF1)
- Nerve pain
- Obsessive-Compulsive Disorder and Pronounced Exam Phobia
- Osteogenesis Imperfecta
- Osteomyelitis
- Paralysis
- Parkinson's Disease
- Pregnancy-related health conditions
- Profoundly Deaf/hearing impairment
- Pulmonary Hypertension
- Psychotic Illness
- Post Traumatic Stress Disorder (PTSD)
- Schizophrenia
- Scoliosis
- Sleep apnoea
- Spinal Stenosis
- Stroke
- Temporary physical conditions – e.g. broken shoulder, broken wrist, back injury, surgery
- Tourette Syndrome
- Turner Syndrome
- Visual Impairment / Legally Blind

Types of accommodations granted:

- Emergency Action Plan (for epilepsy – seizures)
- Extra time (20 minutes or more per test component)
- Management of hearing impairment for test sessions conducted by remote proctoring (communication via chat box only)
- Permission to bring blood-insulin monitor, epipen, and/or food and drinks relating to medical condition
- Permission to bring support aids (heat pack, cushion, pillow, essential oil, ergonomic mouse and mobility aids)
- Permission to wear brace/splint/wrist support
- Permission to take medication (e.g. ventolin inhaler and diabetes/glucose monitoring kit)
- Permission to use eye drops
- Permission to use a fidget item
- Permission to stand and stretch
- Permission to magnify text and to wear Irlen Spectral Filters / coloured glasses / coloured overlay for the computer monitor
- Permission to use software that inverts the computer screen
- Permission to use a second monitor
- Permission to use lined blank paper
- Permission to use a highlighter
- Permission to use a ruler
- Permission to use a calculator provided by the test centre
- Permission to use text-to-speech software or screen reader
- Permission to read aloud
- Permission to use personal mouse
- Permission to wear ear plugs or noise-cancelling headphones during the test session
- Provision of paper copy of the test
- Provision of additional blank scratch paper
- Permission to use a whiteboard and marker in place of scrap paper
- Provision of a small group test environment (no more than 5 candidates per test room)
- Provision of a fan in the test room
- Provision of ergonomic office chair or adjustable desk
- Provision of a human reader
- Removal of ticking clock from the test room
- Rest breaks
- Seated near bathroom
- Seated at the front of the test room (for hearing loss) and other special seating requests for the front and back of the test room, and near the aisle, or away from the lights
- Seated in a quiet room
- Special support for candidates with limited mobility (i.e. limit time standing in the registration queue)
- Test supervisor to provide written assistance during the instructions component of the test sessions

3. CANDIDATE PERFORMANCE

This section describes the performance of candidates who participated in the test in 2022. The analysis divides the cohort of candidates into two groups: first-attempt candidates (the majority) and those who did not achieve the standard at their first attempt and resat the test. It presents the distributions of candidate performance overall, by subscale and by candidates' collected demographic information: gender, age group, program type, program type by year level, course category, and location of testing.

3.1 Scale score distributions

Figure 1 and Figure 2 present the distributions of first-attempt candidate performance on the literacy component and numeracy component respectively. The vertical line in each figure represents the standard for that component of the test.

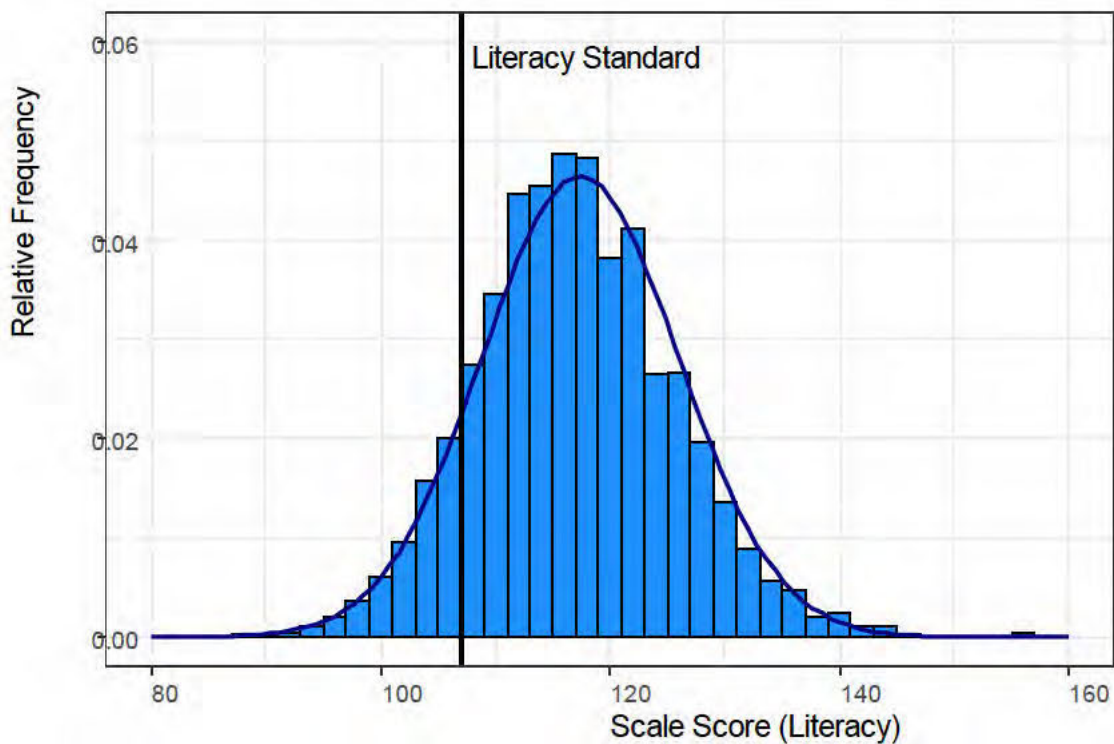


Figure 1: Distribution of candidate scale scores for literacy⁹

⁹ The scale score of the literacy standard is 107.

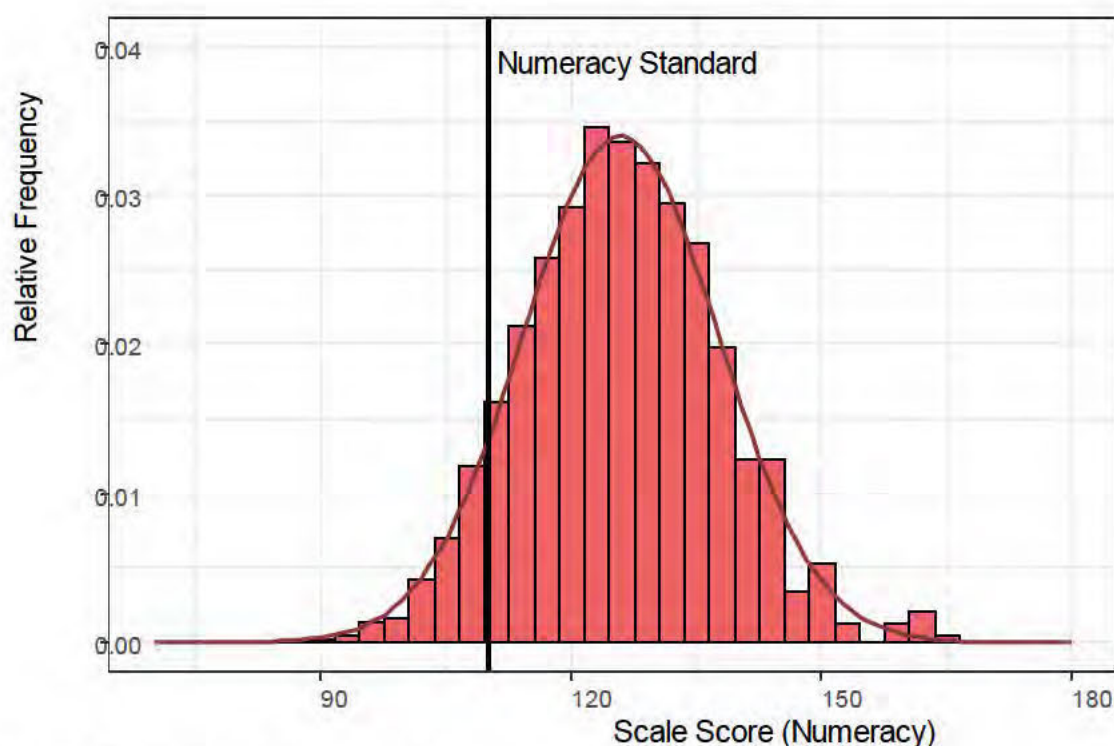


Figure 2: Distribution of candidate scale scores for numeracy¹⁰

Figure 1 and Figure 2 show that scores in both tests are approximately normally distributed and that the tests spread candidates acceptably across the score scales. For both literacy and numeracy, the majority of candidates achieved scale scores above the standard at their first attempt. It can be seen that a proportion of candidates achieved scale scores below the standard at their first attempt.

¹⁰ The scale score of the numeracy standard is 110.

3.2 Candidate scale scores by subscales and subgroups

Table 22 shows the performance of first-attempt candidates in 2022: the number (N) of candidates, the mean scale scores and standard deviation of the scale scores, overall and by subscale, and the pass rates for the literacy and numeracy components for this cohort of candidates. The overall mean scale score for literacy was 117.4 (similar to 2021), with a pass rate of 90.3% (89.6% in 2020, 90.6% in 2021). The overall mean scale score for numeracy was 125.9 (up from 125.3 in 2021), with a pass rate of 92.1% (up from 90.7% in 2021).

Table 22 also shows the performance of candidates on each subscale. As for previous years, the average performance of candidates on the numeracy subscale 'calculator not available' was lower than the average performance on the numeracy subscale 'calculator available', with a difference of 1.8 scale points. This difference is decreasing over time. It was 3.5 scale score points in 2017, 2.5 scale score points in 2018, 1.0 scale score point in 2020, but it rose slightly in 2021 and 2022. The decrease in difference is mostly due to improving performance on the 'calculator not available' subscale, possibly indicating greater attention to the basic number sense and computational skills required.

Scale score frequency distributions for the candidates who participated in the tests are shown in Appendix 3.

Table 22: Candidate performance overall and by subscale for first-attempt candidates

Component	Whole test and subscale	N	Mean	S.D.	Pass Rate
Literacy	Overall	19262	117.4	8.6	90.3
	Reading		117.5	9.2	
	Technical skills of writing		117.2	9.8	
Numeracy	Overall	19162	125.9	11.7	92.1
	Number & algebra		125.6	12.9	
	Measurement & geometry		125.5	12.2	
	Statistics & probability		125.7	11.8	
	Calculator available		126.2	11.5	
	Calculator not available		124.4	15.1	

Table 23 shows the number of candidates (N), mean scale score, and pass rate by demographic characteristics for both literacy and numeracy. Performance of any subgroup with a sample size less than 10 was not reported.

Table 23: Performance by demographic characteristics for first-attempt candidates

Characteristic	Category	Literacy			Numeracy		
		N	Mean	Pass Rate	N	Mean	Pass Rate
Gender	Female	14044	116.8	89.2	13958	124.1	90.2
	Male	5179	119.0	93.3	5169	130.8	97.1
	Indeterminate/intersex	39	122.9	97.4	35	126.7	94.3
Age	17–25	12437	116.2	89.8	12366	124.9	91.8
	26–30	2877	119.5	92.3	2874	127.6	92.7
	31–35	1505	119.0	90.4	1475	127.8	92.3
	36–40	1064	119.5	90.3	1064	127.4	92.0
	41–45	735	120.1	90.1	728	128.3	94.2
	46+	644	120.9	90.8	655	127.5	91.8
International Students	No	18194	117.7	91.3	18118	125.8	91.9
	Yes	1068	112.4	72.8	1044	127.0	94.5
English as a First Language	Yes	16746	118.0	92.3	16660	126.0	92.4
	No	2516	113.5	77.1	2502	125.5	89.9
Indigenous	No	18652	117.4	90.3	18559	125.9	92.1
	Yes	366	114.9	87.2	364	122.3	87.9
	Not disclosed	244	119.1	92.6	239	128.5	94.6
Residential Area	Metropolitan areas	15658	117.3	90.2	15583	125.9	91.9
	Regional areas	3352	117.7	91.0	3334	125.9	92.8
	Remote areas	132	119.0	91.7	131	127.3	89.3
	International	82	114.7	81.7	79	129.8	98.7
	Invalid or Missing	38	117.7	92.1	35	127.6	94.3
Program Type	Undergraduate	12319	115.7	88.7	12243	124.1	90.6
	Postgraduate	6866	120.6	93.3	6848	129.3	94.8
	Pathway	77	109.9	68.8	71	117.7	77.5
Program Type by Year Level	Undergraduate 1st year	1460	115.6	87.2	1431	125.1	91.3
	Undergraduate 2nd year	4117	115.4	87.8	4123	123.8	90.3
	Undergraduate 3rd year	4141	115.7	89.5	4073	124.1	91.8
	Undergraduate 4th year	2065	116.5	91.0	2071	124.0	89.3
	Undergrad 5th year or above	310	115.9	88.7	322	124.0	90.1
	Undergraduate graduated	226	113.2	80.5	223	121.4	86.1
	Postgraduate 1st year	3617	121.3	94.6	3597	130.9	96.9
	Postgraduate 2nd year	2404	120.3	92.7	2397	128.3	93.7
	Postgraduate 3rd year	279	119.2	90.3	271	126.6	90.4
	Postgraduate 4th year	193	118.4	93.8	204	124.9	90.7
	Postgrad 5th year or above	215	119.8	92.1	216	127.1	88.9
	Postgraduate graduated	158	115.0	80.4	163	122.8	84.0
	Pathway 1st year	62	109.7	67.7	57	117.1	77.2
	Pathway 2nd year	6	-	-	7	-	-
	Pathway 3rd year	0	-	-	0	-	-
	Pathway graduated	9	-	-	7	-	-
Course Category	Early childhood	1159	113.3	78.9	1158	121.8	86.4
	Primary	8157	116.6	90.2	8109	124.2	90.5
	Secondary	7628	119.4	93.4	7599	129.1	95.7
	Special education	132	114.6	87.1	129	122.2	87.6
	Other	2186	115.7	85.7	2167	123.6	88.6

The *t*-test and Cohen's *d* for effect size were used to determine whether group mean scale scores were significantly different for first-attempt candidates. Only differences where $p \leq 0.05$ and $d < -0.2$ and $d > 0.2$ are reported here as significant.

Table 23 shows that the results of 2022 are similar to the results of 2021 and previous years.

Gender. Male candidates again significantly outperformed female candidates in literacy, and even more so in numeracy. In literacy, the mean scale score for male candidates (119.0) was significantly higher (effect size of 0.26) than for female candidates (116.8), and the pass rate was considerably lower for female candidates (89.2%) than for male candidates (93.3%). In numeracy, the difference was even greater. The mean scale score for male candidates (130.8) was significantly higher (effect size 0.59) than for female candidates (124.1), and the pass rate of the female candidates (90.2%) was considerably lower than that for male candidates (97.1 %).

Age. As in previous years, achievement on the literacy test tended to increase with the age of the candidates, but this was less evident for numeracy. In literacy, the youngest group of candidates, aged 17–25 (mean scale score 116.2), achieved significantly lower (effect size 0.40) than candidates aged over 25 (119.0–120.9). The numeracy mean scale score for candidates aged over 25 (127.4–128.3) was also significantly greater (effect size 0.24) than that for candidates aged 17–25 (124.9).

International. As in all previous years, the 2022 literacy mean scale score of international candidates (112.4) was significantly lower (effect size 0.62) than of other candidates (117.7). The numeracy mean scale score of international candidates (127.0) was not significantly different (effect size 0.10) from the mean scale score of other candidates (125.8).

Language background. In 2022, as in 2017–2021, the literacy mean scale score for candidates whose first language is English (118.0) was significantly higher (effect size 0.54) than for other candidates (113.5). In numeracy, the mean scale scores were 125.5 and 126.0 respectively; not a significant difference (effect size 0.04).

Indigeneity. As in 2017–2021, in 2022, in both literacy and numeracy, candidates identifying as Aboriginal or Torres Strait Islander had significantly lower mean scale scores (effect size 0.29 and 0.31 respectively) than other candidates. In literacy, the mean scale scores were 114.9 (similar to 114.8 in 2021) and 117.4 respectively. In numeracy, the mean scale scores were 122.3 (higher than 119.5 in 2021) and 125 respectively. However, it is worth noting that the pass rates of first-attempt candidates identifying as Aboriginal or Torres Strait Islander were still relatively high, at 87.2% for literacy (up from 81% in 2017, 83% in 2018, 84% in 2020, 87% in 2021) and 87.9% for numeracy (up from 81% in 2020 and 87% in 2021). In literacy, the pass rates of candidates identifying as Aboriginal or Torres Strait Islander were higher than that of international candidates (72.8%) and candidates whose first language was not English (77.1%). The reverse was true for numeracy. The pass rate of candidates identifying as Aboriginal or Torres Strait Islander was lower than that of international candidates (94.5%) and candidates whose first language was not English (89.9%).

Residential location. Residential postcode data were used to place candidates into four main categories: metropolitan, regional, remote and international. Where postcodes could not be matched to an indicator they were categorised as missing or invalid. As for 2017–2021, in both literacy and numeracy, there was little difference in achievement between Australian residential areas (metropolitan, regional and remote) in 2022. For literacy, candidates with an international postcode achieved significantly lower scores than candidates with metropolitan postcodes (114.7, compared to 117.3, effect size 0.31). Candidates with an international postcode also achieved significantly lower scores than candidates with remote postcodes (114.7, compared to 119.0, effect size 0.44). In

numeracy, the mean scale score for candidates with international postcodes was significantly higher than for candidates with metropolitan postcodes (129.8, compared to 125.9, effect size 0.33).

Level of study. In 2022, as in previous years, in both literacy and numeracy, the mean scale scores for postgraduate candidates were significantly higher than for undergraduate candidates: 120.6 and 115.7 with an effect size of 0.59 in literacy; and 129.3 and 124.1 with an effect size of 0.46 in numeracy. The difference in mean scale scores was approximately 5 scale score points for both components.

Pathways. In literacy, the mean scale score of the 77 Pathways candidates (109.9) was above the standard (107) and nearly 6 scale score points below the mean scale score of undergraduate candidates (115.7), with an effect size of 0.75. In numeracy, the mean scale score of the 71 Pathways candidates (117.1) was above the standard (110) but 7 scale score points below the mean scale score of undergraduate candidates (124.1), with an effect size of 0.57.

Course Category. As in previous years, in both literacy and numeracy, the mean scale scores of candidates in the secondary education course category were significantly higher than those of candidates in the other four course categories, with the greatest differences found in numeracy. In literacy, there was a difference of 2.8 scale score points between the primary cohort (116.6) and the secondary cohort (119.4), and a difference of 3.3 scale score points between the primary cohort (116.6) and the early years cohort (113.3), with effect sizes 0.34 and 0.40 respectively.

In numeracy, there was a difference of 4.9 scale score points between the primary cohort (124.2) and the secondary cohort (129.1), and a difference of 2.4 scale score points between the primary cohort (124.2) and the early years cohort (121.8), with effect sizes 0.43 and 0.21 respectively.

Candidates in the special education category had significantly lower mean scale scores than candidates in the secondary education course category, for both literacy (114.6) and numeracy (122.2), with effect sizes 0.56 and 0.60 respectively.

Table 24 summarises the significant differences in mean scale scores for the eight demographic characteristics.

Table 24: Subgroups showing significantly higher mean scale scores

Characteristic	Literacy	Numeracy
Gender	Males	Males
Age	Above 25 years	Above 25 years
International	Domestic	None
Language background	English as a first language	None
Indigeneity	Non-Indigenous	Non-Indigenous
Residential location	Remote and Metropolitan > International	International > Metropolitan
Program type	Postgraduate	Postgraduate
Course category	Secondary > Primary > Early childhood	Secondary > Primary > Early childhood

Figure 3 shows that, for all age groups, the difference in achievement between male candidates and female candidates is more pronounced for numeracy than for literacy. However, in each age category and for male or female, there are candidates who achieve well above the standard.

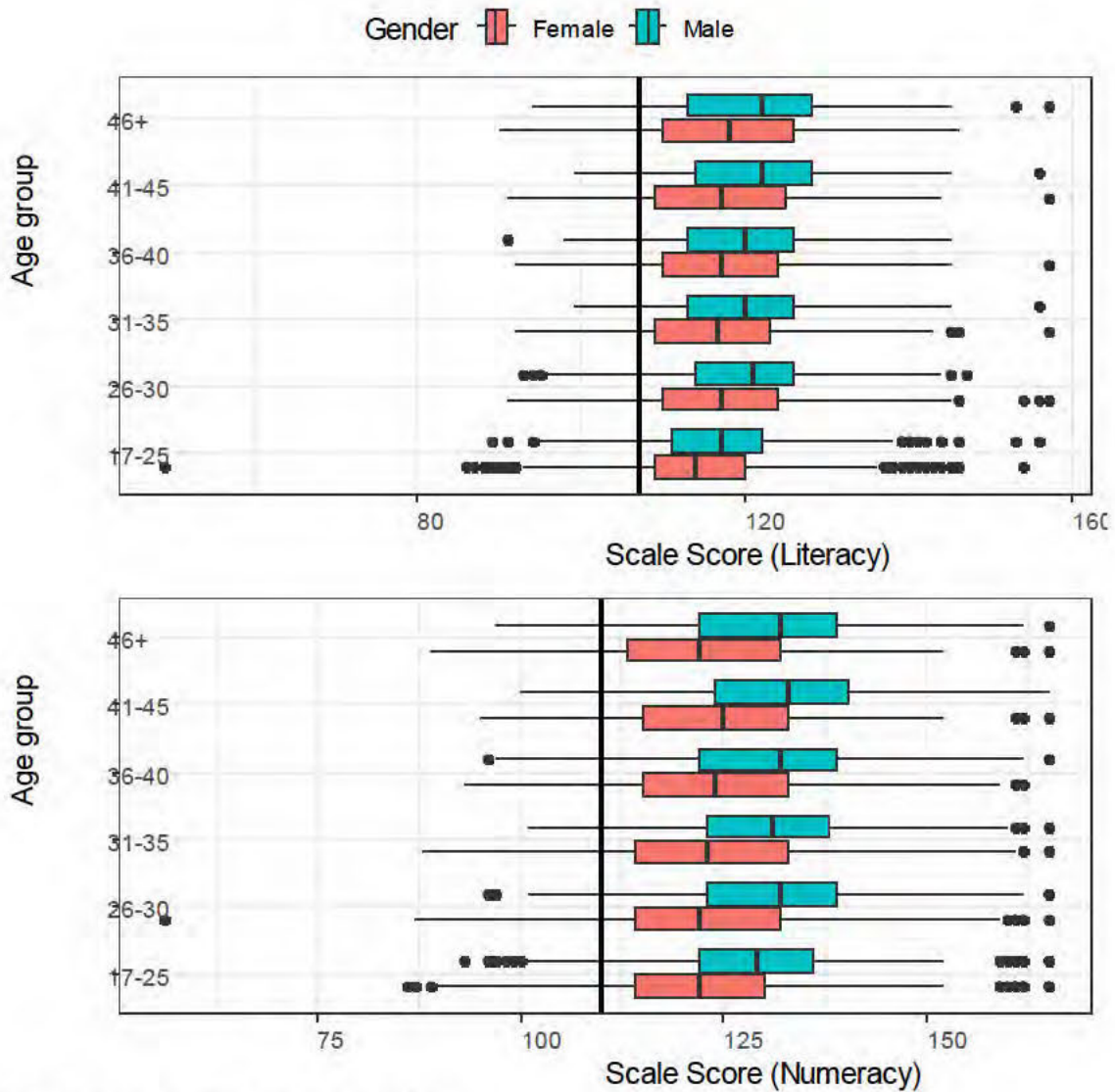


Figure 3: Score distribution by gender and age

Figures 4 and 5 show that, for all year levels, the difference in achievement between postgraduate candidates and undergraduate candidates is similar for literacy and numeracy, with the achievement of postgraduate candidates higher than that of undergraduate candidates. While the achievement of the Pathways cohort is lower for both components, most candidates achieve the standards.

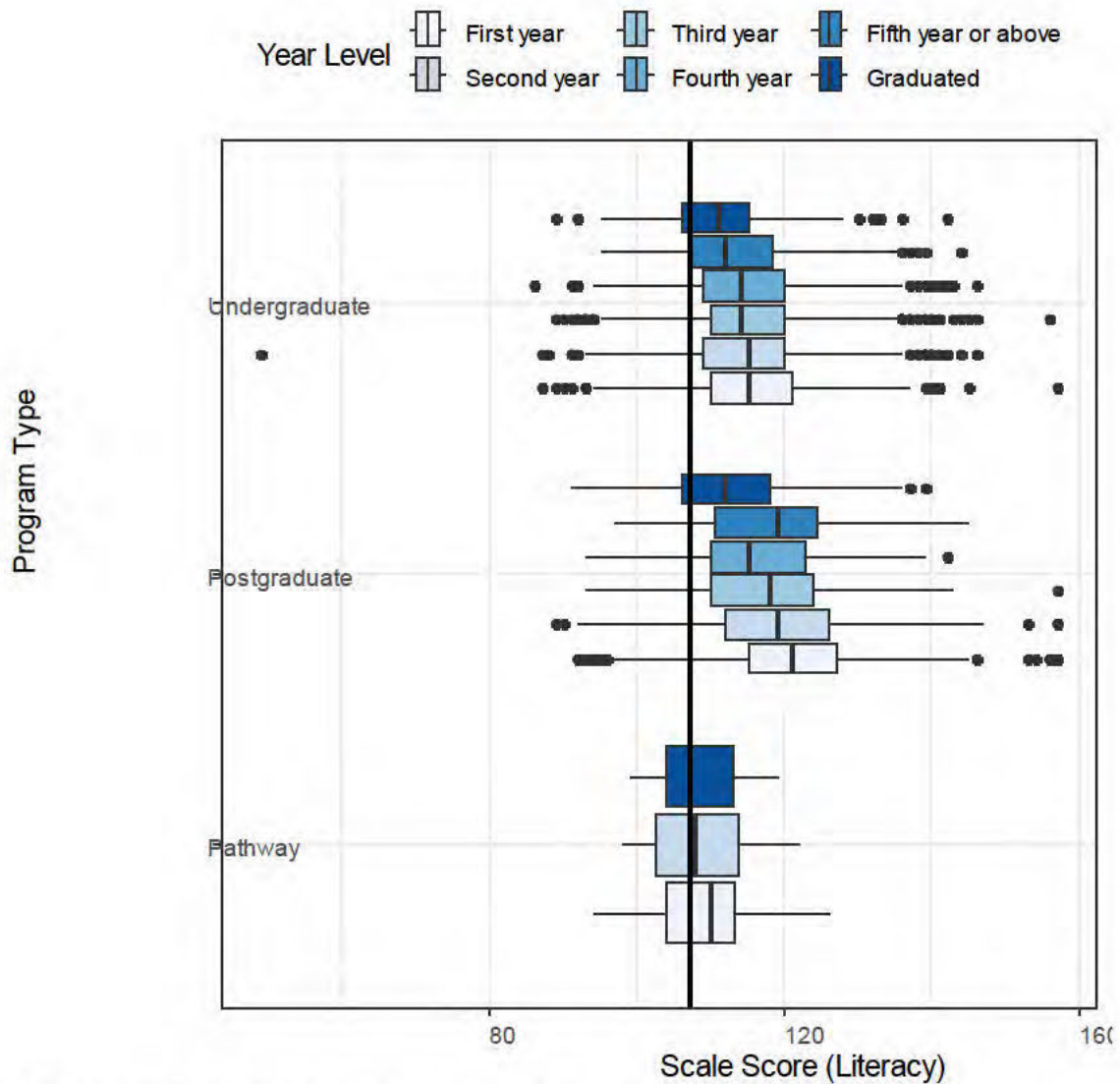


Figure 4: Score distribution by program type and year level, literacy

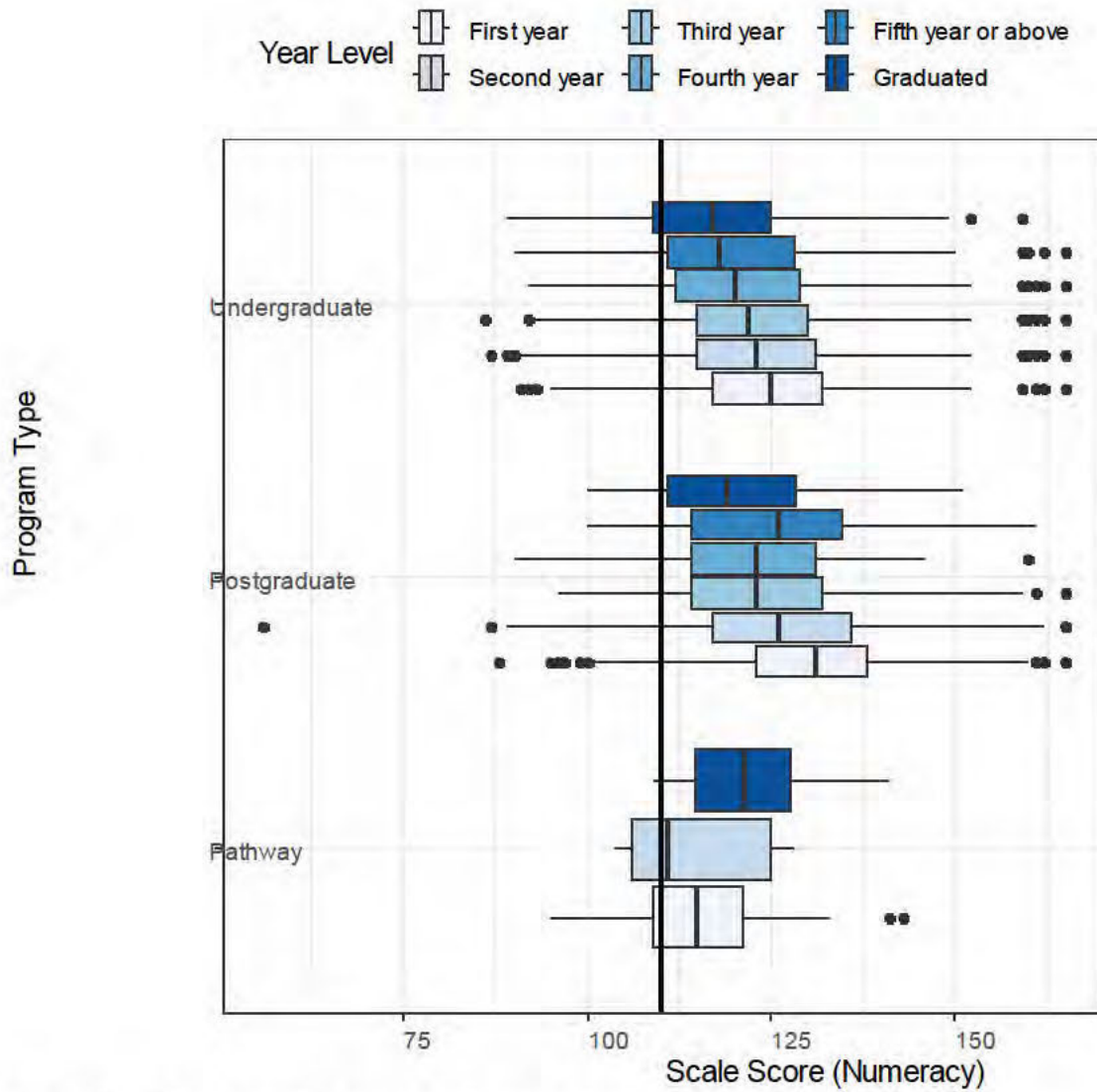


Figure 5: Score distribution by program type and year level, numeracy

Figure 6 shows that, although candidates in secondary education courses achieve highest in both literacy and numeracy, there are candidates who achieve well above the standard in each of the other courses. For example, for both literacy and numeracy, the achievement of the top 25% of candidates in the early childhood category is broadly equivalent to the top 50% of candidates in the secondary category.

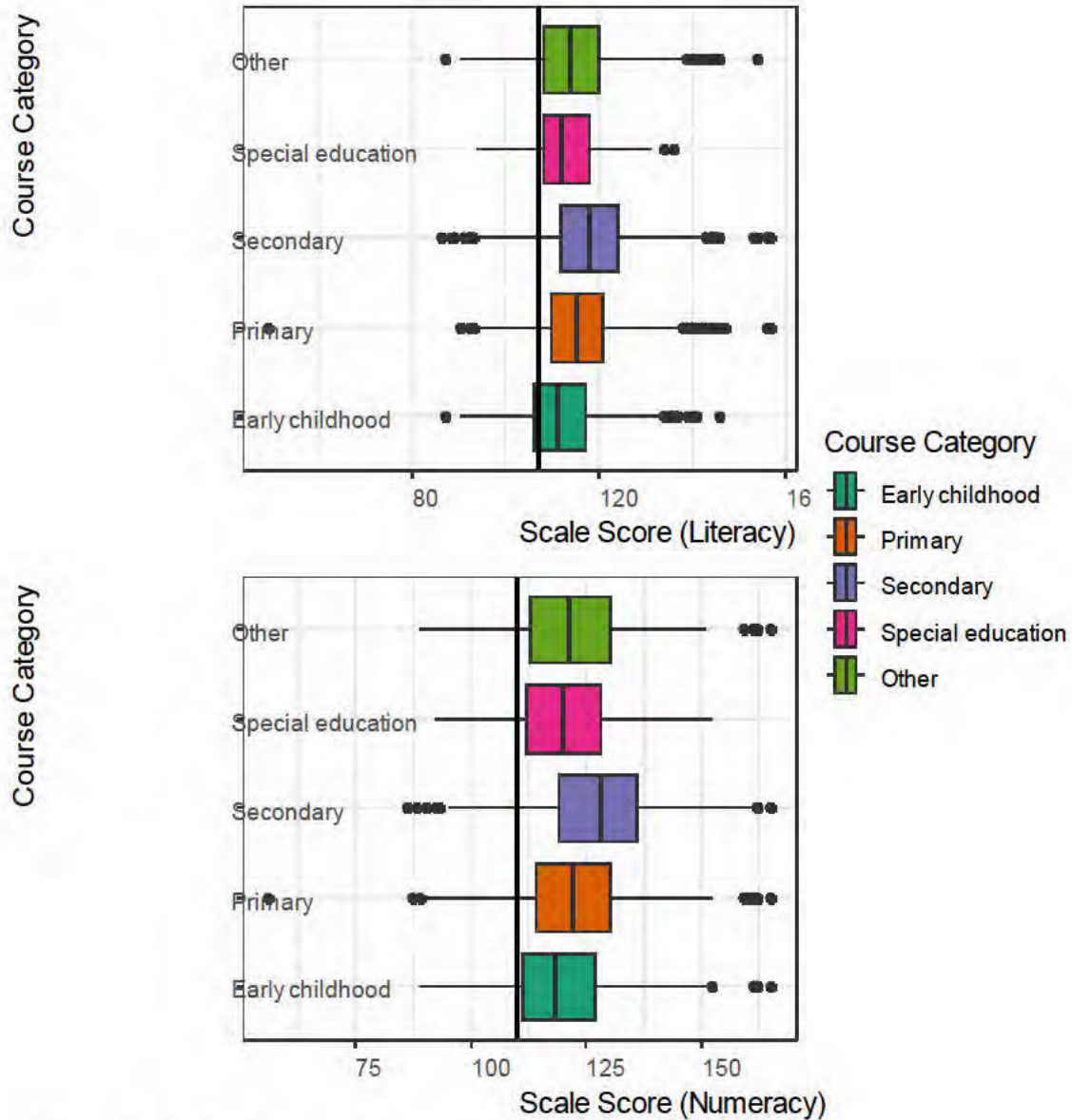


Figure 6: Score distribution by course category

3.3 Candidate performance by test centres and remote proctoring

Table 25 shows the performance by test centres and remote proctoring. It can be seen from the last three rows that the performance of candidates using remote proctoring was very similar to the performance of candidates who took tests in capital city test centres and regional city test centres, with less than one scale score point separating the mean scale scores of the three groups for the literacy component and slightly more than one scale score point separating the mean scale scores for the numeracy component. Pass rates were very similar.

Table 25: Performance by test centres and remote proctoring

Test Centre	Literacy				Numeracy			
	N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
Adelaide	823	116.2	8.9	87.6	799	126.0	12.4	91.5
Albury	21	121.0	7.4	100.0	25	125.6	12.4	92.0
Armidale	30	117.8	7.4	93.3	28	128.9	11.9	96.4
Ballarat	135	118.5	7.8	91.9	136	126.5	12.6	89.0
Bathurst	11	119.6	9.6	100.0	10	129.8	11.0	100.0
Brisbane	1425	118.6	8.4	92.9	1417	127.1	11.4	94.4
Cairns	33	118.5	8.8	87.9	29	129.4	10.3	100.0
Canberra	305	119.8	8.7	93.8	303	129.2	12.0	96.4
Darwin	140	114.4	10.2	75.0	136	126.3	11.9	95.6
Geelong	36	118.9	9.0	88.9	36	126.9	12.7	94.4
Gold Coast	184	117.2	7.6	93.5	178	126.8	10.2	97.8
Hobart	125	122.2	9.1	94.4	122	129.5	11.0	97.5
Melbourne	1668	118.3	9.0	90.5	1656	126.8	12.2	92.6
Mildura	8	-	-	-	10	129.8	11.3	90.0
Newcastle	310	117.2	7.8	91.0	305	126.6	11.5	92.1
Parramatta	251	116.0	8.3	86.5	236	124.8	11.0	89.8
Perth	1456	116.5	8.1	89.0	1435	124.6	11.2	91.4
Reasonable adjustments	25	118.1	9.7	92.0	24	120.0	13.3	79.2
Remote proctoring	10378	117.1	8.5	90.1	10365	125.4	11.7	91.3
Rockhampton	21	119.7	9.8	95.2	16	129.7	14.3	93.8
Sunshine Coast / Maroochydore	82	117.3	7.1	95.1	77	125.5	9.2	94.8
Sydney	1510	118.5	9.0	91.1	1522	127.3	11.9	93.0
Townsville	42	116.0	9.1	90.5	42	122.9	9.3	97.6
Wagga Wagga	10	114.0	5.1	100.0	6	-	-	-
Warrnambool	10	116.6	7.8	90.0	15	120.9	9.9	86.7
Wollongong	223	118.5	8.3	92.4	234	128.1	12.0	94.0
Capital cities	7728	117.8	8.8	90.3	7650	126.5	11.8	92.8
Regional cities	1156	117.8	8.0	92.4	1147	126.9	11.4	93.7
Remote proctoring	10378	117.1	8.5	90.1	10365	125.4	11.7	91.3

Figure 7 shows that for test centres in capital cities and regional cities, and for remote proctoring, for both literacy and numeracy, the distributions are very similar and there are candidates in each category who achieve well above the standard.

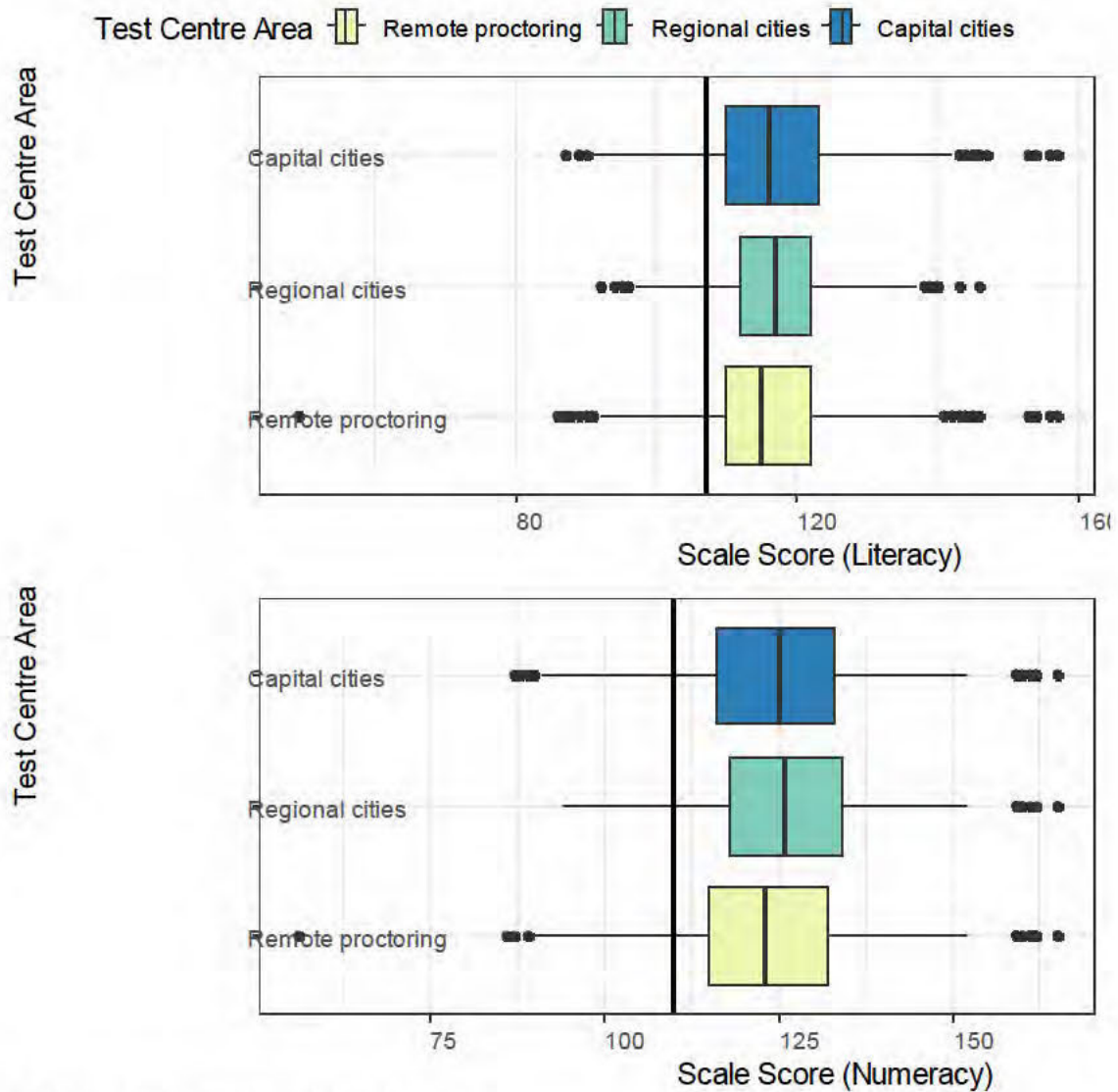


Figure 7: Score distribution by location of testing

3.4 Candidates who did not achieve the standard after one attempt

Table 26 shows the number and proportion of candidates who did not achieve the test standard in 2022 after one attempt. The proportion of first-attempt candidates who did not achieve the standard on the literacy component was 9.7% (9.4% in 2021). The proportion of first-attempt candidates who did not achieve the standard on the numeracy component was 7.9% (down from 9.3% in 2021). The percentage of first-attempt candidates who did not achieve either standard in 2022 was 3.5% (down from 3.9% in 2021).

Table 26: Number and proportion of first-attempt candidates who did not achieve the standard

	Number	Percentage
Candidates who did not achieve the literacy standard	1871	9.7
Candidates who did not achieve the numeracy standard	1520	7.9
Candidates who achieved neither the literacy nor the numeracy standard	586	3.5

3.5 Performance of resit candidates

Mean scale scores. Table 27 shows the performance of candidates who had multiple attempts at the test, overall and by subscale. As expected, the performance of resit candidates was lower than the performance of the majority of candidates who achieved the standard at their first attempt. For example, for the 1,766 second-attempt candidates for literacy in 2022, their overall mean scale score was 107.6 with a pass rate of 61.0% (compared to 117.4 and 90.3% for first-attempt candidates in 2022). For the 1,565 second-attempt candidates for numeracy in 2022, the overall mean scale score for numeracy was 111.3 with a pass rate of 60.9% (compared to 125.9 and 92.1% for first-attempt candidates in 2022).

Pass rates. It can be seen from Table 28 that pass rates for literacy declined from 61.0% for the second attempt to 51.9% for the fifth attempt. For numeracy, the pass rate decreased from 60.9% for the second attempt to 60.2% for the third attempt. It then increased to 71.1% for the fourth attempt, dropping to 64.1 for the fifth attempt (39 candidates).

Subscales. For the literacy subscales, the mean scale score of resit candidates were slightly lower for Reading than for Technical skills of writing. For the numeracy subscales, the mean scores of resit candidates for the 'calculator not available' subscale were lower than the mean scores of resit candidates on the other numeracy subscales for all resit attempts.

Table 27: Resit candidate performance overall and by subscale

Component	Whole test and subscale	2nd Attempt (Resit 1)			3rd Attempt (Resit 2)			4th Attempt (Resit 3)			5th Attempt (Resit 4)		
		N	Mean	Pass Rate	N	Mean	Pass Rate	N	Mean	Pass Rate	N	Mean	Pass Rate
Literacy	Overall	1766	107.6	61.0	628	106.9	53.0	179	108.1	58.1	52	107.7	51.9
	Reading		107.3			106.1			106.8			106.8	
	Technical skills of writing		108.2			108.5			110.4			109.5	
Numeracy	Overall	1565	111.3	60.9	561	112.1	60.2	142	112.9	71.1	39	113.9	64.1
	Number & algebra		110.4			111.3			112.7			113.6	
	Measurement & geometry		111.3			111.9			112.4			112.2	
	Statistics & probability		112.8			113.6			113.6			114.3	
	Calculator available		112.0			112.7			113.5			113.4	
	Calculator not available		108.4			109.6			110.9			114.6	

It can be seen from Table 28 that, for both literacy and numeracy, there is very little difference in the mean scale score change between first and second attempts regardless of the time taken between the attempts.

Table 28: Change in scale score between first and second attempts by time

Component	Mean score change (scale score points)				
	<2 months	2 to 4 months	4 to 6 months	6+ months	All
Literacy	+4.4	+4.8	+5.0	+5.2	+4.9
Numeracy	+6.3	+5.2	+5.9	+7.3	+6.5

Overall, each second-attempt cohort in 2022 improved their scale scores (4.9 points for literacy and 6.5 points for numeracy). However, after taking performance (Band level *after* second attempt) into account, it can be seen from Table 29 that the change in scale scores was not uniform. The mean score change of the least able cohort (those with second-attempt scores below Band 1) was –10.0 scale score points for literacy and –3.9 scale score points for numeracy. That is, the mean scale score of the candidates below Band 1 was lower at the second attempt than it was at the first attempt. In general, the higher the performance of the second-attempt candidates, the more they were able to improve their scores between their first and second attempts.

Table 29: Change in scale score between first and second attempts by performance (Band)

Component	Mean score change (scale score points)				
	below Band 1	Band 1	Band 2	Band 3 and above	All
Literacy	–10.0	1.2	7.1	18.4	4.9
Numeracy	–3.9	2.5	8.5	23.0	6.5

The findings above suggest that it is likely that the change in score between first and second attempts is explained more by performance than by the time interval between testing.

Additional analysis investigated the impact of resit candidates on pass rates. Table 30 categorises candidates by their most recent result at the end of 2022, grouped by number of test attempts of each candidate. In literacy, the pass rate was 94.1% for no-resit (first-attempt) candidates, the same as in 2021, and pass rates ranged from 52.9% to 71.4% for resit candidates. In numeracy, the pass rates were similar to literacy: 94.9% for no-resit candidates, and from 63.2% to 100% (2 candidates) for resit candidates. Overall, in 2022 the performance of resit candidates ‘reduced’ the pass rate by 3% in literacy (from 94.1% to 91.1%) and by 2.6% in numeracy (from 94.9% to 92.3%), both less than in 2021.

Table 30: Candidate performance by number of test sittings in 2018–22*

Component	Year	Number of Test Sittings	Number of Unique Candidates	Standard Achieved	Standard Not Achieved	Pass Rate
Literacy	2018	1 (no resits)	19721	19300	421	97.9
		2	1216	1037	179	85.3
		3	419	298	121	71.1
		4	113	52	61	46.0
		5	10	3	7	30.0
		All	21479	20690	789	96.3
	2019	1 (no resits)	18703	18332	371	98.0
		2	1339	1129	210	84.3
		3	529	353	176	66.7
		4	167	91	76	54.5
		5	36	16	20	44.4
		All	20774	19921	853	95.9
	2020	1 (no resits)	15087	14788	299	98.0
		2	975	853	122	87.5
		3	401	291	110	72.6
		4	134	80	54	59.7
		5	33	20	13	60.6
		All	16630	16032	598	96.4
	2021	1 (no resits)	19401	18928	473	97.6
		2	1200	1026	174	85.5
		3	491	312	179	63.5

Component	Year	Number of Test Sitzings	Number of Unique Candidates	Standard Achieved	Standard Not Achieved	Pass Rate
		4	151	104	47	68.9
		5	45	23	22	51.1
		8	1	1	0	100.0
		All	21289	20394	895	95.8
	2022	1 (no resits)	18479	17390	1089	94.1
		2	1508	1077	431	71.4
		3	585	332	253	56.8
		4	163	104	59	63.8
		5	51	27	24	52.9
		6	3	2	1	66.7
		All	20789	18932	1857	91.1
Numeracy	2018	1 (no resits)	19687	19224	463	97.6
		2	1122	903	219	80.5
		3	388	242	146	62.4
		4	112	55	57	49.1
		5	26	10	16	38.5
		6	1	1	0	100.0
		All	21336	20435	901	95.8
	2019	1 (no resits)	18570	18158	412	97.8
		2	1253	1014	239	80.9
		3	551	384	167	69.7
		4	188	116	72	61.7
		5	40	19	21	47.5
		All	20602	19691	911	95.6
	2020	1 (no resits)	14915	14635	280	98.1
		2	1023	878	145	85.8
		3	507	386	121	76.1
		4	172	132	40	76.7
		5	48	34	14	70.8
		All	16665	16065	600	96.4
	2021	1 (no resits)	19311	18799	512	97.3
		2	1196	988	208	82.6
		3	509	358	151	70.3
		4	150	119	31	79.3
		5	37	29	8	78.4
		All	21203	20293	910	95.7
	2022	1 (no resits)	18593	17643	950	94.9
		2	1334	952	382	71.4
		3	534	338	196	63.3
		4	137	101	36	73.7
		5	39	25	14	64.1
		6	2	2	0	100.0
		8	1	0	1	0.0
		All	20640	19061	1579	92.3

*For 2016 and 2017 data, refer to Table 30 in 2021 Technical Report

Table 31 details a small number of declines in scale scores.

Compared to the 2021 cohort, the 2022 candidates who resat three times (four attempts) had lower overall mean scale scores for Numeracy, overall and the 'Number and algebra' and 'Calculator allowed' (CAN) components of the test.

Compared to the 2021 cohort, the 2022 candidates who resat four times (five attempts) had a lower mean scale score for the 'Measurement and geometry' component of the test. The differences were all small and none was found to be statistically significant at the 0.05 level.

Table 31: Decline in performance of 2022 resit

Domain	Attempt	Strand	2021			2022			Change in scale score
			N	Mean	SD	N	Mean	SD	
Numeracy	4	Overall	173	112.97	7.57	142	112.90	7.65	-0.07
	4	Number & algebra	173	113.07	8.75	142	112.75	8.51	-0.32
	4	Calculator not available	173	111.60	12.14	142	110.91	10.85	-0.69
	5	Measurement & geometry	37	112.24	6.64	39	112.18	10.76	-0.06

4. CANDIDATE PERFORMANCE BY TEST WINDOW

This section presents candidate performance by test window. The performance of resit candidates is also described by test window.

4.1 Distributions of candidate scale scores by subscale and test window

Table 32 shows the performance of all candidates (first-attempt and resits) who sat the test for each test window in 2022. In 2022, the overall mean scale scores for literacy and numeracy remained quite constant across the four test windows.

There was a similar pattern across the test windows in relation to subscale mean scale scores.

Table 32: Candidate performance by test window, overall and by subscale

Component	Test Window	Whole test and subscale	N	Mean	S.D.	Pass Rate
Literacy	TW1	Overall	5595	116.3	8.9	87.3
		Reading		116.4	9.7	
		Technical skills of writing		116.2	9.9	
	TW2	Overall	5174	116.2	9.2	85.4
		Reading		116.1	9.6	
		Technical skills of writing		116.3	10.5	
	TW3	Overall	5494	116.5	8.8	87.3
		Reading		116.6	9.4	
		Technical skills of writing		116.4	9.9	
	TW4	Overall	5627	115.9	8.7	85.9
		Reading		115.9	9.5	
		Technical skills of writing		115.9	9.7	
Numeracy	TW1	Overall	5555	123.6	12.2	87.5
		Number & algebra		123.6	13.5	
		Measurement & geometry		123.2	12.7	
		Statistics & probability		122.9	11.8	
		Calculator available		123.7	11.9	
		Calculator not available		122.6	16.0	
	TW2	Overall	5116	123.8	12.3	86.9
		Number & algebra		123.8	13.4	
		Measurement & geometry		123.3	12.9	
		Statistics & probability		123.1	12.0	
		Calculator available		124.0	12.0	
		Calculator not available		122.5	15.5	
	TW3	Overall	5369	125.6	11.9	91.7
		Number & algebra		125.1	13.1	
		Measurement & geometry		125.3	12.3	
		Statistics & probability		126.1	12.1	
		Calculator available		126.0	11.7	
		Calculator not available		123.6	15.1	
	TW4	Overall	5433	124.4	12.2	88.9
		Number & algebra		123.7	13.3	
		Measurement & geometry		124.2	12.8	
		Statistics & probability		125.3	12.2	
		Calculator available		125.0	12.0	
		Calculator not available		122.1	15.3	

Appendix 4 provides a detailed analysis of candidate performance by demographic characteristics and test windows. Candidate performance of any subgroup with a sample size less than 10 was not reported.

Appendix 5 provides a detailed analysis of performance by test centres and remote proctoring by test window. The distributions of candidate performance within a subgroup were similar across test windows.

Table 33 shows the proportion of candidates by test window who did not achieve the standard in 2022 after one or more attempts.

Table 33: Number and proportion of candidates who did not achieve the standard by test window

Test Window	Component	Number	% of Candidates
TW1	Literacy	712	12.7
	Numeracy	693	12.5
	Both	201	4.5
TW2	Literacy	756	14.6
	Numeracy	669	13.1
	Both	210	5.0
TW3	Literacy	696	12.7
	Numeracy	447	8.3
	Both	151	3.5
TW4	Literacy	792	14.1
	Numeracy	603	11.1
	Both	204	4.7

4.2 Performance of resit candidates by test window

Table 34 and Table 35 show the performance of resit candidates overall, by subscale and by test attempt for each test window. In literacy, the overall mean scale score of second-attempt (resit 1) candidates was at or slightly above the literacy standard (107) in test windows 1,3 and 4, but slightly below the standard in test window 2. For numeracy, the overall mean scale score of second-attempt (resit 1) candidates was slightly below the numeracy standard (110) in test window 1, but slightly above the standard in test windows 2, 3 and 4.

In literacy, the candidates who sat the test for the third time (resit 2) had similar but slightly lower overall mean scores, compared to those candidates who sat the test for the second time for test windows 1, 2 and 4. The overall mean score was higher for test window 3. The pass rates of the third-attempt (resit 2) candidates also tended to be lower than the second-attempt (resit 1) candidates.

In numeracy, the overall mean scores of candidates who sat the numeracy component for the third time were higher than the overall mean scales scores of those candidates who sat the test for the second time in every test window. However, the pass rates tended to be lower for those candidates who sat the numeracy component for the third time.

Table 34: Resit candidate performance by test window, overall and by subscale – Literacy

Component	Test Window	Whole Test and Subscale	2nd Attempt (Resit 1)			3rd Attempt (Resit 2)			4th Attempt (Resit 3)			5th Attempt (Resit 4)		
			N	Mean	Pass Rate	N	Mean	Pass Rate	N	Mean	Pass Rate	N	Mean	Pass Rate
Literacy	TW1	Overall	459	107.9	64.9	169	106.7	55.6	52	107.7	53.8	8	-	-
		Reading		107.6			105.9			106.4			-	
		Technical skills of writing		108.7			108.5			110.2			-	
	TW2	Overall	366	106.9	55.5	142	106.1	46.5	41	108.2	56.1	12	104.6	33.3
		Reading		106.8			105.1			107.0			103.8	
		Technical skills of writing		107.2			107.9			111.0			106.1	
	TW3	Overall	444	107.8	62.4	115	108.0	56.5	34	108.5	67.6	11	108.2	45.5
		Reading		107.5			107.1			107.1			106.8	
		Technical skills of writing		108.2			109.8			111.0			111.1	
	TW4	Overall	497	107.7	60.2	202	107.0	53.5	52	108.0	57.7	21	107.7	52.4
		Reading		107.3			106.5			106.9			107.2	
		Technical skills of writing		108.5			108.1			109.9			109.2	

Table 35: Resit candidate performance by test window, overall and by subscale – Numeracy

Component	Test Window	Whole Test and Subscale	2nd Attempt (Resit 1)			3rd Attempt (Resit 2)			4th Attempt (Resit 3)			5th Attempt (Resit 4)		
			N	Mean	Pass Rate	N	Mean	Pass Rate	N	Mean	Pass Rate	N	Mean	Pass Rate
Numeracy	TW1	Overall	441	109.9	54.4	151	112.0	60.3	34	110.5	58.8	9	-	-
		Number & algebra		109.4			111.2			110.8			-	
		Measurement & geometry		109.9			112.6			110.4			-	
		Statistics & probability		110.8			112.7			110.6			-	
		Calculator available		110.5			112.2			111.1			-	
		Calculator not available		107.5			111.0			108.6			-	
	TW2	Overall	362	110.5	53.6	115	112.2	55.7	37	114.6	67.6	9	-	-
		Number & algebra		109.8			111.8			113.6			-	
		Measurement & geometry		110.3			111.2			114.0			-	
		Statistics & probability		111.6			113.2			115.5			-	
		Calculator available		111.2			112.7			115.0			-	
		Calculator not available		107.6			110.2			112.6			-	
	TW3	Overall	355	112.8	71.3	122	113.1	67.2	31	114.4	87.1	9	-	-
		Number & algebra		111.8			112.6			114.8			-	
		Measurement & geometry		112.9			113.0			113.1			-	
		Statistics & probability		114.6			114.3			115.4			-	
		Calculator available		113.6			113.9			114.7			-	
		Calculator not available		109.6			110.2			113.5			-	
	TW4	Overall	407	112.2	65.4	173	111.5	58.4	40	112.2	72.5	12	118.3	66.7
		Number & algebra		110.7			110.2			112.0			116.8	
		Measurement & geometry		112.3			111.0			111.8			115.8	
		Statistics & probability		114.3			114.1			113.0			118.5	
		Calculator available		112.9			112.4			113.2			118.0	
		Calculator not available		109.1			107.5			109.3			115.9	

5. PHASE 8 TRIAL ITEM ANALYSIS

5.1 In-test trialling

Following review by the Expert Groups, 87 literacy items and 89 numeracy items were trialled within the live tests. These items were placed in small clusters (5-item clusters for literacy, and 4-item 'calculator available' clusters and a 1-item 'calculator not available' cluster for numeracy). Candidates were unaware of the location of these trial items. The trial items did not contribute to a candidate's score. The items were trialled in multiple test windows until sufficient candidates had attempted them. In this way, robust trial item estimates were obtained to enable selection of new, balanced clusters for refreshment of the tests in test window 3 and test window 4 in 2023.

5.2 Trial item analysis

Table 36 shows that the acceptable Phase 8 trial items were well targeted by difficulty, with most numeracy items and literacy items achievable by candidates in Bands 2 and 3. A small number were achievable by candidates above Band 3 and by candidates in Band 1, as required by the test construct. A number of Phase 8 trial items (12 literacy and 1 numeracy) were below Band 1 and may not be selected for the test.

Table 36: Distribution of Phase 8 trial items by Band

Achievable by candidates ...	Number of literacy items	Number of numeracy items
above Band 3	2	7
in Band 3: Clearly above the standard	6	30
in Band 2: At and above the standard	26	36
in Band 1: Below the standard	41	15
below Band 1	12	1
Total	87	89

5.3 Differential item functioning

During the item development and revision phase, avoiding items that might favour one subgroup of candidates over another is attempted. Despite this, it is normal for a proportion of items to show differential item functioning (DIF).

DIF analysis was performed on all trial items. Only analysis where subgroup size exceeds 50 candidates can be reported reliably. On many occasions, no obvious content or context bias is observable. Investigating reasons for a particular item showing DIF for a particular group involves looking for an explanatory connection between actual characteristics of the item and assumed or posited characteristics of the group.

It is often not possible to withhold all items showing DIF from the live tests, so the approach is to attempt to 'balance' the tests accordingly, and thereby minimise the likelihood of any test bias. Selected items with DIF are spread across the clusters. No candidate attempts all clusters, so no candidate is required to attempt all items showing DIF.

Table 37 shows the number of Phase 8 items showing significant differential item functioning. There were too few (<50) candidates to reliably report DIF for Indigenous and international candidates, and candidates whose first language is not English.

In literacy, there were more items favouring female candidates, but in numeracy the items showing DIF were more balanced between male and female candidates. There were more items favouring candidates aged 26+ years in both literacy and numeracy. In literacy, there were more items favouring

male than female candidates. In literacy, DIF items were balanced between potentially favouring secondary candidates and potentially favouring early childhood & primary candidates. In numeracy, all three identified DIF items were potentially favouring early childhood and primary candidates. The DIF analysis by residential area did not identify any DIF items in literacy. In numeracy, only two items favouring Regional and Remote area candidates were identified.

Items showing DIF are investigated for unfair content and the items are not selected where this is found. This is usually not the case, and the DIF is related to performance; the favoured subgroup is simply better at the skills being assessed for a variety of reasons. To minimise differential test functioning, a DIF 'cancelling' method is applied at the cluster formation stage: items showing DIF are paired with items showing DIF in the opposite direction. In this way, clusters are well balanced and the tests from which the clusters are created are fair.

Table 37: Differential item functioning

Variable	Favours	Number of literacy items	Number of numeracy items
Age	17–25 years	2	2
	26+ years	4	4
Course Category	Early childhood & primary	2	3
	Secondary	2	0
Gender	Female	5	3
	Male	1	2
Residential area	Metropolitan areas	0	0
	Regional and Remote areas	0	2
Program Type	Postgraduate	3	1
	Undergraduate	2	2

The detailed DIF analysis may be found in Appendix 6.

6. PHASE 8 TEST DEVELOPMENT

During 2022, 115 Phase 8 literacy items (78 Reading and 37 Technical skills of writing) and 108 Phase 8 numeracy items mapped against the Assessment Framework were developed. The items were reviewed by the Expert Groups in February 2022 and are revised based upon reviewers' feedback. A small proportion will be retired. A selection of at least 60 literacy items and at least 60 numeracy items were in-test trialled in test windows 3 and 4 of 2022 and test window 1 of 2023. A selection of these will be used to refresh the test in 2023.

7. CONCLUSION

Despite the ongoing challenges presented by COVID-19 in 2022, the test was successfully administered in four test windows in all Australian states and territories to 22,950 candidates. Another set of new items was successfully trialled, enabling the test to be refreshed.

Item difficulty and targeting of the new set of trial items against the revised assessment framework was such that equivalent test clusters can be created. Differential item functioning was found to be manageable, ensuring that unbiased clusters can be created in order to refresh the test in mid-2023.

Of the candidates who first registered in 2022, by the end of the year, 93.0% had achieved the literacy standard and 94.2% had achieved the numeracy standard. Over the seven years of testing, 95.8% of candidates had achieved the literacy standard and 95.8% of candidates had achieved the numeracy standard. Of the 134,170 candidates presenting for the test in the seven year period 2016–2022, 94.0% had achieved both standards, thereby meeting the requirements. Candidates were making effective use of the opportunity to improve their skills and resit the tests with 96.3% of the 2017 cohort achieving the literacy standard and 96.2% achieving the numeracy standard by the end of 2022.

8. APPENDICES

Appendix 1: Proportion of candidates by test centre and by attempt

Table 38 shows the number and proportion of candidates participating at each test centre and by remote proctoring for literacy. Table 39 shows the same for numeracy. In 2022, as in 2021, more than half of first-attempt candidates (compared to 22% in 2019) sat the test by remote proctoring. Attendances at many test centres continue to be reduced from pre-COVID-19 attendances. For example, the Melbourne CBD test centre accounted for just under 9% of all first-attempt candidates in 2022, compared with 21% in 2019.

Table 38: Number and proportion of candidates who participated by test centre – Literacy

Test Centre	1st attempt		2nd attempt		3rd attempt		4th attempt		5th attempt		6th attempt	
	N	%	N	%	N	%	N	%	N	%	N	%
Adelaide	823	4.3	122	6.9	43	6.8	8	4.5	2	3.8	0	0.0
Albury	21	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Armidale	30	0.2	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Ballarat	135	0.7	4	0.2	1	0.2	0	0.0	0	0.0	0	0.0
Bathurst	11	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Brisbane	1425	7.4	69	3.9	17	2.7	4	2.2	1	1.9	0	0.0
Cairns	33	0.2	3	0.2	1	0.2	0	0.0	1	1.9	0	0.0
Canberra	305	1.6	15	0.8	3	0.5	2	1.1	0	0.0	0	0.0
Darwin	140	0.7	39	2.2	21	3.3	9	5.0	1	1.9	0	0.0
Geelong	36	0.2	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Gold Coast	184	1.0	9	0.5	4	0.6	3	1.7	0	0.0	0	0.0
Hobart	125	0.6	2	0.1	3	0.5	2	1.1	2	3.8	0	0.0
Melbourne	1668	8.7	134	7.6	49	7.8	11	6.1	5	9.6	0	0.0
Mildura	8	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Newcastle	310	1.6	19	1.1	5	0.8	1	0.6	0	0.0	0	0.0
Parramatta	251	1.3	14	0.8	7	1.1	1	0.6	0	0.0	0	0.0
Perth	1456	7.6	125	7.1	24	3.8	4	2.2	2	3.8	0	0.0
Reasonable Adjustments	25	0.1	13	0.7	9	1.4	5	2.8	2	3.8	1	33.3
Remote proctoring	10379	53.9	1078	61.0	401	63.9	116	64.8	30	57.7	1	33.3
Rockhampton	21	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sunshine Coast / Maroochydore	82	0.4	3	0.2	5	0.8	0	0.0	0	0.0	0	0.0
Sydney	1510	7.8	102	5.8	33	5.3	11	6.1	5	9.6	1	33.3
Townsville	42	0.2	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Wagga Wagga	10	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Warrnambool	10	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wollongong	223	1.2	10	0.6	2	0.3	2	1.1	1	1.9	0	0.0
Total	19263	100.0	1766	100.0	628	100.0	179	100.0	52	100.0	3	100.0

Table 39: Number and proportion of candidates who participated by test centre – Numeracy

Test Centre	1st attempt		2nd attempt		3rd attempt		4th attempt		5th attempt		6th attempt		7th attempt		8th attempt	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Adelaide	799	4.2	94	6.0	40	7.1	13	9.2	2	5.1	0	0.0	0	0.0	0	0.0
Albury	25	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Armidale	28	0.1	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ballarat	136	0.7	4	0.3	1	0.2	0	0.0	1	2.6	0	0.0	0	0.0	0	0.0
Bathurst	10	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Brisbane	1417	7.4	73	4.7	21	3.7	7	4.9	1	2.6	0	0.0	0	0.0	0	0.0
Cairns	29	0.2	1	0.1	0	0.0	1	0.7	0	0.0	0	0.0	0	0.0	0	0.0
Canberra	303	1.6	7	0.4	1	0.2	1	0.7	0	0.0	0	0.0	0	0.0	0	0.0
Darwin	136	0.7	8	0.5	3	0.5	1	0.7	0	0.0	0	0.0	0	0.0	0	0.0
Geelong	36	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Gold Coast	178	0.9	10	0.6	0	0.0	1	0.7	1	2.6	0	0.0	0	0.0	0	0.0
Hobart	122	0.6	4	0.3	1	0.2	1	0.7	2	5.1	0	0.0	0	0.0	0	0.0
Melbourne	1656	8.6	110	7.0	32	5.7	9	6.3	3	7.7	0	0.0	0	0.0	0	0.0
Mildura	10	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Newcastle	305	1.6	18	1.2	2	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Parramatta	236	1.2	13	0.8	1	0.2	2	1.4	1	2.6	0	0.0	0	0.0	0	0.0
Perth	1435	7.5	127	8.1	32	5.7	6	4.2	0	0.0	0	0.0	0	0.0	0	0.0
Reasonable Adjustments	24	0.1	7	0.4	9	1.6	6	4.2	3	7.7	0	0.0	0	0.0	0	0.0
Remote proctoring	10365	54.1	1004	64.2	389	69.3	86	60.6	22	56.4	2	100.0	1	100.0	1	100.0
Rockhampton	16	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sunshine Coast/Maroochydore	77	0.4	3	0.2	1	0.2	3	2.1	0	0.0	0	0.0	0	0.0	0	0.0
Sydney	1522	7.9	75	4.8	26	4.6	5	3.5	2	5.1	0	0.0	0	0.0	0	0.0
Townsville	42	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wagga Wagga	6	0.0	1	0.1	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Warrnambool	15	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wollongong	234	1.2	5	0.3	1	0.2	0	0.0	1	2.6	0	0.0	0	0.0	0	0.0
Total	19162	100.0	1565	100.0	561	100.0	142	100.0	39	100.0	2	100.0	1	100.0	1	100.0

Appendix 2: Proportion of candidates by test centre and by test window

Tables 40 and 41 show the number and proportion of candidates participating in each test centre in test windows 1–4 for literacy and for numeracy respectively. It can be seen that some test centres in some locations were not used for some test windows.

Table 40: Number of candidates in test centres by test windows – Literacy

Test Centre	TW1		TW2		TW3		TW4	
	N	%	N	%	N	%	N	%
Adelaide	212	3.8	282	5.5	220	4.0	284	5.0
Albury	0	0.0	6	0.1	15	0.3	0	0.0
Armidale	10	0.2	10	0.2	12	0.2	0	0.0
Ballarat	43	0.8	39	0.8	58	1.1	0	0.0
Bathurst	0	0.0	11	0.2	0	0.0	0	0.0
Brisbane	443	7.9	256	4.9	356	6.5	461	8.2
Cairns	0	0.0	18	0.3	20	0.4	0	0.0
Canberra	65	1.2	79	1.5	95	1.7	86	1.5
Darwin	60	1.1	43	0.8	65	1.2	42	0.7
Geelong	0	0.0	38	0.7	0	0.0	0	0.0
Gold Coast	51	0.9	54	1.0	95	1.7	0	0.0
Hobart	22	0.4	28	0.5	41	0.7	43	0.8
Melbourne	421	7.5	485	9.4	485	8.8	476	8.5
Mildura	8	0.1	0	0.0	0	0.0	0	0.0
Newcastle	76	1.4	104	2.0	155	2.8	0	0.0
Parramatta	94	1.7	99	1.9	80	1.5	0	0.0
Perth	493	8.8	415	8.0	353	6.4	350	6.2
Reasonable Adjustments	17	0.3	6	0.1	17	0.3	15	0.3
Remote proctoring	3195	57.1	2646	51.1	2786	50.7	3378	60.0
Rockhampton	0	0.0	21	0.4	0	0.0	0	0.0
Sunshine Coast/Maroochydore	34	0.6	27	0.5	29	0.5	0	0.0
Sydney	256	4.6	421	8.1	493	9.0	492	8.7
Townsville	0	0.0	26	0.5	17	0.3	0	0.0
Wagga Wagga	0	0.0	10	0.2	0	0.0	0	0.0
Warrnambool	10	0.2	0	0.0	0	0.0	0	0.0
Wollongong	86	1.5	50	1.0	102	1.9	0	0.0
Total	5596	100.0	5174	100.0	5494	100.0	5627	100.0

Table 41: Number of candidates in test centres by test windows – Numeracy

Test Centre	TW1		TW2		TW3		TW4	
	N	%	N	%	N	%	N	%
Adelaide	191	3.4	296	5.8	202	3.8	259	4.8
Albury	0	0.0	10	0.2	15	0.3	0	0.0
Armidale	11	0.2	8	0.2	10	0.2	0	0.0
Ballarat	39	0.7	43	0.8	60	1.1	0	0.0
Bathurst	0	0.0	10	0.2	0	0.0	0	0.0
Brisbane	449	8.1	259	5.1	363	6.8	448	8.2
Cairns	0	0.0	16	0.3	15	0.3	0	0.0
Canberra	59	1.1	84	1.6	96	1.8	73	1.3
Darwin	37	0.7	34	0.7	49	0.9	28	0.5
Geelong	0	0.0	36	0.7	0	0.0	0	0.0
Gold Coast	51	0.9	42	0.8	97	1.8	0	0.0
Hobart	25	0.5	26	0.5	40	0.7	39	0.7
Melbourne	428	7.7	456	8.9	471	8.8	455	8.4
Mildura	10	0.2	0	0.0	0	0.0	0	0.0
Newcastle	76	1.4	100	2.0	149	2.8	0	0.0
Parramatta	78	1.4	86	1.7	89	1.7	0	0.0
Perth	500	9.0	417	8.2	354	6.6	329	6.1
Reasonable Adjustments	17	0.3	8	0.2	9	0.2	15	0.3
Remote proctoring	3191	57.4	2627	51.3	2727	50.8	3325	61.2
Rockhampton	0	0.0	16	0.3	0	0.0	0	0.0
Sunshine Coast/Maroochydore	28	0.5	29	0.6	27	0.5	0	0.0
Sydney	260	4.7	430	8.4	478	8.9	462	8.5
Townsville	0	0.0	26	0.5	16	0.3	0	0.0
Wagga Wagga	0	0.0	8	0.2	0	0.0	0	0.0
Warrnambool	15	0.3	0	0.0	0	0.0	0	0.0
Wollongong	90	1.6	49	1.0	102	1.9	0	0.0
Total	5555	100.0	5116	100.0	5369	100.0	5433	100.0

Appendix 3: Score frequency distribution

Table 42: Literacy score frequency distribution of first-attempt candidates

Scale Score	Frequency	Percentile
86	1	0.0
87	2	0.0
88	1	0.0
89	4	0.0
90	4	0.1
91	5	0.1
92	8	0.1
93	11	0.2
94	13	0.3
95	30	0.4
96	39	0.6
97	40	0.8
98	43	1.0
99	99	1.6
100	123	2.2
101	111	2.8
102	139	3.5
103	228	4.7
104	290	6.2
105	315	7.8
106	365	9.7
107	406	11.8
108	461	14.2
109	598	17.3
110	625	20.6
111	708	24.2
112	873	28.8
113	842	33.1
114	878	37.7
115	868	42.2
116	922	47.0
117	951	51.9
118	884	56.5
119	976	61.6
120	629	64.9
121	844	69.2
122	827	73.5
123	760	77.5
124	590	80.5
125	428	82.8
126	611	85.9
127	416	88.1
128	440	90.4
129	313	92.0
130	243	93.3
131	279	94.7
132	163	95.6
133	181	96.5
134	134	97.2
135	86	97.6
136	141	98.4

Standard in 2017 TW3–4, 2018 to 2022

Scale Score	Frequency	Percentile
137	41	98.6
138	26	98.7
139	55	99.0
140	63	99.3
141	28	99.5
142	23	99.6
143	14	99.7
144	19	99.8
145	17	99.9
146	10	99.9
147	1	99.9
153	2	99.9
154	2	99.9
156	6	100.0
157	7	100.0

Table 43: Numeracy score frequency distribution of first-attempt candidates

Scale Score	Frequency	Percentile
87	1	0.0
88	1	0.0
89	2	0.0
90	3	0.0
91	2	0.0
92	10	0.1
93	10	0.2
94	5	0.2
95	18	0.3
96	20	0.4
97	38	0.6
98	22	0.7
99	28	0.8
100	41	1.0
101	63	1.4
102	77	1.8
103	100	2.3
104	100	2.8
105	127	3.5
106	174	4.4
107	177	5.3
108	238	6.6
109	263	7.9
110	254	9.3
111	338	11.0
112	339	12.8
113	367	14.7
114	399	16.8
115	453	19.2
116	452	21.5
117	507	24.2
118	527	26.9
119	580	29.9
120	535	32.7

Standard in 2017 TW3–4, 2018 to 2022

Scale Score	Frequency	Percentile
121	565	35.7
122	661	39.1
123	636	42.4
124	687	46.0
125	623	49.3
126	588	52.3
127	720	56.1
128	737	60.0
129	367	61.9
130	745	65.8
131	672	69.3
132	472	71.7
133	549	74.6
134	569	77.6
135	301	79.1
136	673	82.6
137	217	83.8
138	392	85.8
139	528	88.6
140	59	88.9
141	454	91.3
142	192	92.3
143	224	93.4
144	73	93.8
145	405	95.9
146	53	96.2
148	138	96.9
149	59	97.2
150	183	98.2
151	60	98.5
152	70	98.9
159	55	99.1
160	19	99.2
161	62	99.6
162	56	99.9
165	27	100.0

Table 44 shows the percentage of candidates who sat the test in 2022 for each of the three bands for both literacy and numeracy. For literacy, 55% of the candidates who registered in 2022 and sat the literacy component in 2022 were located in Band 2: At or above the standard, while 35% were located in Band 3: Well above the standard or above Band 3. For numeracy, 35% were located in Band 2: At or above the standard, while 58% were located in Band 3: Well above the standard or above Band 3.

Table 44: Candidates attempting the test in 2022 by Band achievement

Component	Year of Registration	No. of Unique Candidates	Below Band 1 (%)	Band 1 (%)	Band 2 (%)	Band 3 (%)	Above Band 3 (%)
Literacy	2022	19263	0.1	9.6	55.1	32.3	2.8
	2022 plus the 2016–22 resitters	20789	0.1	8.8	58.3	30.1	2.6
Numeracy	2022	19162	0.3	7.7	34.5	41.3	16.2
	2022 plus the 2016–22 resitters	20640	0.3	7.4	38.5	38.7	15.2

The distribution of candidate scale scores across the bands in 2022 was similar to that in 2021 for both literacy and numeracy.

Appendix 4: Performance by demographic characteristics and test windows

Tables 45, 46, 47 and 48 show performance by demographic characteristics for each test window. In general, the overall findings in Section 3: Candidate Performance are also true for each test window.

Undergraduate candidates in their first year were more likely to attempt the test in test window 4, whereas the reverse was true for undergraduate candidates in their fourth year who were more likely to attempt the test in test window 1.

Postgraduate candidates in their first year were most likely to attempt the test in test windows 2 and 3. However, postgraduate candidates in their second year were more likely to attempt the test in test window 1.

Table 45: Performance by demographic characteristics in test window 1

Characteristic	Category	Literacy				Numeracy			
		N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
Gender	Female	4134	115.8	8.8	86.2	4147	121.8	11.8	85.0
	Male	1451	117.8	8.9	90.4	1399	129.0	11.8	94.9
	Indeterminate/intersex	10	122.4	4.1	100.0	9	-	-	-
Age	17–25	3557	115.4	8.1	87.8	3518	123.0	11.6	88.2
	26–30	847	118.0	9.5	88.5	871	124.6	13.4	86.6
	31–35	454	117.0	9.4	85.7	447	124.6	13.0	85.5
	36–40	331	118.0	9.9	85.8	310	124.3	13.0	86.1
	41–45	219	117.9	10.7	82.6	205	125.6	13.7	88.8
	46+	187	118.4	11.2	82.9	204	123.8	13.2	84.8
International Students	No	5250	116.7	8.8	88.7	5293	123.6	12.3	87.4
	Yes	345	110.0	8.5	64.9	262	124.3	11.5	90.5
English as First Language	Yes	4755	117.1	8.6	90.3	4822	123.8	12.1	88.2
	No	840	111.6	9.0	70.0	733	122.4	13.1	83.2
Indigenous	No	5440	116.3	8.9	87.4	5390	123.6	12.3	87.5
	Yes	93	114.2	7.7	81.7	105	120.3	10.8	82.9
	Not disclosed	62	118.7	10.0	88.7	60	127.3	10.7	96.7
Residential Area	Metropolitan areas	4506	116.3	8.9	87.3	4506	123.6	12.3	87.5
	Regional areas	1001	116.6	8.8	88.5	970	123.2	11.7	87.4
	Remote areas	32	112.0	7.0	75.0	42	121.4	15.9	78.6
	International	42	111.3	10.2	64.3	25	129.5	11.1	100.0
	Invalid or Missing	14	117.7	7.9	92.9	12	126.2	10.6	91.7

Characteristic	Category	Literacy				Numeracy			
		N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
Program Type	Undergraduate	3635	114.8	8.0	86.1	3598	121.7	11.4	85.7
	Postgraduate	1947	119.2	9.6	89.7	1948	127.2	12.9	91.0
	Pathway	13	106.7	6.5	61.5	9	-	-	-
Program Type by Year Level	Undergraduate 1st year	168	113.7	8.1	82.1	153	121.1	11.7	85.0
	Undergraduate 2nd year	989	115.0	8.0	88.2	979	122.8	10.7	90.1
	Undergraduate 3rd year	1179	115.1	7.7	87.9	1189	122.3	11.1	89.2
	Undergraduate 4th year	1079	114.8	8.1	85.6	1040	120.7	11.8	81.0
	Undergrad 5th year or above	139	113.4	9.2	74.8	145	119.8	12.1	75.9
	Undergraduate graduated	81	110.7	8.0	66.7	92	115.9	11.2	66.3
	Postgraduate 1st year	612	120.6	8.9	93.3	616	130.4	11.5	97.1
	Postgraduate 2nd year	1048	118.9	9.8	88.9	1044	126.4	13.3	89.7
	Postgraduate 3rd year	91	117.6	9.7	85.7	98	123.7	13.8	81.6
	Postgraduate 4th year	62	117.0	10.1	85.5	56	122.4	12.5	85.7
	Postgrad 5th year or above	84	119.8	10.2	90.5	75	127.4	13.2	88.0
	Postgraduate graduated	50	112.6	9.0	74.0	59	118.8	11.6	76.3
	Pathway 1st year	7	-	-	-	6	-	-	-
	Pathway 2nd year	2	-	-	-	2	-	-	-
	Pathway 3rd year	1	-	-	-	0	-	-	-
	Pathway 4th year	0	-	-	-	0	-	-	-
	Pathway 5th year or above	0	-	-	-	0	-	-	-
	Pathway graduated	3	-	-	-	1	-	-	-
Course Category	Early childhood	423	111.1	8.1	70.4	406	117.9	11.2	76.1
	Primary	2306	115.8	8.4	87.3	2291	122.0	11.5	85.6
	Secondary	2152	118.6	8.9	92.0	2159	127.4	12.2	93.6
	Special education	37	114.1	8.4	86.5	37	120.4	11.7	81.1
	Other	677	114.2	8.7	82.7	662	120.1	11.6	81.7

Table 46: Performance by demographic characteristics in test window 2 (including resits)

Characteristic	Category	Literacy				Numeracy			
		N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
Gender	Female	3732	115.3	9.0	83.7	3733	121.8	11.8	84.0
	Male	1429	118.4	9.2	89.6	1369	129.5	12.0	94.9
	Indeterminate/intersex	13	121.8	6.6	92.3	14	121.8	9.9	85.7
Age	17–25	3333	115.0	8.4	85.1	3240	123.2	11.9	86.9
	26–30	835	118.1	9.9	86.5	836	125.0	13.3	87.1
	31–35	366	118.0	10.1	86.6	380	125.4	12.5	88.2
	36–40	278	117.7	10.2	84.9	291	124.0	11.9	86.3
	41–45	199	119.1	11.0	83.4	189	127.3	12.4	91.0
	46+	163	119.2	10.5	85.3	180	123.2	13.6	80.6
International Students	No	4793	116.7	9.0	87.4	4807	123.6	12.4	86.6
	Yes	381	109.7	9.0	60.1	309	126.5	10.8	92.6
English as a First Language	Yes	4363	117.2	8.8	89.1	4389	123.9	12.3	87.6
	No	811	110.9	9.1	65.2	727	123.4	12.5	83.1
Indigenous	No	5004	116.2	9.2	85.4	4957	123.9	12.3	87.0
	Yes	104	113.3	7.7	82.7	107	119.0	11.8	80.4
	Not disclosed	66	117.4	9.2	92.4	52	130.2	13.1	96.2
Residential Area	Metropolitan areas	4241	116.2	9.2	85.6	4204	123.9	12.4	86.6
	Regional areas	857	115.7	8.8	84.4	845	123.1	11.9	88.3
	Remote areas	39	121.2	10.8	92.3	35	128.7	13.2	88.6
	International	25	113.0	9.5	68.0	20	131.2	8.9	100.0
	Invalid or Missing	12	118.7	8.5	91.7	12	123.9	10.8	91.7
Program Type	Undergraduate	3123	114.3	8.2	83.3	3085	121.6	11.7	83.9
	Postgraduate	2018	119.1	9.8	88.9	2014	127.2	12.5	91.6
	Pathway	33	110.2	6.1	72.7	17	118.4	10.1	82.4
Program Type by Year Level	Undergraduate 1st year	338	115.5	8.4	85.8	319	125.0	11.7	90.3
	Undergraduate 2nd year	949	115.0	8.2	85.2	933	122.1	11.5	85.0
	Undergraduate 3rd year	1020	114.3	8.0	83.8	969	122.0	11.3	86.4
	Undergraduate 4th year	645	113.5	8.1	81.1	670	119.7	11.7	78.2
	Undergrad 5th year or above	121	111.8	7.9	72.7	132	118.9	12.3	75.8
	Undergraduate graduated	50	112.6	9.0	72.0	62	118.5	13.2	74.2
	Postgraduate 1st year	1135	120.9	9.6	92.7	1107	130.0	11.6	95.6

Characteristic	Category	Literacy				Numeracy			
		N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
	Postgraduate 2nd year	643	117.7	9.7	85.8	649	124.5	12.9	88.4
	Postgraduate 3rd year	67	116.7	9.4	82.1	71	122.9	11.2	85.9
	Postgraduate 4th year	65	115.6	9.4	83.1	80	121.6	11.8	86.2
	Postgrad 5th year or above	63	115.7	8.3	82.5	63	124.1	13.0	85.7
	Postgraduate graduated	45	110.4	9.1	62.2	44	118.0	13.6	65.9
	Pathway 1st year	28	110.4	6.4	71.4	13	118.9	10.0	84.6
	Pathway 2nd year	2	-	-	-	2	-	-	-
	Pathway 3rd year	0	-	-	-	1	-	-	-
	Pathway 4th year	0	-	-	-	0	-	-	-
	Pathway 5th year or above	0	-	-	-	0	-	-	-
	Pathway graduated	3	-	-	-	1	-	-	-
Course Category	Early childhood	320	110.9	8.0	69.4	337	119.1	10.6	80.7
	Primary	1976	114.9	8.5	84.4	1984	121.3	12.0	82.5
	Secondary	2280	118.4	9.3	89.8	2232	127.2	12.2	92.2
	Special education	17	113.2	8.5	82.4	16	116.7	9.7	81.2
	Other	581	114.8	9.2	80.6	547	122.2	11.6	85.6

Table 47: Performance by demographic characteristics in test window 3 (including resits)

Characteristic	Category	Literacy				Numeracy			
		N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
Gender	Female	4133	115.9	8.9	85.6	4016	123.8	11.6	89.9
	Male	1356	118.4	8.2	92.5	1349	131.0	11.5	96.9
	Indeterminate/intersex	5	-	-	-	4	-	-	-
Age	17–25	3509	115.5	8.0	87.4	3398	124.8	11.4	91.5
	26–30	822	118.2	9.4	88.4	821	126.9	12.7	92.0
	31–35	425	117.8	9.7	86.4	407	127.7	12.9	91.4
	36–40	321	118.3	9.8	86.9	324	127.9	11.9	94.8
	41–45	212	117.9	10.3	84.9	203	125.7	13.0	90.6
	46+	205	119.9	11.0	87.3	216	127.3	13.7	90.3
International Students	No	5039	117.0	8.7	89.0	5040	125.5	12.0	91.5
	Yes	455	111.1	8.4	69.0	329	127.2	11.4	94.8
English as a First Language	Yes	4575	117.4	8.5	90.3	4593	125.7	11.9	91.9
	No	919	112.1	9.0	72.4	776	125.2	12.4	90.5
Indigenous	No	5322	116.5	8.8	87.3	5202	125.7	12.0	91.7
	Yes	102	115.4	8.8	86.3	101	123.6	11.4	90.1
	Not disclosed	70	118.1	8.8	90.0	66	127.5	10.9	93.9
Residential Area	Metropolitan areas	4421	116.4	8.7	87.2	4340	125.6	12.0	91.2
	Regional areas	1007	117.0	9.0	88.3	963	125.9	11.6	93.7
	Remote areas	35	119.1	10.0	85.7	36	125.9	12.3	88.9
	International	21	112.8	13.5	71.4	19	128.2	13.2	94.7
	Invalid or Missing	10	117.4	10.9	80.0	11	130.6	10.8	100.0
Program Type	Undergraduate	3541	114.9	7.9	86.0	3478	123.8	11.4	90.4
	Postgraduate	1924	119.5	9.5	90.2	1862	129.1	12.2	94.4
	Pathway	29	109.7	6.9	62.1	29	116.4	10.0	72.4
Program Type by Year Level	Undergraduate 1st year	441	115.8	8.1	88.0	445	126.0	11.4	92.1
	Undergraduate 2nd year	1061	115.1	7.9	86.2	1057	124.3	11.4	91.5
	Undergraduate 3rd year	1259	115.0	7.6	86.9	1182	124.1	11.0	91.9
	Undergraduate 4th year	576	114.8	8.2	84.7	586	122.4	11.5	87.0
	Undergrad 5th year or above	110	113.3	8.3	80.9	120	120.1	12.6	82.5
	Undergraduate graduated	94	110.7	6.9	74.5	88	119.3	10.7	80.7
	Postgraduate 1st year	1059	120.6	9.4	92.1	1019	131.1	11.5	97.4
	Postgraduate 2nd year	579	119.0	9.4	89.1	558	127.6	12.6	92.1

Characteristic	Category	Literacy				Numeracy			
		N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
	Postgraduate 3rd year	87	118.3	10.0	88.5	84	126.4	13.1	92.9
	Postgraduate 4th year	71	116.8	8.8	90.1	73	124.6	11.3	90.4
	Postgrad 5th year or above	57	120.5	9.3	93.0	63	127.1	13.3	85.7
	Postgraduate graduated	71	112.8	9.9	71.8	65	121.5	11.8	83.1
	Pathway 1st year	22	110.1	6.4	68.2	22	116.5	10.5	77.3
	Pathway 2nd year	3	-	-	-	3	-	-	-
	Pathway 3rd year	0	-	-	-	0	-	-	-
	Pathway 4th year	0	-	-	-	0	-	-	-
	Pathway 5th year or above	0	-	-	-	0	-	-	-
	Pathway graduated	4	-	-	-	4	-	-	-
Course Category	Early childhood	454	112.5	8.8	74.7	396	122.1	13.1	84.8
	Primary	2409	115.9	8.1	88.7	2412	124.1	11.2	91.3
	Secondary	1944	118.8	9.0	90.6	1890	129.3	11.8	95.5
	Special education	32	112.7	8.3	71.9	27	119.1	11.5	88.9
	Other	655	115.0	8.9	82.0	644	123.4	11.7	86.2

Table 48: Performance by demographic characteristics in test window 4 (including resits)

Characteristic	Category	Literacy				Numeracy			
		N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
Gender	Female	4219	115.2	8.7	84.2	4124	122.6	11.7	86.8
	Male	1396	117.9	8.6	91.0	1298	130.3	11.7	95.6
	Indeterminate/intersex	12	121.2	8.9	100.0	11	124.9	13.1	81.8
Age	17–25	3695	114.9	7.8	86.3	3602	123.5	11.5	88.5
	26–30	778	117.7	9.2	87.1	753	126.4	12.9	89.8
	31–35	458	117.7	9.9	86.5	424	126.4	13.2	91.0
	36–40	284	117.6	10.3	84.2	259	127.4	13.6	90.7
	41–45	232	117.0	11.1	80.2	220	126.8	13.7	88.6
	46+	180	118.2	11.5	82.8	175	124.4	13.1	85.7
International Students	No	5251	116.2	8.6	87.3	5199	124.4	12.2	88.8
	Yes	376	111.0	8.5	67.3	234	125.0	11.3	90.2
English as a First Language	Yes	4729	116.7	8.5	89.3	4757	124.7	12.1	89.7
	No	898	111.2	8.5	68.2	676	122.5	12.3	83.4
Indigenous	No	5435	115.9	8.7	85.9	5248	124.5	12.1	89.0
	Yes	119	113.1	7.6	84.0	114	119.6	11.5	84.2
	Not disclosed	73	118.0	9.5	89.0	71	127.5	13.1	87.3
Residential Area	Metropolitan areas	4633	115.7	8.7	85.6	4464	124.2	12.1	88.6
	Regional areas	917	116.9	8.9	87.5	897	125.8	12.2	91.1
	Remote areas	48	116.6	8.7	91.7	50	122.0	13.0	82.0
	International	22	111.2	8.4	77.3	17	128.2	10.6	94.1
	Invalid or Missing	7	-	-	-	5	-	-	-
Program Type	Undergraduate	3875	114.4	7.9	84.1	3781	122.8	11.5	87.4
	Postgraduate	1727	119.2	9.6	90.6	1623	128.4	12.7	92.7
	Pathway	25	107.9	7.4	52.0	29	117.2	10.8	75.9
Program Type by Year Level	Undergraduate 1st year	560	115.4	8.4	86.6	543	124.7	11.5	90.6
	Undergraduate 2nd year	1393	114.6	7.8	85.1	1337	123.5	11.3	88.9
	Undergraduate 3rd year	1252	114.4	7.6	85.1	1206	122.8	11.4	87.3
	Undergraduate 4th year	460	113.5	8.1	79.3	485	120.2	11.7	82.3
	Undergrad 5th year or above	94	114.0	8.7	79.8	103	122.0	12.7	87.4
	Undergraduate graduated	116	111.2	6.8	71.6	107	116.5	9.7	75.7
	Postgraduate 1st year	968	120.7	9.0	94.3	916	130.7	12.1	95.4

Characteristic	Category	Literacy				Numeracy			
		N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
	Postgraduate 2nd year	507	118.5	10.1	87.6	469	127.4	12.6	93.2
	Postgraduate 3rd year	84	116.8	9.6	85.7	80	121.7	12.8	81.2
	Postgraduate 4th year	52	114.0	7.4	84.6	44	120.8	11.7	79.5
	Postgrad 5th year or above	51	116.3	8.9	84.3	54	121.9	12.5	77.8
	Postgraduate graduated	65	112.6	9.2	73.8	60	121.8	11.8	86.7
	Pathway 1st year	19	107.3	7.2	52.6	24	116.2	10.1	75.0
	Pathway 2nd year	3	-	-	-	3	-	-	-
	Pathway 3rd year	0	-	-	-	0	-	-	-
	Pathway 4th year	0	-	-	-	0	-	-	-
	Pathway 5th year or above	0	-	-	-	0	-	-	-
	Pathway graduated	3	-	-	-	2	-	-	-
Course Category	Early childhood	344	111.9	7.9	74.1	318	118.9	10.9	80.8
	Primary	2585	115.3	8.2	86.2	2553	122.9	11.5	87.4
	Secondary	1938	118.2	9.1	90.4	1840	128.4	12.2	93.8
	Special education	73	113.2	7.2	82.2	66	123.0	12.7	84.8
	Other	687	113.5	8.3	78.9	656	122.1	11.8	85.4

Figure 8 shows that, for literacy, the distributions of the scale scores of female candidates and male candidates are very similar to each other across test windows. For numeracy, while the distributions of the scale scores of male candidates were higher up the scale than those of female candidates, it can be seen that in each test window most female candidates achieved well above the numeracy standard. It can also be seen that there were female candidates achieving very high numeracy scores. The median scale scores were lowest in test window 2 for both males and females for literacy and for females for numeracy. There was little apparent variation between test windows for males for numeracy.

Figure 9 shows that, for both literacy and numeracy, the distributions of the scale scores of the age groups are very similar. Again, median scores were lowest for test window 2.

Figure 10 shows that, for literacy, there are no observable patterns in the scale score distributions of undergraduates except that there is a decline in achievement of candidates after their graduation. There is a stronger downward trend in the distributions of postgraduate candidates. This is primarily due to the higher proportions of resit candidates in the later year cohorts.

Figure 11 shows similar downward trends for numeracy as those shown in Figure 10 for literacy.

Figure 12 shows that the only observable pattern between test windows in the scale score distributions of the course categories for both literacy and numeracy is for test window 2.

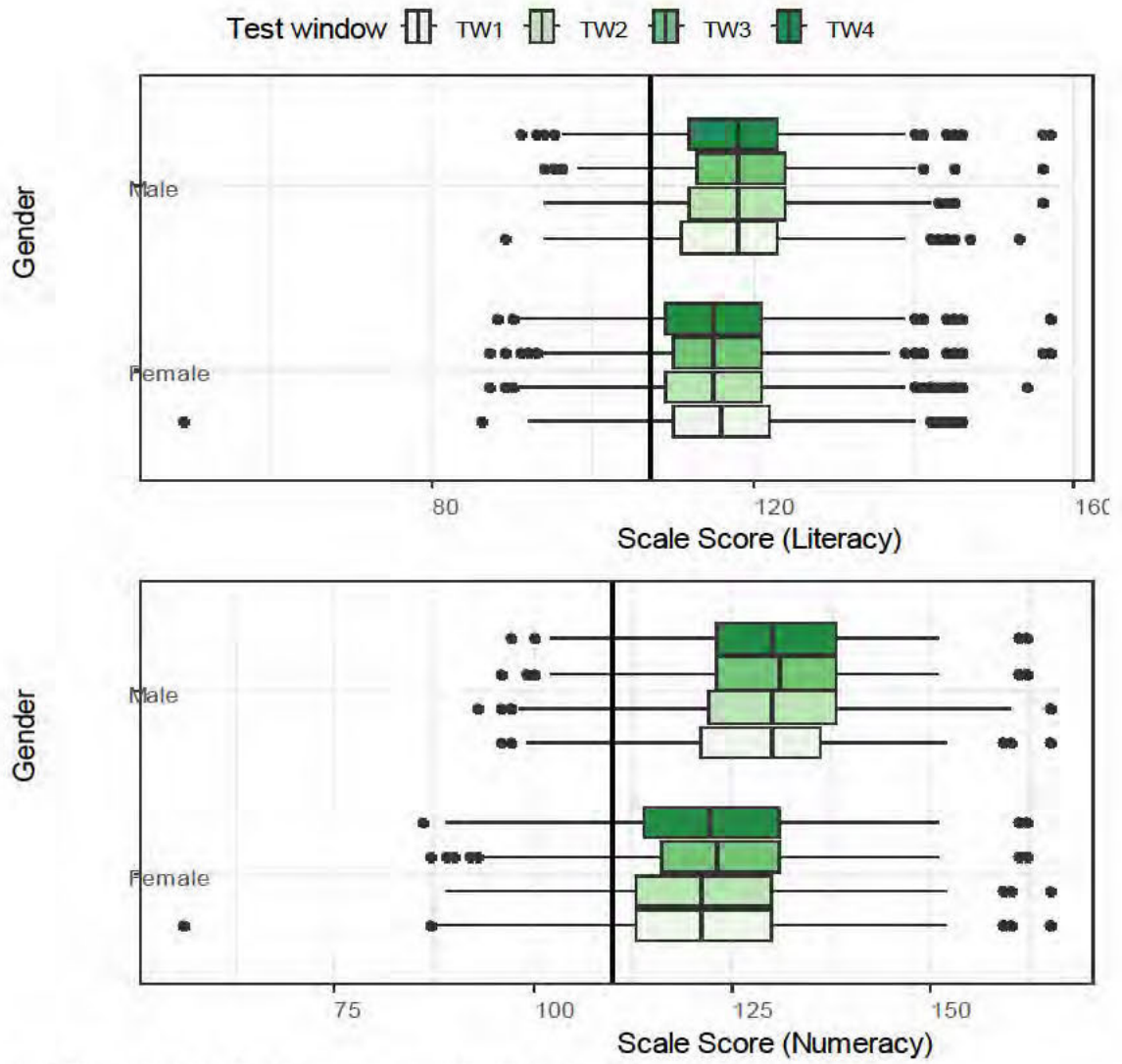


Figure 8: Score distribution by gender and test window

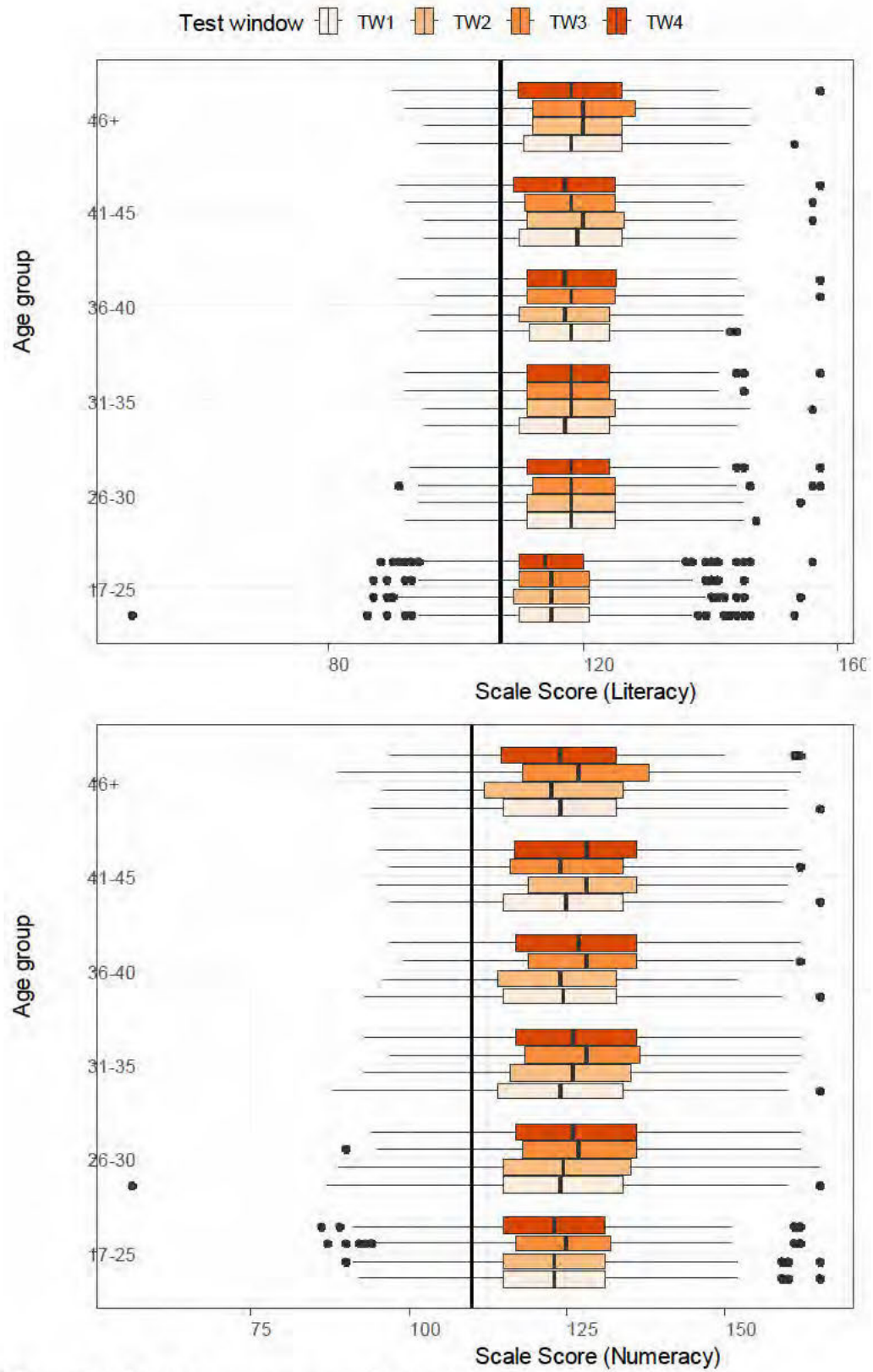


Figure 9: Score distribution by age group and test window

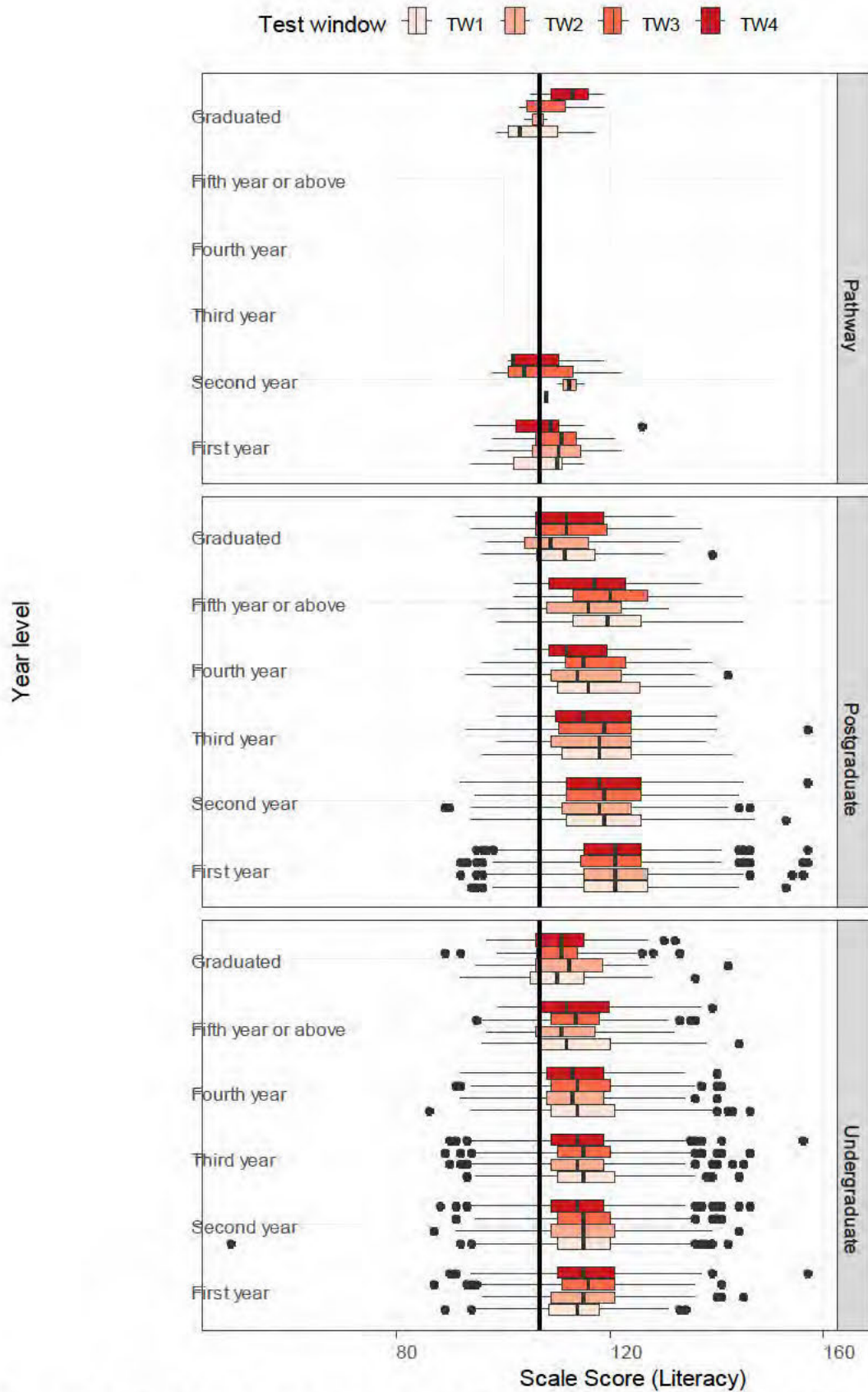


Figure 10: Score distribution by program type, year level and test window – Literacy

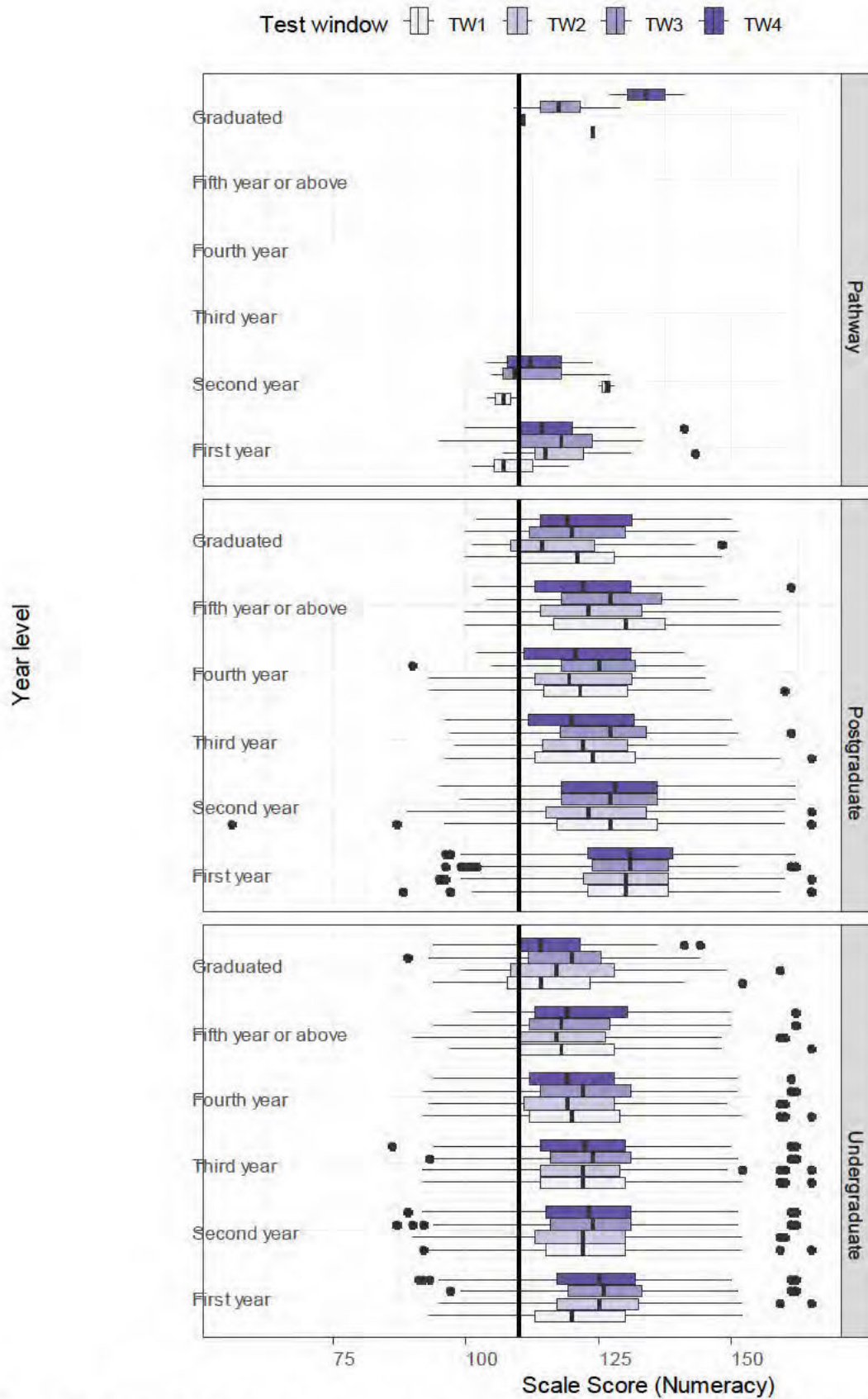


Figure 11: Score distribution by program type, year level and test window – Numeracy

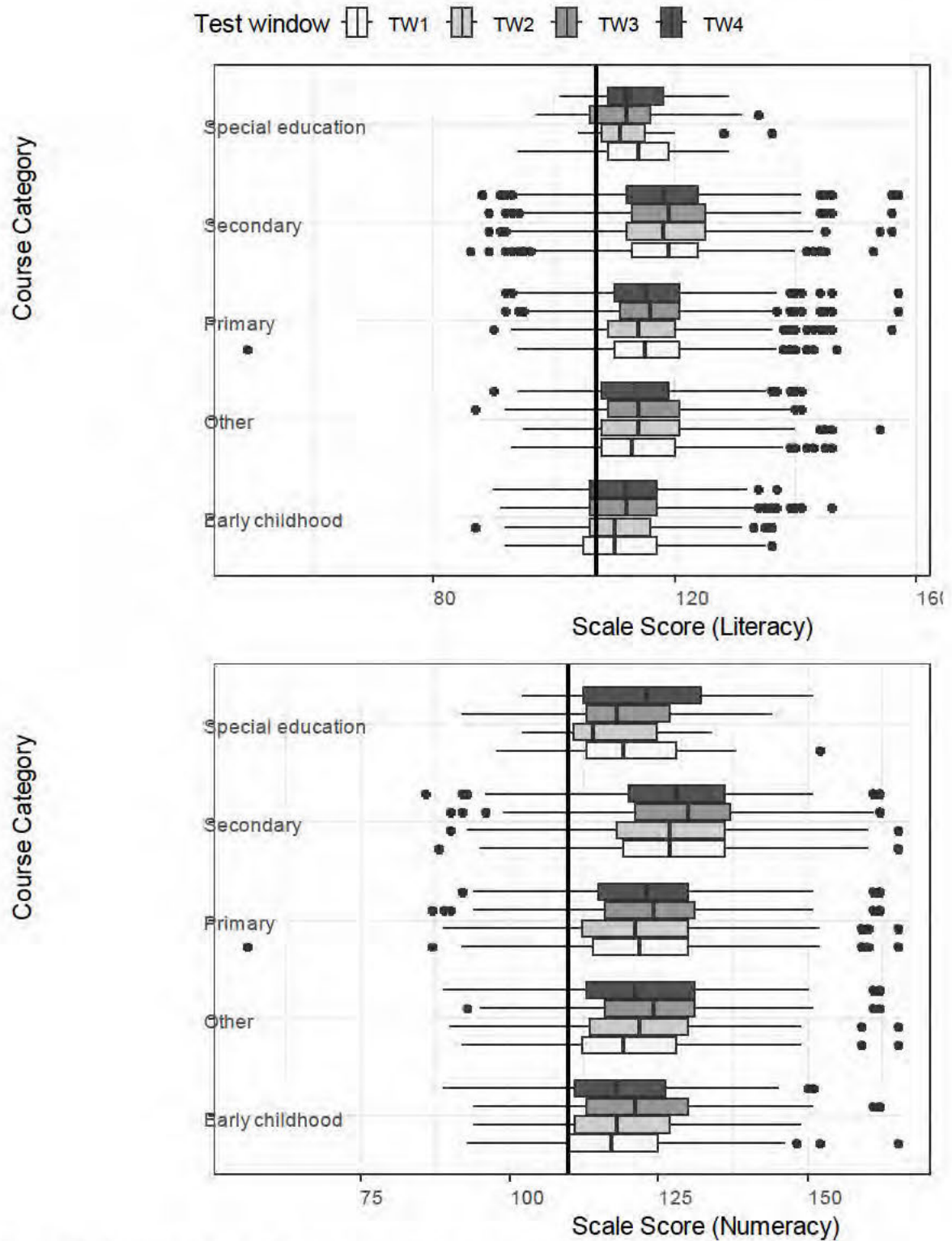


Figure 12: Score distribution by course category and test window

Appendix 5: Performance by test centres and remote proctoring by test window

Table 49 shows performance by location of test centres and remote proctoring in test windows 1 to 4.

Table 49: Performance by test centres and remote proctoring in test windows 1 to 4

Test Window	Category	Literacy				Numeracy			
		N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
TW1	Capital Cities	2083	116.5	8.9	87.0	2044	124.2	12.1	88.5
	Regional Cities	318	117.4	8.2	91.5	320	125.5	12.0	90.9
	Remote Proctoring	3194	116.0	8.9	87.0	3191	123.0	12.3	86.6
TW2	Capital Cities	2114	116.5	9.4	85.7	2096	124.4	12.3	88.1
	Regional Cities	414	117.0	8.5	89.4	393	125.5	12.0	91.6
	Remote Proctoring	2646	115.8	9.1	84.5	2627	123.1	12.3	85.3
TW3	Capital Cities	2205	117.1	9.1	87.2	2151	126.5	12.2	92.6
	Regional Cities	503	117.1	8.1	89.7	491	127.1	11.2	94.5
	Remote Proctoring	2786	116.0	8.6	87.0	2727	124.7	11.8	90.4
TW4	Capital Cities	2249	116.4	9.0	86.4	2108	125.4	12.4	90.5
	Regional Cities	0	-	-	-	0	-	-	-
	Remote Proctoring	3378	115.5	8.5	85.6	3325	123.8	12.0	87.9

There were no clearly observable trends or differences in mean scale scores between categories across test windows for either component of the test, noting there were no candidates sitting in regional cities in test window 4

Appendix 6: Analysis of differential item functioning

Differential item functioning (DIF) analysis was performed to investigate if there are any trial items that may favour one subgroup over another. DIF analysis was not performed for Indigenous candidates, international candidates, and English not as first language candidates due to insufficient sample size ($n < 50$).

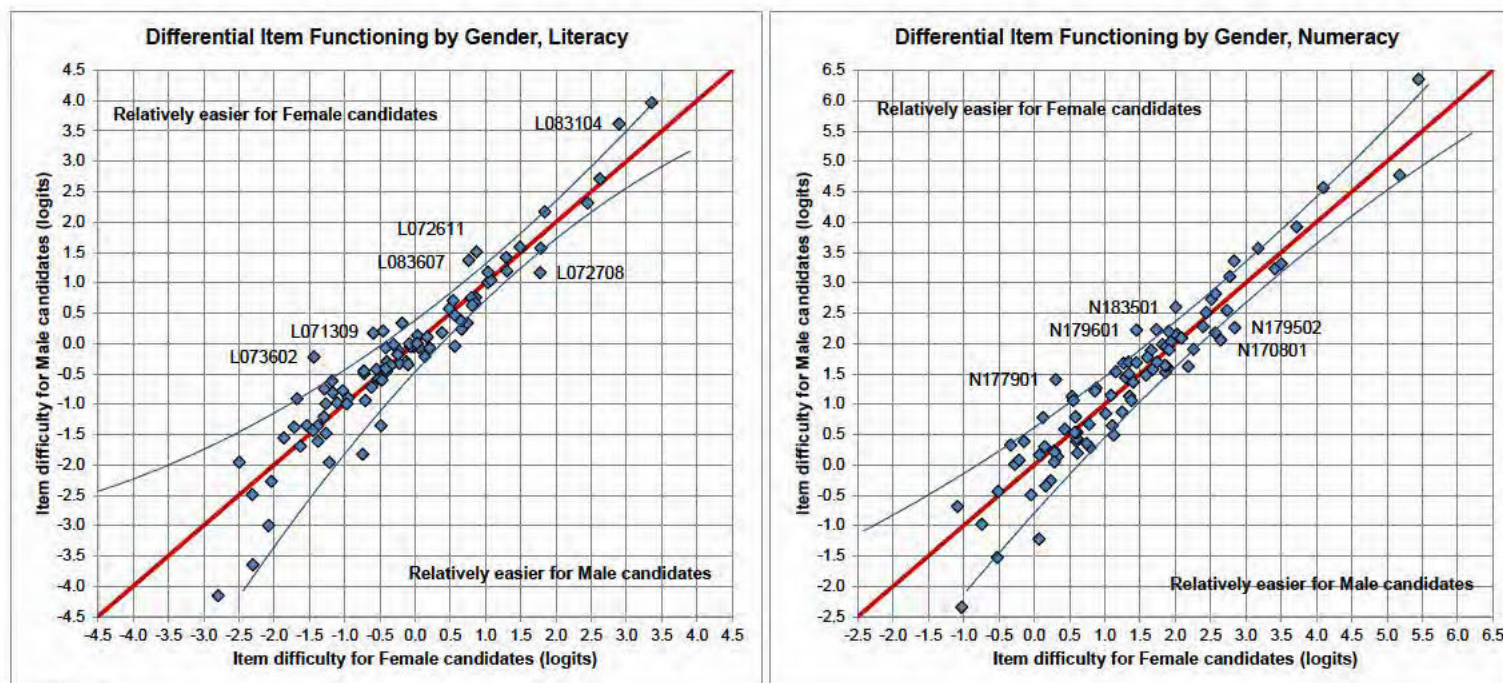


Figure 13: Gender DIF plots

As shown in Figure 13, several trial items are relatively distant from the confidence intervals and these are listed in Table 51. The table shows that, in literacy, of the 87 trial items, five items significantly favoured females (two Technical skills of writing and three Reading) and one item significantly favoured males (Reading).

In numeracy, of the 89 trial items, three items significantly favoured females and two item significantly favoured males. Of the three items favouring females, one was a Number and algebra item and the other two were Measurement and geometry items. Of the two items favouring males, both were Measurement and geometry items.

Table 50: List of potential Gender DIF items

Item Label	Name	Difference in Item Difficulties (logit) (Female - Male)	Standardised Difference in Item Difficulties (logit) (Female - Male)	Chi-square	Probability	Gender Favoured	Content
L073602	Laura	-1.210	-4.276	18.288	0.000	Female	Reading
L072611	Coaching	-0.639	-3.590	12.890	0.000	Female	Reading
L071309	Early Childhood Framework	-0.763	-3.283	10.781	0.001	Female	Reading
L072708	Numeracy and Sport	0.607	3.237	10.476	0.001	Male	Reading
L083104	Art Show Invitation	-0.725	-3.795	14.398	0.000	Female	TSW
L083607	Draft Conference Report	-0.612	-4.025	16.200	0.000	Female	TSW
N179502	Fitness Tracker	0.579	3.036	9.220	0.002	Male	MG
N179601	Walking Trail	-0.772	-4.035	16.282	0.000	Female	MG
N177901*	River Depth	-1.100	-4.857	23.593	0.000	Female	MG
N183501	Cheese Sandwich	-0.594	-3.112	9.687	0.002	Female	NA
N170801	Photo Area	0.585	3.364	11.317	0.001	Male	MG

*Calculator not available

Figure 14 shows the DIF plots for Age groups (17–25 y.o. compared to 26+ y.o.). There are six items outside the confidence interval limits in both literacy and numeracy.

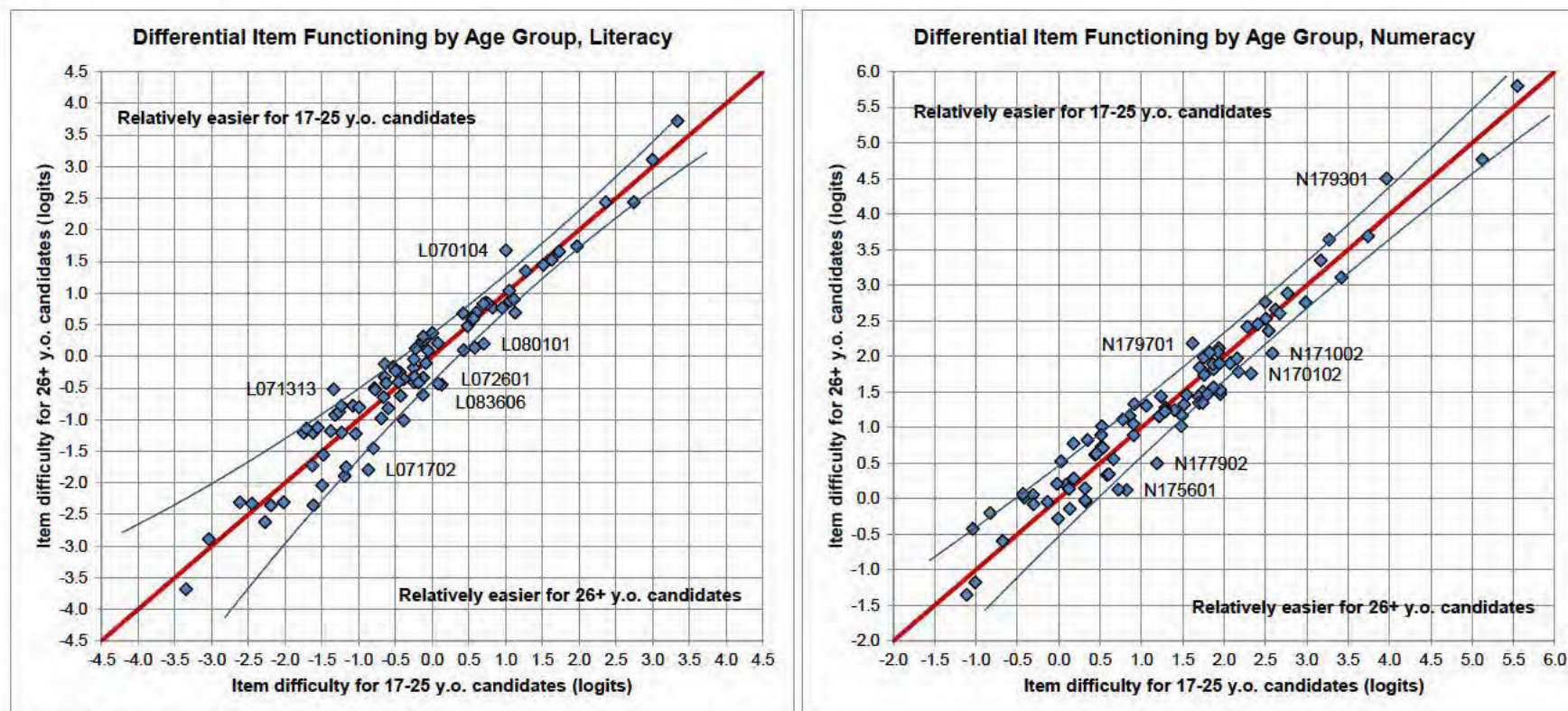


Figure 14: Age group DIF plots

Table 51 lists the trial items with potential DIF by Age group. Of the six literacy items showing significant age DIF, most (four) favoured candidates aged over 25, a similar finding to previous years. This is not a surprising finding given the achievement of candidates on the literacy component tends to increase with age. Of the four literacy items favouring candidates aged over 25, two were Reading items. Of the six numeracy items showing significant age DIF, most (four) favoured candidates aged 26+. Three were Number and algebra items and the remaining one was a Measurement and geometry item.

Table 51: List of potential Age group DIF items

Item Label	Name	Difference in Item Difficulties (logit) (17–25 v 26+)	Standardised Difference in Item Difficulties (logit) (17–25 v 26+)	Chi-square	Probability	Age Group Favoured (years)	Content
L072601	Coaching	0.579	4.125	17.018	0.000	26+	Reading
L080101	Senior Camp	0.504	2.857	8.163	0.004	26+	TSW
L071702	Perceptions of Childhood	0.923	2.859	8.171	0.004	26+	Reading
L071313	Early Childhood Framework	–0.821	–2.984	8.906	0.003	17-25	Reading
L070104	Job Aspirations	–0.672	–4.097	16.787	0.000	17-25	Reading
L083606	Draft Conference Report	0.512	2.911	8.476	0.004	26+	TSW
N170102	Global Refugees	0.569	3.213	10.327	0.001	26+	NA
N179301	Van Cover	–0.536	–3.180	10.109	0.001	17-25	MG
N179701	Senior Class Scores	–0.566	–3.356	11.262	0.001	17-25	SP
N171002*	Buy-Now-Pay-Later	0.542	3.133	9.813	0.002	26+	NA
N175601*	Senior School	0.697	2.951	8.708	0.003	26+	NA
N177902*	River Depth	0.692	3.136	9.831	0.002	26+	MG

*Calculator not available

Figure 15 shows the DIF plots for Program type (undergraduate compared to postgraduate).

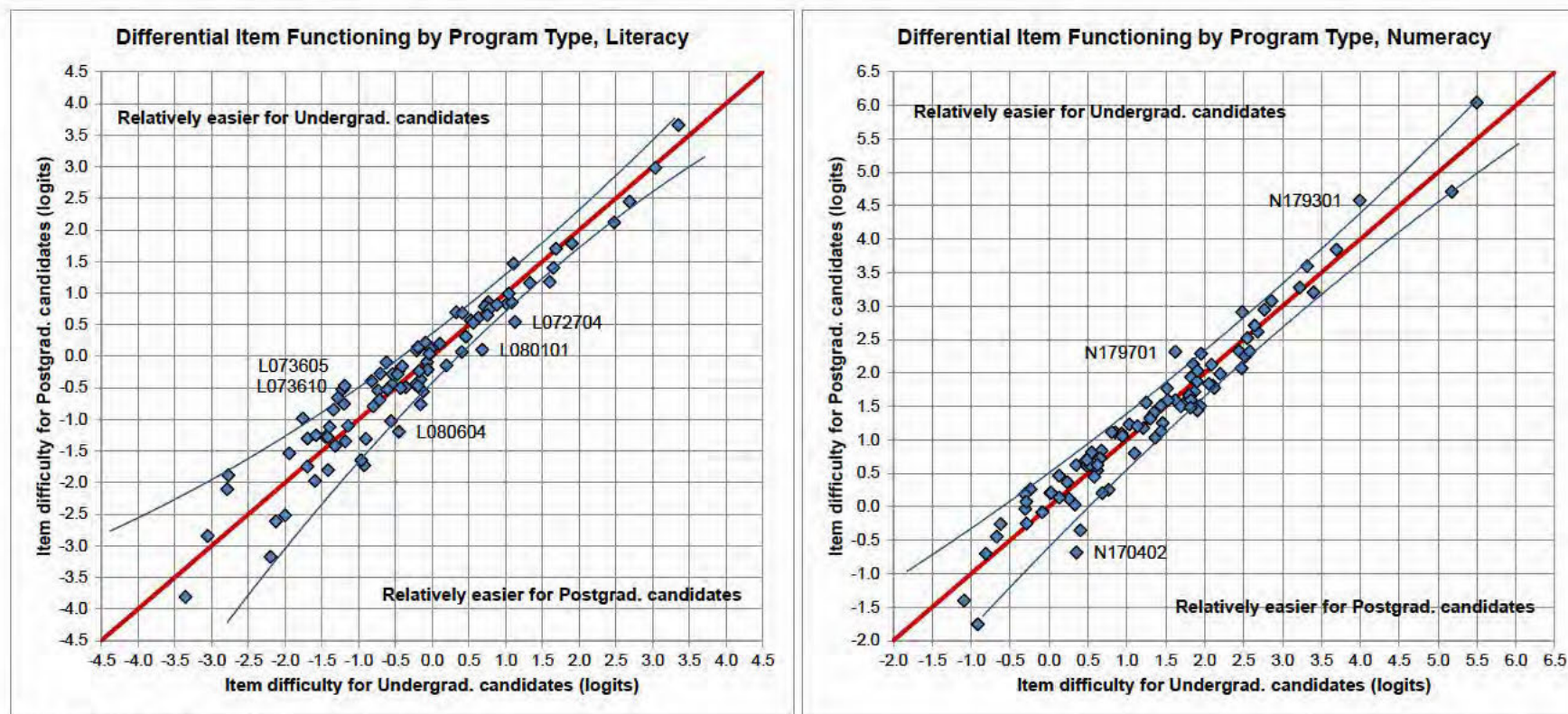


Figure 15: Program type DIF plots

Table 52 lists the trial items with potential DIF by Program type. In literacy, three of the five items showing significant DIF by program type favoured postgraduate candidates: One of the items was a Reading item and two were Technical skills of writing items. In numeracy, there were three items showing significant DIF by program type: One item favoured postgraduates, two favoured undergraduates.

Table 52: List of potential Program type DIF items

Item Label	Name	Difference in Item Difficulties (logit) (Undergraduate – Postgraduate)	Standardised Difference in Item Difficulties (logit) (Undergraduate – Postgraduate)	Chi-square	Probability	Program favoured	Content
L080604	Philosophy Classes	0.745	2.635	6.943	0.008	Postgraduate	TSW
L073605	Laura	–0.696	–2.603	6.776	0.009	Undergraduate	Reading
L073610	Laura	–0.724	–2.745	7.533	0.006	Undergraduate	Reading
L072704	Numeracy and Sport	0.580	2.960	8.759	0.003	Postgraduate	Reading
L080101	Senior Camp	0.577	3.048	9.293	0.002	Postgraduate	TSW
N179301	Van Cover	–0.586	–3.365	11.321	0.001	Undergraduate	MG
N170402	World Electricity	1.033	3.142	9.875	0.002	Postgraduate	SP
N179701	Senior Class Scores	–0.695	–3.908	15.271	0.000	Undergraduate	SP

*Calculator not available

Figure 16 shows the DIF plots for Course category (Early childhood & Primary compared to Secondary).

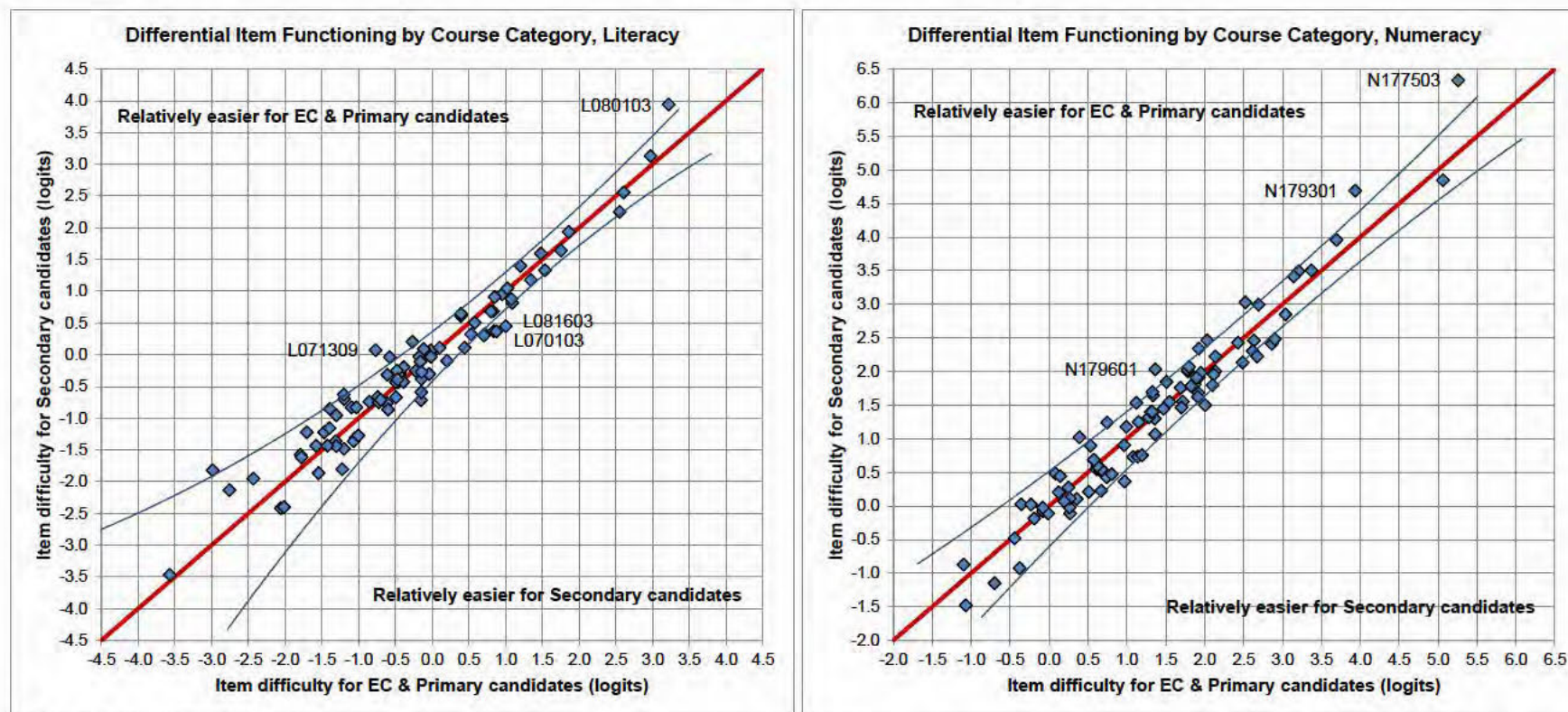


Figure 16: Course category DIF plots

In literacy, it can be seen from Figure 16 that two of the four identified DIF items significantly favoured secondary candidates. In numeracy, all three identified DIF items significantly favoured Early Childhood and Primary candidates.

Table 53 lists the items with significant Course category DIF. Of the two literacy items that favoured Early childhood and Primary candidates, one assessed Reading and one assessed Technical skills of writing. Of the two items that favoured Secondary candidates, one assessed Reading and one assessed Technical skills of writing. Of the three numeracy items, all favouring Early Childhood & Primary candidates, two were Measurement and geometry items and the remaining one was a Statistics item.

Table 53: List of potential Course category DIF items

Item Label	Name	Difference in Item Difficulties (logit) (Secondary – EC & Primary)	Standardised Difference in Item Difficulties (logit) (Secondary – EC & Primary)	Chi-square	Probability	Course favoured	Content
L080103	Senior Camp	–0.723	–3.307	10.937	0.001	EC & Primary	TSW
L071309	Early Childhood Framework	–0.846	–3.570	12.743	0.000	EC & Primary	Reading
L081603	OSHC Coordinator	0.549	3.159	9.980	0.002	Secondary	TSW
L070103	Job Aspirations	0.506	2.643	6.987	0.008	Secondary	Reading
N179301	Van Cover	–0.754	–4.145	17.179	0.000	EC & Primary	MG
N179601	Walking Trail	–0.668	–3.695	13.650	0.000	EC & Primary	MG
N177503	Mentoring Programs	–1.077	–3.772	14.227	0.000	EC & Primary	SP

*Calculator not available

Figure 17 shows the DIF plots for residential area (metropolitan areas compared with regional and remote areas).

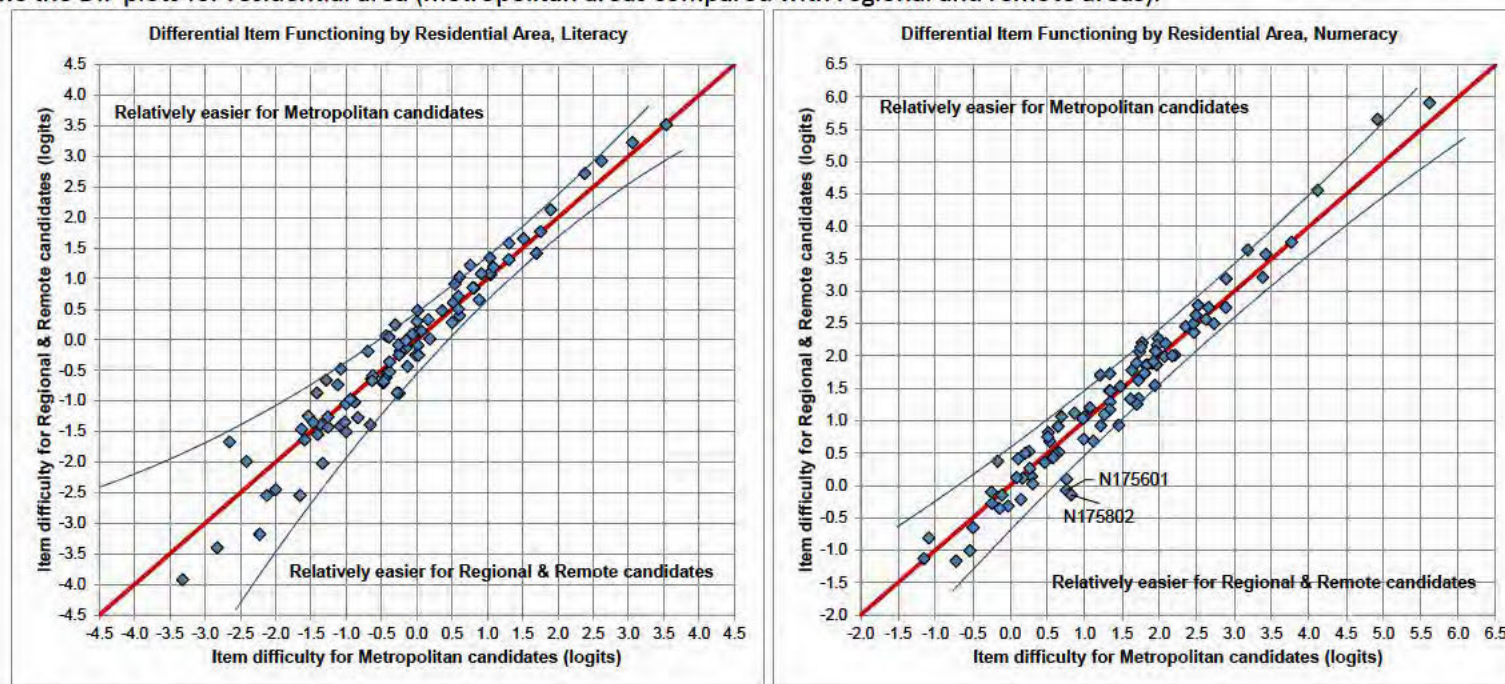


Figure 17 Residential area DIF plots

For literacy, none of the differences in item difficulty between metropolitan area candidates and regional and remote candidates were found to be significant. Table 54 shows there were 2 numeracy items that favoured Regional and Remote candidates.

Table 54: List of potential Residential area DIF items

Item Label	Name	Difference in Item Difficulties (logit) (Metro. – Reg. & Remote)	Standardised Difference in Item Difficulties (logit) (Metro. – Reg. & Remote)	Chi-square	Probability	Residential area favoured	Content
N175601*	Senior School	0.827	2.461	6.056	0.014	Regional & Remote	NA
N175802	Poly Tunnel	0.964	3.887	15.107	0.000	Regional & Remote	MG

*Calculator not available

It is worth noting that two literacy items and four numeracy items showed significant DIF for more than one subgroup, as shown in Table 55. The content of these six items will be further explored and they will be given a low priority for selection and release.

Table 55: List of items showing multiple DIF

Item label	Name	Favoured	Content
L071309	Early Childhood Framework	EC & Primary, Female	Reading
L080101	Senior Camp	Postgraduate, 26+ y.o.	TSW
N175601*	Senior School	Regional & Remote, 26+ y.o.	NA
N179301	Van Cover	EC & Primary, Undergraduate, 17-25 y.o.	MG
N179601	Walking Trail	EC & Primary, Female	MG
N179701	Senior Class Scores	Undergraduate, 17-25 y.o.	SP

It is also worth noting that some stimulus texts had multiple items showing DIF, as shown in Table 56. This occurred more often with literacy texts mainly because they were associated with larger item sets.

Table 56: List of stimulus texts with multiple items showing DIF

Domain	Component	Item label	Favoured	Content
Literacy	Coaching	L072601	26+ y.o.	Reading
Literacy	Coaching	L072611	Female	Reading
Literacy	Draft Conference Report	L083606	26+ y.o.	TSW
Literacy	Draft Conference Report	L083607	Female	TSW
Literacy	Early Childhood Framework	L071309	EC & Primary, Female	Reading
Literacy	Early Childhood Framework	L071313	17-25 y.o.	Reading
Literacy	Job Aspirations	L070103	Secondary	Reading
Literacy	Job Aspirations	L070104	17-25 y.o.	Reading
Literacy	Laura	L073605	Undergraduate	Reading
Literacy	Laura	L073610	Undergraduate	Reading
Literacy	Laura	L073602	Female	Reading
Literacy	Numeracy and Sport	L072704	Postgraduate	Reading
Literacy	Numeracy and Sport	L072708	Male	Reading
Literacy	Senior Camp	L080103	EC & Primary	TSW
Literacy	Senior Camp	L080101	Postgraduate, 26+ y.o.	TSW
Numeracy	River Depth	N177902*	26+ y.o.	MG
Numeracy	River Depth	N177901*	Female	MG



LITERACY AND NUMERACY TEST FOR INITIAL TEACHER EDUCATION STUDENTS

2023 Technical Report

FOR THE AUSTRALIAN
GOVERNMENT
DEPARTMENT OF
EDUCATION, MAY 2024

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1 Overview

1.1 Administration

The Literacy and Numeracy Test for Initial Teacher Education students ('LANTITE'; hereafter referred to as 'the test') was conducted across Australia for the eighth year, in four test windows, from February 2023 to November 2023. In this period, 21,483 unique candidates attempted one or both components of the test (literacy and numeracy), of which 16 had initially registered for the test in 2016, 73 in 2017, 121 in 2018, 207 in 2019, 258 in 2020, 635 in 2021 and 1,413 in 2022.

Note that from Test Window Two in 2023, prospective initial teacher education (ITE) students were allowed to sit the LANTITE test for the first time. For the purposes of continuity in the interpretation of results, these prospective students have been excluded from the main results presented in this report and have been summarised separately in Section 4. The results presented in all other sections can be interpreted as applying specifically to ITE students, just as have for previous years' technical reports.

Also in 2023, changes to LANTITE were made as part of the LANTITE trial, which commenced in November 2023 within Test Window 4. The details of this trial are briefly summarised in Section 7 of this report. The trial is ongoing, and reporting results of the trial is a separate exercise from this technical report, so no results concerning the trial have been reported in this technical report.

In 2023, 18,760 candidates registered for the test and attempted one or both components of the test for the first time compared to 20,395 in 2022.

In 2023, 17,565 candidates (1,698 fewer than in 2022) sat the literacy component for the first time and 17,623 candidates (1,540 fewer than in 2022) sat the numeracy component for the first time.

During 2023, there were 3,138 resits of the literacy component for a second, third, fourth or fifth time. This included 1,908 second attempts and 763 third attempts. There were 2,224 resits of the numeracy component in 2022 for a second, third, fourth or fifth time. This included 1,360 second attempts and 567 third attempts. These resit numbers included candidates who did not achieve one standard or more in the years 2016 to 2022.

As for the previous three years, in 2023 approximately three-quarters (74%) of the candidates were female. Most (64%) were aged between 17 and 25 and slightly more candidates (43%) were enrolled in primary courses than in secondary courses (38%). Those enrolled in Early Childhood courses made up 7% of the candidates.

Students from 48 higher education providers sat the test in 2023, one more provider than in 2022. The test was offered at 24 test centres (8 capital cities and 16 regional cities) in all states and territories, or via remote proctoring under prescribed conditions.

Just under half (49.9%) of first-attempt candidates in 2023 sat the test at a test centre, with 50.1% choosing remote proctoring. Candidates resitting the test were more likely to do so via remote proctoring with additional attempts. In 2023, 60% of second-attempt candidates, 62% of third-attempt candidates and 64% of fourth-attempt candidates sat the test remotely.

Table 1 shows the number of sittings by location for each test window (TW). The proportion of sittings by remote proctoring in 2023 was 51%, a lower proportion than in 2022 (55%). By comparison, 23% of sittings were by remote proctoring in 2019 (pre-COVID).

Table 1: Number of sittings by location and by test window, including resits¹

Location of testing	TW1		TW2		TW3		TW4	
	Literacy	Numeracy	Literacy	Numeracy	Literacy	Numeracy	Literacy	Numeracy
Capital cities	2000	2011	2237	2109	2021	1867	2495	2360
Regional cities	289	265	567	558	465	456	0	0
Remote proctoring	2356	2289	2624	2507	2440	2371	3254	3054
Total sittings	4645	4565	5428	5174	4926	4694	5749	5414

At each test window, a proportion of candidates (34–40%) chose to attempt only one of the test components, as shown in Table 2. In 2022, the proportions of sittings were similar across the four test windows (31–35%).

Table 2: Summary of sittings by test window, including resits

Test	TW1	TW2	TW3	TW4	Total
Both literacy and numeracy	3573	4234	3771	4179	15757
Literacy only	1072	1194	1155	1570	4991
Numeracy only	992	940	923	1235	4090
Total sittings	5637	6368	5849	6984	24838

Testing conditions were modified to accommodate 701 candidates who required reasonable adjustments in 2023 compared to 710 in 2022. Accessible versions of the test were also available for candidates who required supportive technology, such as a screen reader. The online accessible versions of the test were used on several occasions in 2023. Fourteen candidates were provided with a paper version of the test in 2023. The number of requests to accommodate anxiety disorders and dyslexia has remained stable in the last couple of years. The number of requests for Attention Deficit Hyperactivity Disorder (ADHD) has increased over the last three years. The administration of the test is further described in Section 2 of this report.

1.2 Candidate results

Table 3 shows the number of candidates attempting each component and both components and their pass rates at the end of 2023. The table shows how the pass rates increase over time as candidates resit and achieve the standard. For example:

- of those candidates who initially registered for the literacy component in 2016, the pass rate increased by 2.1% from 95.2% at the end of 2016 to 97.3% at the end of 2017, but only by a further 0.3% to 97.6% at the end of 2018 and a further 0.2% at the end of 2019. At the end of 2023, the pass rate was, for the first time since 2019, 0.1% higher at 97.9%.
- of those candidates who initially registered for the numeracy component in 2018, the pass rate increased from 90% at the end of 2018 to 94.5% at the end of 2020 and 95.6% at the end of 2023.

In the period from 2016 to 2023, the number of unique candidates participating in one or more components of the test was 154,797. Of these, 153,429 sat the literacy component and 153,073 sat the numeracy component. Almost all candidates (151,705) attempted both components of the test while 1,724 attempted

¹ Tables 1 and 2 include resit candidates in all test windows.

literacy only and 1,368 attempted numeracy only. At the end of 2023, of the 151,705 candidates who had attempted both components, 143,735 candidates had achieved both standards – an overall pass rate of 94.7% (slightly better than the overall pass rate of 94% at the end of 2022).

By the end of 2023, nearly 98% of the 2016 cohort had met the literacy standard and 97.1% had met the numeracy standard. Of the 2020 cohort, 97% had met the literacy standard and 97.3% had met the numeracy standard.

Table 3: Summary of candidate pass rates, 2016–2023

Component	Year of registration	At end of year	Number of unique candidates	Standard achieved	Standard not achieved	Cancelled due to misconduct	Pass rate
Literacy	2016	2016	13083	12461	621	1	95.2
	2016	2017	13083	12733	349	1	97.3
	2016	2018	13083	12774	309	0	97.6
	2016	2019	13083	12789	294	0	97.8
	2016	2020	13083	12792	291	0	97.8
	2016	2021	13083	12794	289	0	97.8
	2016	2022	13083	12797	286	0	97.8
	2016	2023	13083	12803	280	0	97.9
	2017	2017	23387	21520	1867	0	92.0
	2017	2018	23387	22213	1174	0	95.0
	2017	2019	23387	22386	1001	0	95.7
	2017	2020	23387	22452	935	0	96.0
	2017	2021	23387	22492	895	0	96.2
	2017	2022	23387	22511	876	0	96.3
	2017	2023	23387	22535	852	0	96.4
	2018	2018	22060	19954	2106	0	90.5
	2018	2019	22060	20734	1326	0	94.0
	2018	2020	22060	20939	1121	0	94.9
	2018	2021	22060	21060	1000	0	95.5
	2018	2022	22060	21109	951	0	95.7
	2018	2023	22060	21151	909	0	95.9
	2019	2019	20670	18955	1715	0	91.7
	2019	2020	20670	19548	1122	0	94.6
	2019	2021	20670	19801	869	0	95.8
	2019	2022	20670	19927	743	0	96.4
	2019	2023	20670	20005	665	0	96.8
	2020	2020	16510	15164	1346	0	91.8
	2020	2021	16510	15747	763	0	95.4
	2020	2022	16510	15918	591	1	96.4
	2020	2023	16510	16017	491	2	97.0
	2021	2021	20891	19399	1492	0	92.9
	2021	2022	20891	20032	859	0	95.9
	2021	2023	20891	20276	615	0	97.1
	2022	2022	19263	17921	1342	0	93.0
	2022	2023	19263	18572	691	0	96.4
	2023	2023	17565	16254	1311	0	92.5
	2016–2023	2023	153429	147613	5814	2	96.2

Numeracy	2016	2016	13084	12327	757	0	94.2
	2016	2017	13084	12622	462	0	96.5
	2016	2018	13084	12661	423	0	96.8
	2016	2019	13084	12676	408	0	96.9
	2016	2020	13084	12687	397	0	97.0
	2016	2021	13084	12691	393	0	97.0
	2016	2022	13084	12695	389	0	97.0
	2016	2023	13084	12701	383	0	97.1
	2017	2017	23465	21655	1809	1	92.3
	2017	2018	23465	22240	1225	0	94.8
	2017	2019	23465	22410	1055	0	95.5
	2017	2020	23465	22494	971	0	95.9
	2017	2021	23465	22539	926	0	96.1
	2017	2022	23465	22562	903	0	96.2
	2017	2023	23465	22592	873	0	96.3
	2018	2018	22006	19814	2192	0	90.0
	2018	2019	22006	20544	1462	0	93.4
	2018	2020	22006	20804	1202	0	94.5
	2018	2021	22006	20918	1088	0	95.1
	2018	2022	22006	20980	1026	0	95.3
	2018	2023	22006	21030	976	0	95.6
	2019	2019	20702	18773	1929	0	90.7
	2019	2020	20702	19489	1213	0	94.1
	2019	2021	20702	19774	928	0	95.5
	2019	2022	20702	19899	803	0	96.1
	2019	2023	20702	19985	717	0	96.5
	2020	2020	16313	14991	1322	0	91.9
	2020	2021	16313	15574	739	0	95.5
	2020	2022	16313	15773	540	0	96.7
	2020	2023	16313	15879	434	0	97.3
	2021	2021	20719	19264	1454	1	93.0
	2021	2022	20719	19849	869	1	95.8
	2021	2023	20719	20121	598	0	97.1
	2022	2022	19161	18054	1107	0	94.2
	2022	2023	19161	18600	561	0	97.1
	2023	2023	17623	16800	823	0	95.3
	2016–2023	2023	153073	147708	5365	0	96.5
Both	2016–2023	2023	151705	143735	7970	0	94.7

Table 4 shows the percentage of candidates by the number of attempts they had at each component of the test, as at the end of 2023. Across the eight years and for both components, approximately 92% of candidates attempted the test once, approximately 5.5% of candidates attempted the test twice, and approximately 2.8% of candidates attempted the test three or more times.

For literacy, by the end of 2023, 5.7% of the candidates who registered in 2016 had resat the test compared to 9.5% of the 2017 cohort, 10.7% of the 2018 cohort, 9.7% of the 2019 cohort, 9% of the 2020 cohort, 7.9% of the 2021 cohort and 7.9% of the 2022 cohort. Of the candidates who registered in 2023, 4.9% resat the test in 2023.

For numeracy, by the end of 2023, approximately 6.4% of the candidates who registered in 2016 had resat the test compared to 8.6% of the 2017 cohort, 10.5% of the 2018 cohort, 10.5% of the 2019 cohort, 8.9% of the 2020 cohort, 7.5% of the 2021 cohort and 6.1% of the 2022 cohort. Of the candidates who registered in 2023, 2.6% resat the test in 2023.

Table 4: Summary of resit rates by year of registration and overall

Domain	Year of registration	Number of unique candidates	Unique candidates who had 1 attempt only (%)	Unique candidates who had 2 attempts only (%)	Unique candidates who had 3 attempts only (%)	Unique candidates who had 4 attempts only (%)	Unique candidates who had 5 attempts only (%)	Unique candidates who had 6 attempts only (%)	Unique candidates who had 7 attempts only (%)	Unique candidates who had 8 attempts only (%)
Literacy	2016	13083	94.4	3.9	1.1	0.5	0.2	< 0.1	0.0	0.0
	2017	23387	90.6	5.6	2.6	1.0	0.3	< 0.1	0.0	< 0.1
	2018	22060	89.3	6.8	2.7	1.0	0.2	< 0.1	0.0	0.0
	2019	20670	90.3	6.5	2.3	0.7	0.2	< 0.1	0.0	0.0
	2020	16510	91.0	5.9	2.2	0.7	0.2	< 0.1	0.0	0.0
	2021	20891	92.1	5.4	1.8	0.6	0.1	< 0.1	0.0	0.0
	2022	19263	92.0	5.5	1.7	0.6	0.1	0.0	0.0	0.0
	2023	17565	95.2	4.1	0.7	0.1	0.0	0.0	0.0	0.0
	2016–23	153429	91.6	5.6	1.9	0.7	0.2	< 0.1	0.0	< 0.1
Numeracy	2016	13084	93.6	4.0	1.4	0.7	0.3	< 0.1	< 0.1	< 0.1
	2017	23465	91.4	4.9	2.3	1.1	0.3	< 0.1	0.0	0.0
	2018	22006	89.4	6.3	3.0	1.0	0.2	< 0.1	0.0	0.0
	2019	20702	89.6	6.6	2.9	0.8	0.2	< 0.1	0.0	0.0
	2020	16313	91.1	6.0	2.2	0.6	0.1	0.0	0.0	0.0
	2021	20719	92.3	5.2	1.9	0.4	< 0.1	< 0.1	0.0	0.0
	2022	19161	93.9	4.7	1.2	0.2	< 0.1	0.0	0.0	0.0
	2023	17623	97.3	2.3	0.3	< 0.1	0.0	0.0	0.0	0.0
	2016–23	153073	92.1	5.1	2.0	0.6	0.2	< 0.1	0.0	< 0.1

Table 4 shows that, by the end of 2023, some resitting candidates had attempted the test up to seven times.

Table 4 also shows that of the 17,565 candidates who attempted the literacy component for the first time in 2023, 89.6% achieved the standard at their first sitting. This pass rate in 2023 is slightly lower compared to previous years (90.6% in 2021 and 90.3% in 2022).² For numeracy in 2023, 93.5% of the 17,623 candidates achieved the standard at their first sitting (compared to 90.7% in 2021 and 92.1% in 2022).

Table 5: Number of sittings and pass rates by attempt and by test window in 2023

		TW1	Pass rate	TW2	Pass rate	TW3	Pass rate	TW4	Pass rate	Total	Pass rate
Literacy	First sitting	3993	90.6	4769	90.2	4326	89.6	4477	88.1	17565	89.6
	Second sitting	469	57.8	397	56.7	429	54.3	613	51.2	1908	54.7
	Third sitting	126	57.9	183	49.7	114	43.0	340	47.6	763	49.1
	Fourth sitting	44	54.5	60	55.0	44	59.1	238	43.7	386	48.4
	Fifth sitting	10	90.0	18	44.4	9	77.8	64	46.9	101	53.5
	Sixth sitting	3	66.7	1	100.0	4	75.0	17	17.6	25	36.0
	Total sittings	4645	86.0	5428	85.9	4926	85.1	5749	79.3	20748	83.9
Numeracy	First sitting	4054	93.1	4724	93.2	4260	95.2	4585	92.5	17623	93.5
	Second sitting	351	63.5	288	58.3	300	69.0	421	64.6	1360	64.0
	Third sitting	118	66.1	112	54.5	98	67.3	239	59.8	567	61.4
	Fourth sitting	36	75.0	35	80.0	27	77.8	141	63.8	239	69.5
	Fifth sitting	6	66.7	13	76.9	9	55.6	21	81.0	49	73.5
	Sixth sitting	0	-	2	50.0	0	-	6	33.3	8	37.5
	Seventh sitting	0	-	0	-	0	-	1	100.0	1	100.0
	Totals sittings	4565	90.0	5174	90.3	4694	92.8	5414	88.0	19847	90.2

² The 2021 and 2022 pass rates for first-time candidates in literacy and numeracy reported for comparison purposes in this paragraph are taken from the LANTITE technical reports for those years.

Resitting candidates

Under the standard resit allowance, candidates who do not achieve the standard on their first attempt are permitted up to two additional sittings. In a small number of cases, more than two resits may be granted in exceptional circumstances.

In 2023, the number of resits for the literacy component increased from the 2022 numbers but decreased for the numeracy component. In 2023, there were 3,138 resits of the literacy component (up from 2,628 resits in 2022) and 2,224 resits of the numeracy component (slightly down from 2,306 resits in 2022). For literacy, there were 1,908 second attempts, 763 third attempts, 386 fourth attempts, 101 fifth attempts and 25 sixth attempts (compared to 1,766, 628, 179, 52 and 0 respectively in 2022). For numeracy, the resit numbers were 1,360 second attempts, 567 third attempts, 239 fourth attempts, 49 fifth attempts, 8 sixth attempts and 1 seventh attempt (compared to 1,565, 560, 142, 39, 0 and 0 respectively in 2022).

There were a small number of candidates in 2023 who had sixth attempts (3 for literacy, 2 for numeracy), a 7th attempt (1 for numeracy) and an 8th attempt (1 for numeracy).

Table 6 shows the proportion of candidates by test window who did not achieve the standard in 2023 after one or more attempts.

Table 6: Numbers and percentages of candidates who did not achieve the standard, by test window

Test Window	Component	Number	% of Candidates
TW1	Literacy	649	14.0
	Numeracy	458	10.0
	Both	141	3.9
TW2	Literacy	766	14.1
	Numeracy	502	9.7
	Both	177	4.2
TW3	Literacy	734	14.9
	Numeracy	338	7.2
	Both	117	3.1
TW4	Literacy	1190	20.7
	Numeracy	648	12.0
	Both	241	5.8

Candidates' results for 2023 are described in more detail in Section 3 of this report.

1.3 Test design and in-test trialling for replenishment of item pool

In the first half of 2023, in test windows 1 and 2, there were 18 equivalent test forms for literacy and 18 equivalent test forms for numeracy. In the second half of 2023, in test windows 3 and 4, a proportion of the test forms were refreshed using items that were trialled in the previous cycle. In these two test windows, there were 22 equivalent test forms for literacy and 20 equivalent test forms for numeracy.

For literacy, each test form was comprised of five 12-item clusters (C1 to C5), totalling 60 items. For numeracy, the test was divided into two sections as follows: section 1 ('calculator available' – CA), comprised of four 12-item clusters (48 items); and section 2 ('calculator not available' – CN), comprised of two 6-item clusters (12 items). The two sections together totalled 60 items.

To augment and replenish the pool of items available for the test in future administrations, items were trial-tested within the live instruments. These items were administered in small clusters (one to five items) and did not contribute to the candidates' scores. Examples of one literacy test and one numeracy test with in-test trial clusters are shown below.

Literacy	C1	C2	C3	C4	C5	Trial C
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	Section 1					Section 2		
Numeracy	CA1	CA2	CA3	CA4	Trial CA	CN1	CN2	Trial CN

In the second half of 2023 and the first half of 2024, 102 Phase 9 literacy items and 96 Phase 9 numeracy items were in-test trialled. Each trial item was administered to approximately 800 candidates on average. A sufficient number of items were well-targeted for difficulty across the three reporting bands, as required by the test construct and assessment framework, thereby ensuring adequate test replenishment.

2 Test Administration Windows 1–4 in 2023

This section covers the demographic characteristics of candidates who sat the test in 2023. Details on test centres, remote proctoring and other administrative matters can be found in each of the four 2023 test window administration reports submitted separately throughout 2023.

2.1 Demographic characteristics of candidates

Approximately 21,500 candidates from the following 48 institutions sat the test in 2023, which is one more institution than in 2022 (the additional institution in 2023 was Morling College):

Alphacrucis College	Murdoch University
Australian Catholic University	Queensland University of Technology
Australian College of Physical Education	RMIT University
Avondale University	Southern Cross University
Central Queensland University	Swinburne University of Technology
Charles Darwin University	Tabor Adelaide
Charles Sturt University	The University of Adelaide
Christian Heritage College	The University of Melbourne
Curtin University	The University of New England
Deakin University	The University of New South Wales
Eastern College Australia	The University of Newcastle
Edith Cowan University	The University of Notre Dame Australia
Excelsia College	The University of Queensland
Federation University Australia	The University of Sydney
Flinders University	The University of Western Australia
Griffith University	University of Canberra
Holmesglen TAFE	University of South Australia
James Cook University	University of Southern Queensland
La Trobe University	University of Tasmania
Macquarie University	University of Technology Sydney
Melbourne Polytechnic	University of the Sunshine Coast
Monash University	University of Wollongong
Montessori World Educational Institute	Victoria University
Morling College	Western Sydney University

Table 7 shows the demographic characteristics of all candidates who sat the test in 2023. This includes candidates who first registered for the test in 2023, plus those who registered in the period 2016–2022 and resat the test in 2023. It shows that the demographic characteristics for the candidates who attempted the literacy and numeracy components were very similar.

The majority of candidates who attempted the literacy component (74.4% for literacy, 62.5% for numeracy)³ were female, resided in metropolitan areas (80.4% for literacy, 80.3% for numeracy) and most were in the age group 17–25 (62.4% for literacy, 62.5% for numeracy). The majority of candidates (66.6% for literacy, 66.3% for numeracy) were enrolled in an undergraduate course. Of these, the greatest number of undergraduate candidates were those in their third year. Over half of the postgraduate candidates who attempted the literacy and numeracy components in 2023 were those in their first year. In regard to course category, candidates were mainly enrolled in primary teacher education courses (42.7% for literacy, 43.1% for numeracy), followed by secondary (37.6% for literacy, 37.4% for numeracy), other teacher education courses (12.3% for literacy, 12.1% for numeracy), early childhood (6.8% for literacy, 6.7% for numeracy) and special education (less than 1% for both literacy and numeracy).

The proportion of international candidates attempting the test in 2023 was very similar to 2022 (7.7% for literacy, 6.9% for numeracy). The proportion of candidates who identify as Indigenous and the proportion from regional areas were very similar to previous years at 2.2% for both literacy and numeracy, and 18.4% for literacy and 18.5% for numeracy, respectively.

³ In the descriptive text accompanying the tables throughout the report, most percentages are rounded to the nearest whole per cent.

Table 7: Demographic characteristics of unique candidates in 2023 (including 2016–22 resitters)

Characteristic	Category	Literacy		Numeracy	
		N	%	N	%
Gender	Female	14372	74.4	14286	74.9
	Male	4910	25.4	4761	25.0
	Indeterminate/intersex	30	0.2	32	0.2
Age	17–25	12048	62.4	11932	62.5
	26–30	2789	14.4	2800	14.7
	31–35	1643	8.5	1605	8.4
	36–40	1199	6.2	1165	6.1
	41–45	829	4.3	790	4.1
	46+	804	4.2	787	4.1
International Students	No	17831	92.3	17765	93.1
	Yes	1481	7.7	1314	6.9
English as a First Language	Yes	16043	83.1	16173	84.8
	No	3269	16.9	2906	15.2
Indigenous	No	18596	96.3	18364	96.3
	Yes	429	2.2	426	2.2
	Not disclosed	287	1.5	289	1.5
Residential Area ⁴	Metropolitan areas	15529	80.4	15315	80.3
	Regional areas	3545	18.4	3530	18.5
	Remote areas	169	0.9	166	0.9
	International	23	0.1	23	0.1
	Invalid or Missing	46	0.2	45	0.2
Program Type	Undergraduate	12853	66.6	12651	66.3
	Postgraduate	6440	33.3	6408	33.6
	Pathway	19	0.1	20	0.1
Program Type by Year Level	Undergraduate first year	1742	9.0	1723	9.0
	Undergraduate second year	3738	19.4	3631	19.0
	Undergraduate third year	4484	23.2	4352	22.8
	Undergraduate fourth year	2323	12.0	2369	12.4
	Undergraduate fifth year or above	457	2.4	471	2.5
	Undergraduate graduated	109	0.6	105	0.6
	Postgraduate first year	3452	17.9	3462	18.1
	Postgraduate second year	2096	10.9	2043	10.7
	Postgraduate third year	384	2.0	385	2.0
	Postgraduate fourth year	228	1.2	231	1.2
	Postgraduate fifth year or above	205	1.1	216	1.1
	Postgraduate graduated	75	0.4	71	0.4
	Pathway first year	4	0.0	4	0.0
	Pathway second year	5	0.0	4	0.0
	Pathway third year	2	0.0	5	0.0
	Pathway fourth year	5	0.0	6	0.0
	Pathway fifth year or above	1	0.0	0	0.0
	Pathway graduated	2	0.0	1	0.0
Course Category	Teacher education: early childhood	1310	6.8	1282	6.7
	Teacher education: primary	8241	42.7	8217	43.1
	Teacher education: secondary	7252	37.6	7140	37.4
	Teacher education: special education	143	0.7	136	0.7
	Teacher education: other	2366	12.3	2304	12.1

The following demographic analysis separates the 2023 candidates into five groups for each component of the test: first-attempt candidates, second-attempt candidates (first resit), third-attempt candidates (second resit),

⁴ The residential area classification is based on the Australian Statistical Geography Standard [ASGS] and is mapped from a candidate's jurisdiction and postcode. 'Metropolitan' areas include Major cities of Australia, Major cities to Inner and Outer Regional Australia. 'Regional' areas include Inner and Outer Regional Australia. 'Remote' areas include Remote to Very Remote Australia.

fourth-attempt candidates (third resit), fifth-attempt candidates (fourth resit) and candidates who achieved no standard.

Table 8 shows the demographic characteristics of the first-attempt candidates for each component of the test in 2023. The demographic characteristics of this cohort are very similar to those described in Table 7 above.

Table 9 shows the demographic characteristics of the candidates who sat the test for a second time (first resit) during 2023. It shows that the overwhelming majority of these resit candidates were female (84% for literacy, 91% for numeracy) and mostly in the age group 17–25 (63% for literacy, 64% for numeracy). This result is similar to the results seen in previous technical reports. The proportion of females in the second-attempt cohort exceeded the proportion in the first-attempt cohort (74%). The majority of second-attempt candidates were enrolled in an undergraduate course (73.4% for literacy, 77.2% for numeracy), similar to 2022. These proportions exceed the proportion of undergraduate candidates in the first-attempt cohort (65.6% for literacy, 65.4% for numeracy).

In comparing Table 9 with Table 8, the proportion of second-attempt candidates for whom English was not their first language was more than double that of first-attempt candidates for literacy (34% compared to 15%). For numeracy, the difference was considerably less (18% compared to 15%). It can also be seen that the proportion of candidates from early childhood courses in the second-attempt cohort was 14% for literacy, more than double the proportion for literacy in the first-attempt cohort (6%). For numeracy, the proportions were 11% compared to 6% respectively.

Table 10 shows the demographic characteristics of the third-attempt candidates in 2023. Consistent with the second-attempt candidates, this cohort tended to be mostly female, undergraduates, and aged 17–25. Furthermore, in keeping with the second-attempt cohort, these categories are more highly represented than in the first-attempt cohort.

Table 10 also shows that, for literacy, English was not the first language of 43.8% of the third-attempt candidates, whereas the proportion was only 14.9% for the first-attempt candidates (as shown in Table 8). For numeracy, English was not the first language of 18.9% of the third-attempt candidates, also higher than the proportion (15.1%) of the first-attempt candidates. The proportion of candidates from early childhood courses in the third-attempt cohort was 18% for literacy, triple the proportion for literacy in the first-attempt cohort (6%). The proportion of candidates from early childhood courses in the third-attempt cohort for numeracy was 13%, more than double that of the first-attempt cohort (6%).

Table 11 shows demographic characteristics of the small number of candidates (386 literacy, 239 numeracy) who were authorised to sit the test for the fourth time in 2023. Again, this cohort was mostly female candidates (86% literacy and 91.6% numeracy). For literacy, the proportions of candidates in this cohort for whom English was not their first language (49%) were considerably higher than the proportions of the first-attempt cohort (14.9% as shown in Table 8). For numeracy, the proportions of candidates in this cohort for whom English was not their first language (18%) were slightly higher than the proportions of the first-attempt cohort (15.1% as shown in Table 8).

In 2023, a very small number of candidates (81 for literacy, 43 for numeracy) were granted fifth attempts (Table 12). Note that the numbers are too small to make any meaningful observations.

Table 8: Demographic characteristics of first-attempt candidates in 2023

Characteristic	Category	Literacy		Numeracy	
		N	%	N	%
Gender	Female	12906	73.5	12964	73.6
	Male	4629	26.4	4629	26.3
	Indeterminate/intersex	30	0.2	30	0.2
Age	17–25	11085	63.1	11114	63.1
	26–30	2486	14.2	2515	14.3
	31–35	1461	8.3	1473	8.4
	36–40	1100	6.3	1097	6.2
	41–45	727	4.1	722	4.1
	46+	706	4.0	702	4.0
International Students	No	16324	92.9	16356	92.8
	Yes	1241	7.1	1267	7.2
English as a First Language	Yes	14940	85.1	14968	84.9
	No	2625	14.9	2655	15.1
Indigenous	No	16934	96.4	16985	96.4
	Yes	371	2.1	366	2.1
	Not disclosed	260	1.5	272	1.5
Residential Area	Metropolitan areas	14088	80.2	14130	80.2
	Regional areas	3266	18.6	3284	18.6
	Remote areas	145	0.8	144	0.8
	International	24	0.1	23	0.1
	Invalid or Missing	42	0.2	42	0.2
Program Type	Undergraduate	11527	65.6	11520	65.4
	Postgraduate	6020	34.3	6084	34.5
	Pathway	18	0.1	19	0.1
Program Type by Year Level	Undergraduate first year	1735	9.9	1716	9.7
	Undergraduate second year	3628	20.7	3565	20.2
	Undergraduate third year	4026	22.9	4003	22.7
	Undergraduate fourth year	1794	10.2	1886	10.7
	Undergraduate fifth year or above	279	1.6	293	1.7
	Undergraduate graduated	65	0.4	57	0.3
	Postgraduate first year	3426	19.5	3451	19.6
	Postgraduate second year	1861	10.6	1896	10.8
	Postgraduate third year	331	1.9	334	1.9
	Postgraduate fourth year	193	1.1	190	1.1
	Postgraduate fifth year or above	158	0.9	163	0.9
	Postgraduate graduated	51	0.3	50	0.3
	Pathway first year	6	0.0	7	0.0
	Pathway second year	4	0.0	4	0.0
	Pathway third year	2	0.0	2	0.0
	Pathway fourth year	5	0.0	5	0.0
	Pathway fifth year or above	0	0.0	0	0.0
	Pathway graduated	1	0.0	1	0.0
Course Category	Teacher education: early childhood	1051	6.0	1094	6.2
	Teacher education: primary	7441	42.4	7454	42.3
	Teacher education: secondary	6824	38.8	6837	38.8
	Teacher education: special education	124	0.7	120	0.7
	Teacher education: other	2125	12.1	2118	12.0

Table 9: Demographic characteristics of second-attempt candidates in 2023⁵

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sitzings	N	%	% of Total Sitzings
Gender	Female	1604	84.1	7.7	1237	91.0	6.2
	Male	304	15.9	1.5	122	9.0	0.6
	Indeterminate/intersex	0	0.0	0.0	1	0.1	0.0
Age	17–25	1202	63.0	5.8	871	64.0	4.4
	26–30	266	13.9	1.3	227	16.7	1.1
	31–35	169	8.9	0.8	102	7.5	0.5
	36–40	106	5.6	0.5	54	4.0	0.3
	41–45	79	4.1	0.4	46	3.4	0.2
	46+	86	4.5	0.4	60	4.4	0.3
International Students	No	1584	83.0	7.6	1302	95.7	6.6
	Yes	324	17.0	1.6	58	4.3	0.3
English as a First Language	Yes	1251	65.6	6.0	1117	82.1	5.6
	No	657	34.4	3.2	243	17.9	1.2
Indigenous	No	1824	95.6	8.8	1300	95.6	6.6
	Yes	58	3.0	0.3	42	3.1	0.2
	Not disclosed	26	1.4	0.1	18	1.3	0.1
Residential Area	Metropolitan areas	1588	83.2	7.7	1121	82.4	5.6
	Regional areas	294	15.4	1.4	221	16.2	1.1
	Remote areas	22	1.2	0.1	15	1.1	0.1
	International	0	0.0	0.0	0	0.0	0.0
	Invalid or Missing	4	0.2	0.0	3	0.2	0.0
Program Type	Undergraduate	1400	73.4	6.7	1050	77.2	5.3
	Postgraduate	505	26.5	2.4	306	22.5	1.5
	Pathway	3	0.2	0.0	4	0.3	0.0
Program Type by Year Level	Undergraduate first year	78	4.1	0.4	38	2.8	0.2
	Undergraduate second year	243	12.7	1.2	134	9.9	0.7
	Undergraduate third year	594	31.1	2.9	432	31.8	2.2
	Undergraduate fourth year	383	20.1	1.8	358	26.3	1.8
	Undergraduate fifth year or above	76	4.0	0.4	69	5.1	0.3
	Undergraduate graduated	26	1.4	0.1	19	1.4	0.1
	Postgraduate first year	183	9.6	0.9	46	3.4	0.2
	Postgraduate second year	220	11.5	1.1	151	11.1	0.8
	Postgraduate third year	37	1.9	0.2	39	2.9	0.2
	Postgraduate fourth year	23	1.2	0.1	29	2.1	0.1
	Postgraduate fifth year or above	28	1.5	0.1	29	2.1	0.1
	Postgraduate graduated	14	0.7	0.1	12	0.9	0.1
	Pathway first year	0	0.0	0.0	0	0.0	0.0
	Pathway second year	2	0.1	0.0	0	0.0	0.0
	Pathway third year	0	0.0	0.0	3	0.2	0.0
	Pathway fourth year	0	0.0	0.0	1	0.1	0.0
	Pathway fifth year or above	1	0.1	0.0	0	0.0	0.0
	Pathway graduated	0	0.0	0.0	0	0.0	0.0
Course Category	Teacher education: early childhood	261	13.7	1.3	155	11.4	0.8
	Teacher education: primary	870	45.6	4.2	705	51.8	3.6
	Teacher education: secondary	477	25.0	2.3	284	20.9	1.4
	Teacher education: special education	14	0.7	0.1	9	0.7	0.0
	Teacher education: other	286	15.0	1.4	207	15.2	1.0

⁵ Includes second-attempt candidates who had originally registered before 2023, between 2016 and 2022. Note that any candidates counted in Table 8 who were not successful on their first attempt in 2023 would be counted again in this table.

Table 10: Demographic characteristics of third-attempt candidates in 2023⁶

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sittings	N	%	% of Total Sittings
Gender	Female	655	85.8	3.2	521	91.9	2.6
	Male	108	14.2	0.5	45	7.9	0.2
	Indeterminate/intersex	0	0.0	0.0	1	0.2	0.0
Age	17–25	433	56.7	2.1	304	53.6	1.5
	26–30	119	15.6	0.6	118	20.8	0.6
	31–35	70	9.2	0.3	54	9.5	0.3
	36–40	53	6.9	0.3	31	5.5	0.2
	41–45	45	5.9	0.2	28	4.9	0.1
	46+	43	5.6	0.2	32	5.6	0.2
International Students	No	614	80.5	3.0	555	97.9	2.8
	Yes	149	19.5	0.7	12	2.1	0.1
English as a First Language	Yes	429	56.2	2.1	460	81.1	2.3
	No	334	43.8	1.6	107	18.9	0.5
Indigenous	No	732	95.9	3.5	533	94.0	2.7
	Yes	20	2.6	0.1	26	4.6	0.1
	Not disclosed	11	1.4	0.1	8	1.4	0.0
Residential Area	Metropolitan areas	635	83.2	3.1	469	82.7	2.4
	Regional areas	118	15.5	0.6	87	15.3	0.4
	Remote areas	9	1.2	0.0	10	1.8	0.1
	International	0	0.0	0.0	0	0.0	0.0
	Invalid or Missing	1	0.1	0.0	1	0.2	0.0
Program Type	Undergraduate	539	70.6	2.6	433	76.4	2.2
	Postgraduate	223	29.2	1.1	134	23.6	0.7
	Pathway	1	0.1	0.0	0	0.0	0.0
Program Type by Year Level	Undergraduate first year	12	1.6	0.1	3	0.5	0.0
	Undergraduate second year	61	8.0	0.3	33	5.8	0.2
	Undergraduate third year	178	23.3	0.9	96	16.9	0.5
	Undergraduate fourth year	200	26.2	1.0	194	34.2	1.0
	Undergraduate fifth year or above	72	9.4	0.3	89	15.7	0.4
	Undergraduate graduated	16	2.1	0.1	18	3.2	0.1
	Postgraduate first year	48	6.3	0.2	1	0.2	0.0
	Postgraduate second year	113	14.8	0.5	63	11.1	0.3
	Postgraduate third year	23	3.0	0.1	28	4.9	0.1
	Postgraduate fourth year	17	2.2	0.1	13	2.3	0.1
	Postgraduate fifth year or above	14	1.8	0.1	22	3.9	0.1
	Postgraduate graduated	8	1.0	0.0	7	1.2	0.0
	Pathway first year	0	0.0	0.0	0	0.0	0.0
	Pathway second year	0	0.0	0.0	0	0.0	0.0
	Pathway third year	0	0.0	0.0	0	0.0	0.0
	Pathway fourth year	0	0.0	0.0	0	0.0	0.0
	Pathway fifth year or above	0	0.0	0.0	0	0.0	0.0
	Pathway graduated	1	0.1	0.0	0	0.0	0.0
Course Category	Teacher education: early childhood	135	17.7	0.7	75	13.2	0.4
	Teacher education: primary	345	45.2	1.7	299	52.7	1.5
	Teacher education: secondary	171	22.4	0.8	107	18.9	0.5
	Teacher education: special education	10	1.3	0.0	9	1.6	0.0
	Teacher education: other	102	13.4	0.5	77	13.6	0.4

⁶ Includes third-attempt candidates who had originally registered before 2023, between 2016 and 2022. Note that any candidates counted in Table 8 and Table 9 who were not successful on their first or second attempts in 2023 would be counted again in this table.

Table 11: Demographic characteristics of fourth-attempt candidates in 2023⁷

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sittings	N	%	% of Total Sittings
Gender	Female	332	86.0	1.6	219	91.6	1.1
	Male	54	14.0	0.3	19	7.9	0.1
	Indeterminate/intersex	0	0.0	0.0	1	0.4	0.0
Age	17–25	177	45.9	0.9	111	46.4	0.6
	26–30	87	22.5	0.4	54	22.6	0.3
	31–35	48	12.4	0.2	25	10.5	0.1
	36–40	26	6.7	0.1	16	6.7	0.1
	41–45	30	7.8	0.1	13	5.4	0.1
	46+	18	4.7	0.1	20	8.4	0.1
International Students	No	299	77.5	1.4	233	97.5	1.2
	Yes	87	22.5	0.4	6	2.5	0.0
English as a First Language	Yes	198	51.3	1.0	195	81.6	1.0
	No	188	48.7	0.9	44	18.4	0.2
Indigenous	No	372	96.4	1.8	229	95.8	1.2
	Yes	9	2.3	0.0	9	3.8	0.0
	Not disclosed	5	1.3	0.0	1	0.4	0.0
Residential Area	Metropolitan areas	314	81.3	1.5	188	78.7	0.9
	Regional areas	64	16.6	0.3	45	18.8	0.2
	Remote areas	7	1.8	0.0	6	2.5	0.0
	International	1	0.3	0.0	0	0.0	0.0
	Invalid or Missing	0	0.0	0.0	0	0.0	0.0
Program Type	Undergraduate	276	71.5	1.3	177	74.1	0.9
	Postgraduate	110	28.5	0.5	62	25.9	0.3
	Pathway	0	0.0	0.0	0	0.0	0.0
Program Type by Year Level	Undergraduate first year	2	0.5	0.0	0	0.0	0.0
	Undergraduate second year	13	3.4	0.1	5	2.1	0.0
	Undergraduate third year	61	15.8	0.3	16	6.7	0.1
	Undergraduate fourth year	124	32.1	0.6	97	40.6	0.5
	Undergraduate fifth year or above	59	15.3	0.3	42	17.6	0.2
	Undergraduate graduated	17	4.4	0.1	17	7.1	0.1
	Postgraduate first year	9	2.3	0.0	2	0.8	0.0
	Postgraduate second year	53	13.7	0.3	25	10.5	0.1
	Postgraduate third year	16	4.1	0.1	7	2.9	0.0
	Postgraduate fourth year	9	2.3	0.0	8	3.3	0.0
	Postgraduate fifth year or above	15	3.9	0.1	14	5.9	0.1
	Postgraduate graduated	8	2.1	0.0	6	2.5	0.0
	Pathway first year	0	0.0	0.0	0	0.0	0.0
	Pathway second year	0	0.0	0.0	0	0.0	0.0
	Pathway third year	0	0.0	0.0	0	0.0	0.0
	Pathway fourth year	0	0.0	0.0	0	0.0	0.0
	Pathway fifth year or above	0	0.0	0.0	0	0.0	0.0
	Pathway graduated	0	0.0	0.0	0	0.0	0.0
Course Category	Teacher education: early childhood	70	18.1	0.3	37	15.5	0.2
	Teacher education: primary	171	44.3	0.8	127	53.1	0.6
	Teacher education: secondary	88	22.8	0.4	49	20.5	0.2

⁷ Includes fourth-attempt candidates who had originally registered before 2023, between 2016 and 2022. Note that any candidates counted in Table 8, Table 9, and Table 10 who were not successful on their first, second or third attempts in 2023 would be counted again in this table.

Teacher education: special education	3	0.8	0.0	2	0.8	0.0
Teacher education: other	54	14.0	0.3	24	10.0	0.1

Table 12: Demographic characteristics of fifth-attempt candidates who sat the test in 2023

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sittings	N	%	% of Total Sittings
Gender	Female	81	80.2	0.4	43	87.8	0.2
	Male	20	19.8	0.1	6	12.2	0.0
	Indeterminate/intersex	0	0.0	0.0	0	0.0	0.0
Age	17–25	29	28.7	0.1	23	46.9	0.1
	26–30	32	31.7	0.2	10	20.4	0.1
	31–35	18	17.8	0.1	4	8.2	0.0
	36–40	10	9.9	0.0	2	4.1	0.0
	41–45	5	5.0	0.0	5	10.2	0.0
	46+	7	6.9	0.0	5	10.2	0.0
International Students	No	71	70.3	0.3	47	95.9	0.2
	Yes	30	29.7	0.1	2	4.1	0.0
English as a First Language	Yes	41	40.6	0.2	40	81.6	0.2
	No	60	59.4	0.3	9	18.4	0.0
Indigenous	No	96	95.0	0.5	46	93.9	0.2
	Yes	4	4.0	0.0	3	6.1	0.0
	Not disclosed	1	1.0	0.0	0	0.0	0.0
Residential Area	Metropolitan areas	80	79.2	0.4	39	79.6	0.2
	Regional areas	18	17.8	0.1	8	16.3	0.0
	Remote areas	3	3.0	0.0	2	4.1	0.0
	International	0	0.0	0.0	0	0.0	0.0
	Invalid or Missing	0	0.0	0.0	0	0.0	0.0
Program Type	Undergraduate	62	61.4	0.3	36	73.5	0.2
	Postgraduate	39	38.6	0.2	13	26.5	0.1
	Pathway	0	0.0	0.0	0	0.0	0.0
Program Type by Year Level	Undergraduate first year	0	0.0	0.0	0	0.0	0.0
	Undergraduate second year	0	0.0	0.0	0	0.0	0.0
	Undergraduate third year	11	10.9	0.1	1	2.0	0.0
	Undergraduate fourth year	25	24.8	0.1	19	38.8	0.1
	Undergraduate fifth year or above	19	18.8	0.1	10	20.4	0.1
	Undergraduate graduated	7	6.9	0.0	6	12.2	0.0
	Postgraduate first year	0	0.0	0.0	2	4.1	0.0
	Postgraduate second year	22	21.8	0.1	4	8.2	0.0
	Postgraduate third year	3	3.0	0.0	0	0.0	0.0
	Postgraduate fourth year	2	2.0	0.0	1	2.0	0.0
	Postgraduate fifth year or above	6	5.9	0.0	3	6.1	0.0
	Postgraduate graduated	6	5.9	0.0	3	6.1	0.0
	Pathway first year	0	0.0	0.0	0	0.0	0.0
	Pathway second year	0	0.0	0.0	0	0.0	0.0
	Pathway third year	0	0.0	0.0	0	0.0	0.0
	Pathway fourth year	0	0.0	0.0	0	0.0	0.0
	Pathway fifth year or above	0	0.0	0.0	0	0.0	0.0
	Pathway graduated	0	0.0	0.0	0	0.0	0.0
Course Category	Teacher education: early childhood	16	15.8	0.1	7	14.3	0.0
	Teacher education: primary	38	37.6	0.2	24	49.0	0.1
	Teacher education: secondary	31	30.7	0.1	14	28.6	0.1

Teacher education: special education	2	2.0	0.0	2	4.1	0.0
Teacher education: other	14	13.9	0.1	2	4.1	0.0

Table 13 shows the demographic characteristics for the candidates who had not achieved the standard at the end of 2023 (for literacy and numeracy separately). By the end of 2023, there were 1,903 candidates who had not achieved the literacy standard and 1,178 candidates who had not achieved the numeracy standard. The demographics of this group are similar to those of the previously described resit cohorts.

Those candidates who had not achieved either standard by the end of 2023 had up to six attempts at the test, as shown in Table 14 (for literacy) and Table 15 (for numeracy). It is expected that some of these candidates will resit the test again in 2024.

Table 13: Demographic characteristics of candidates who had not achieved the standard by the end of 2023, for literacy and numeracy

Characteristic	Category	Literacy			Numeracy		
		N	%	% of Total Sittings	N	%	% of Total Sittings
Gender	Female	1596	83.9	7.7	1072	91.0	5.4
	Male	307	16.1	1.5	106	9.0	0.5
	Indeterminate/intersex	0	0.0	0.0	0	0.0	0.0
Age	17–25	1074	56.4	5.2	677	57.5	3.4
	26–30	297	15.6	1.4	218	18.5	1.1
	31–35	184	9.7	0.9	103	8.7	0.5
	36–40	129	6.8	0.6	53	4.5	0.3
	41–45	117	6.1	0.6	54	4.6	0.3
	46+	102	5.4	0.5	73	6.2	0.4
International Students	No	1577	82.9	7.6	1137	96.5	5.7
	Yes	326	17.1	1.6	41	3.5	0.2
English as a First Language	Yes	1102	57.9	5.3	942	80.0	4.7
	No	801	42.1	3.9	236	20.0	1.2
Indigenous	No	1809	95.1	8.7	1125	95.5	5.7
	Yes	60	3.2	0.3	37	3.1	0.2
	Not disclosed	34	1.8	0.2	16	1.4	0.1
Residential Area	Metropolitan areas	1573	82.7	7.6	968	82.2	4.9
	Regional areas	302	15.9	1.5	194	16.5	1.0
	Remote areas	24	1.3	0.1	13	1.1	0.1
	International	0	0.0	0.0	0	0.0	0.0
	Invalid or Missing	4	0.2	0.0	3	0.3	0.0
Program Type	Undergraduate	1391	73.1	6.7	913	77.5	4.6
	Postgraduate	512	26.9	2.5	264	22.4	1.3
	Pathway	0	0.0	0.0	1	0.1	0.0
Program Type by Year Level	Undergraduate first year	200	10.5	1.0	113	9.6	0.6
	Undergraduate second year	395	20.8	1.9	223	18.9	1.1
	Undergraduate third year	435	22.9	2.1	302	25.6	1.5
	Undergraduate fourth year	251	13.2	1.2	188	16.0	0.9
	Undergrad fifth year or above	90	4.7	0.4	67	5.7	0.3
	Undergrad graduated	20	1.1	0.1	20	1.7	0.1
	Postgraduate first year	204	10.7	1.0	82	7.0	0.4
	Postgraduate second year	184	9.7	0.9	89	7.6	0.4
	Postgraduate third year	44	2.3	0.2	31	2.6	0.2
	Postgraduate fourth year	31	1.6	0.1	29	2.5	0.1

Course Category	Postgrad fifth year or above	33	1.7	0.2	24	2.0	0.1
	Postgraduate graduated	16	0.8	0.1	9	0.8	0.0
	Pathway first year	0	0.0	0.0	0	0.0	0.0
	Pathway second year	0	0.0	0.0	0	0.0	0.0
	Pathway third year	0	0.0	0.0	1	0.1	0.0
	Pathway fourth year	0	0.0	0.0	0	0.0	0.0
	Pathway fifth year or above	0	0.0	0.0	0	0.0	0.0
	Pathway graduated	0	0.0	0.0	0	0.0	0.0
	Early childhood	262	13.8	1.3	154	13.1	0.8
	Primary	850	44.7	4.1	597	50.7	3.0
	Secondary	467	24.5	2.3	244	20.7	1.2
	Special education	15	0.8	0.1	9	0.8	0.0
	Other	309	16.2	1.5	174	14.8	0.9

Table 14: Number of attempts by candidates who had not achieved the literacy standard by the end of 2023

Year of registration	At end of	Number of 1-attempt candidates	Number of 2-attempt candidates	Number of 3-attempt candidates	Number of 4-attempt candidates	Number of 5-attempt candidates	Number of 6-attempt candidates	Number of 7-attempt candidates	Number of 8-attempt candidates
2016	2017	136	50	18	10	0	0	0	0
2016	2018	0	5	4	15	4	0	0	0
2016	2019	0	3	11	3	6	0	0	0
2016	2020	0	0	1	4	0	0	0	0
2016	2021	0	1	2	2	0	0	0	0
2016	2022	0	0	1	0	0	0	0	0
2016	2023	0	0	1	1	1	1	0	0
2017	2018	325	143	119	43	3	0	0	0
2017	2019	0	20	55	42	13	0	0	0
2017	2020	0	6	14	13	6	0	0	0
2017	2021	0	2	6	9	2	0	0	0
2017	2022	0	2	3	4	2	1	0	0
2017	2023	0	0	6	7	4	2	0	0
2018	2019	399	197	107	26	0	0	0	0
2018	2020	0	17	36	23	3	0	0	0
2018	2021	0	12	26	9	7	0	0	0
2018	2022	0	4	6	5	1	0	0	0
2018	2023	0	6	10	8	3	4	0	0
2019	2020	331	129	57	6	1	0	0	0
2019	2021	0	18	28	9	6	0	0	0
2019	2022	0	5	18	6	5	0	0	0
2019	2023	0	10	10	15	8	3	0	0
2020	2021	236	85	52	8	2	0	0	0
2020	2022	0	16	21	6	5	0	0	0
2020	2023	0	15	14	20	7	4	0	0
2021	2022	306	102	63	4	3	0	0	0
2021	2023	0	43	43	42	7	2	0	0
2022	2023	344	181	95	62	9	0	0	0
2023	2023	976	272	62	4	0	0	0	0

Table 15: Number of attempts by candidates who had not achieved the numeracy standard by the end of 2023

Year of registration	At end of	Number of 1-attempt candidates	Number of 2-attempt candidates	Number of 3-attempt candidates	Number of 4-attempt candidates	Number of 5-attempt candidates	Number of 6-attempt candidates	Number of 7-attempt candidates	Number of 8-attempt candidates
2016	2017	159	77	40	9	0	0	0	0
2016	2018	0	8	12	20	12	0	0	0
2016	2019	0	5	7	13	6	0	0	0
2016	2020	0	0	1	3	0	0	0	0
2016	2021	0	2	1	1	1	0	0	0
2016	2022	0	0	0	0	2	0	0	1
2016	2023	0	0	1	2	0	0	0	0
2017	2018	337	171	122	36	3	0	0	0
2017	2019	0	26	48	35	15	0	0	0
2017	2020	0	8	13	9	5	0	0	0
2017	2021	0	2	9	6	2	0	0	0
2017	2022	0	4	5	2	1	0	0	0
2017	2023	0	3	5	4	1	1	0	0
2018	2019	446	229	110	21	0	0	0	0
2018	2020	0	22	47	19	8	0	0	0
2018	2021	0	13	19	7	3	0	0	0
2018	2022	0	7	3	3	3	0	0	0
2018	2023	0	3	9	3	1	0	0	0
2019	2020	382	139	59	4	1	0	0	0
2019	2021	0	25	32	7	1	0	0	0
2019	2022	0	13	15	7	3	0	0	0
2019	2023	0	3	13	8	4	1	0	0
2020	2021	228	83	41	5	0	0	0	0
2020	2022	0	18	16	5	2	0	0	0
2020	2023	0	8	21	7	0	0	0	0
2021	2022	335	117	58	2	2	0	0	0
2021	2023	0	27	37	16	2	2	0	0
2022	2023	346	143	56	16	0	0	0	0
2023	2023	679	121	22	2	0	0	0	0

2.2 Demographic characteristics of candidates by test windows

In 2023, the number of candidates presenting at each test window for literacy were similar across the four windows. There were minimal differences between subgroups as can be seen in Table 16.

Table 16: Demographic characteristics of candidates by test windows, literacy

Characteristic	Category	TW1		TW2		TW3		TW4	
		N	%	N	%	N	%	N	%
Gender	Female	3537	76.1	4005	73.8	3669	74.5	4389	76.3
	Male	1102	23.7	1414	26.1	1250	25.4	1352	23.5
	Indeterminate/intersex	6	0.1	9	0.2	7	0.1	8	0.1
Age	17–25	2861	61.6	3583	66.0	3103	63.0	3385	58.9
	26–30	681	14.7	744	13.7	732	14.9	839	14.6
	31–35	421	9.1	415	7.6	394	8.0	540	9.4
	36–40	304	6.5	313	5.8	276	5.6	404	7.0
	41–45	211	4.5	187	3.4	200	4.1	289	5.0
	46+	167	3.6	186	3.4	221	4.5	292	5.1
International Students	No	4352	93.7	4917	90.6	4450	90.3	5195	90.4
	Yes	293	6.3	511	9.4	476	9.7	554	9.6
English as a First Language	Yes	3903	84.0	4448	81.9	4020	81.6	4501	78.3
	No	742	16.0	980	18.1	906	18.4	1248	21.7
Indigenous	No	4450	95.8	5255	96.8	4752	96.5	5525	96.1
	Yes	112	2.4	106	2.0	108	2.2	136	2.4
	Not disclosed	83	1.8	67	1.2	66	1.3	88	1.5
Residential Area	Metropolitan areas	3758	80.9	4434	81.7	3911	79.4	4621	80.4
	Regional areas	827	17.8	934	17.2	951	19.3	1053	18.3
	Remote areas	38	0.8	44	0.8	49	1.0	55	1.0
	International	11	0.2	6	0.1	2	0.0	6	0.1
	Invalid or Missing	11	0.2	10	0.2	13	0.3	14	0.2
Program Type	Undergraduate	3164	68.1	3548	65.4	3225	65.5	3883	67.5
	Postgraduate	1459	31.4	1880	34.6	1701	34.5	1866	32.5
	Pathway	22	0.5	0	0.0	0	0.0	0	0.0
Program Type by Year Level	Undergraduate first year	115	2.5	577	10.6	571	11.6	564	9.8
	Undergraduate second year	650	14.0	1067	19.7	975	19.8	1253	21.8
	Undergraduate third year	1274	27.4	1133	20.9	1137	23.1	1327	23.1
	Undergraduate fourth year	905	19.5	643	11.8	434	8.8	548	9.5
	Undergraduate fifth year or above	125	2.7	115	2.1	98	2.0	171	3.0
	Undergraduate graduated	95	2.0	13	0.2	10	0.2	20	0.3
	Postgraduate first year	422	9.1	1123	20.7	1088	22.1	1033	18.0
	Postgraduate second year	740	15.9	526	9.7	437	8.9	568	9.9
	Postgraduate third year	115	2.5	113	2.1	73	1.5	111	1.9
	Postgraduate fourth year	52	1.1	61	1.1	59	1.2	73	1.3
	Postgraduate fifth year or above	66	1.4	48	0.9	38	0.8	69	1.2
	Postgraduate graduated	64	1.4	9	0.2	6	0.1	12	0.2
	Pathway first year	6	0.1	0	0.0	0	0.0	0	0.0
	Pathway second year	6	0.1	0	0.0	0	0.0	0	0.0
	Pathway third year	2	0.0	0	0.0	0	0.0	0	0.0
	Pathway fourth year	5	0.1	0	0.0	0	0.0	0	0.0
	Pathway fifth year or above	1	0.0	0	0.0	0	0.0	0	0.0
	Pathway graduated	2	0.0	0	0.0	0	0.0	0	0.0

Course Category	Early childhood	351	7.6	397	7.3	350	7.1	441	7.7
	Primary	2114	45.5	2144	39.5	2063	41.9	2555	44.4
	Secondary	1594	34.3	2196	40.5	1800	36.5	2007	34.9
	Special education	28	0.6	34	0.6	38	0.8	54	0.9
	Other	558	12.0	657	12.1	675	13.7	692	12.0

The observations and patterns described above for literacy candidates across the four test windows are also pertinent for numeracy, as shown in Table 17.

Table 17: Demographic characteristics of candidates by test windows, numeracy

Characteristic	Category	TW1		TW2		TW3		TW4	
		N	%	N	%	N	%	N	%
Gender	Female	3510	76.9	3826	73.9	3507	74.7	4150	76.7
	Male	1049	23.0	1337	25.8	1180	25.1	1255	23.2
	Indeterminate/intersex	6	0.1	11	0.2	7	0.1	9	0.2
Age	17–25	2803	61.4	3408	65.9	2964	63.1	3249	60.0
	26–30	697	15.3	752	14.5	679	14.5	799	14.8
	31–35	411	9.0	385	7.4	371	7.9	491	9.1
	36–40	294	6.4	276	5.3	286	6.1	344	6.4
	41–45	191	4.2	176	3.4	201	4.3	246	4.5
	46+	169	3.7	177	3.4	193	4.1	285	5.3
International Students	No	4348	95.2	4697	90.8	4368	93.1	5089	94.0
	Yes	217	4.8	477	9.2	326	6.9	325	6.0
English as a First Language	Yes	3973	87.0	4289	82.9	3986	84.9	4541	83.9
	No	592	13.0	885	17.1	708	15.1	873	16.1
Indigenous	No	4370	95.7	4998	96.6	4534	96.6	5197	96.0
	Yes	111	2.4	102	2.0	99	2.1	136	2.5
	Not disclosed	84	1.8	74	1.4	61	1.3	81	1.5
Residential Area	Metropolitan areas	3697	81.0	4208	81.3	3709	79.0	4340	80.2
	Regional areas	811	17.8	906	17.5	925	19.7	1004	18.5
	Remote areas	39	0.9	44	0.9	42	0.9	53	1.0
	International	8	0.2	6	0.1	2	0.0	7	0.1
	Invalid or Missing	10	0.2	10	0.2	16	0.3	10	0.2
Program Type	Undergraduate	3072	67.3	3301	63.8	3131	66.7	3719	68.7
	Postgraduate	1470	32.2	1873	36.2	1563	33.3	1695	31.3
	Pathway	23	0.5	0	0.0	0	0.0	0	0.0
Program Type by Year Level	Undergraduate first year	112	2.5	513	9.9	575	12.2	557	10.3
	Undergraduate second year	630	13.8	994	19.2	939	20.0	1174	21.7
	Undergraduate third year	1203	26.4	1035	20.0	1062	22.6	1248	23.1
	Undergraduate fourth year	918	20.1	639	12.4	449	9.6	550	10.2
	Undergraduate fifth year or above	129	2.8	114	2.2	99	2.1	164	3.0
	Undergraduate graduated	80	1.8	6	0.1	7	0.1	26	0.5
	Postgraduate first year	436	9.6	1151	22.2	954	20.3	961	17.8
	Postgraduate second year	751	16.5	493	9.5	425	9.1	471	8.7
	Postgraduate third year	116	2.5	111	2.1	74	1.6	108	2.0
	Postgraduate fourth year	49	1.1	56	1.1	65	1.4	71	1.3
	Postgraduate fifth year or above	63	1.4	53	1.0	38	0.8	77	1.4
	Postgraduate graduated	55	1.2	9	0.2	7	0.1	7	0.1
	Pathway first year	7	0.2	0	0.0	0	0.0	0	0.0
	Pathway second year	4	0.1	0	0.0	0	0.0	0	0.0

Course Category	Pathway third year	5	0.1	0	0.0	0	0.0	0	0.0
	Pathway fourth year	6	0.1	0	0.0	0	0.0	0	0.0
	Pathway fifth year or above	0	0.0	0	0.0	0	0.0	0	0.0
	Pathway graduated	1	0.0	0	0.0	0	0.0	0	0.0
	Early childhood	335	7.3	359	6.9	296	6.3	379	7.0
	Primary	2125	46.5	2035	39.3	2011	42.8	2445	45.2
	Secondary	1562	34.2	2129	41.1	1709	36.4	1891	34.9
	Special education	29	0.6	28	0.5	39	0.8	47	0.9
	Other	514	11.3	623	12.0	639	13.6	652	12.0

Table 18 and Table 19 show the numbers and proportions of candidates participating at test centres and via remote proctoring in each test window for literacy and numeracy respectively. In 2023, for each test window, close to half of the candidates participated by remote proctoring.

A more detailed breakdown by test centre can be found in Appendix 2.

Table 18: Number and proportion of candidates participating at test centres and via remote proctoring by test window, literacy

Location of Testing	TW1		TW2		TW3		TW4	
	N	%	N	%	N	%	N	%
Test Centres	2289	49.3	2804	51.6	2486	50.4	2495	43.4
– Capital Cities	2000	43.1	2237	41.2	2021	41.0	2495	43.4
– Regional Cities	289	6.2	567	10.4	465	9.4	0	0.0
Remote Proctoring	2356	50.7	2624	48.3	2440	49.5	3254	56.6
Total	4645	100.0	5428	99.9	4926	99.9	5749	100.0

Table 19: Number and proportion of candidates participating at test centres and via remote proctoring by test window, numeracy

Location of Testing	TW1		TW2		TW3		TW4	
	N	%	N	%	N	%	N	%
Test Centres	2276	49.9	2667	51.6	2323	49.5	2360	43.6
– Capital Cities	2011	44.1	2109	40.8	1867	39.8	2360	43.6
– Regional Cities	265	5.8	558	10.8	456	9.7	0	0.0
Remote Proctoring	2289	50.1	2507	48.5	2371	50.5	3054	56.4
Total	4565	100.0	5174	100.1	4694	100.0	5414	100.0

2.3 Accessibility and accommodations

In 2023, 701 candidates required reasonable adjustments compared to 710 candidates in 2022, a decrease of 1.3%. However, the complexity of the medical conditions and the requested adjustments has increased over the years, resulting in more time and effort spent on organising the test sessions. Table 20 indicates the number of adjustments made for the most common conditions. A complete list of conditions follows the table.

Table 20: Largest accommodation groups, 2019–2023⁸

Condition	Literacy					Numeracy				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Anxiety disorder (inc. panic attacks and test anxiety)	72	143	219	210	245	151	230	302	285	282
Dyslexia	31	27	35	43	41	36	26	41	34	31
Diabetes	2	4	13	7	7	3	7	9	5	7
Epilepsy/Seizures	2	0	2	3	2	2	3	5	3	2
Attention Deficit Hyperactivity Disorder (ADHD)	2	10	25	27	43	4	10	31	38	54
Hearing impairment	2	6	4	5	9	2	4	3	6	9
Visual impairment / Eye conditions	16	12	13	10	16	13	11	13	7	9
Dyscalculia	n.a.	n.a.	3	6	3	8	5	7	16	11

Types of conditions for which reasonable adjustments were made

- Acquired/Traumatic Brain Injury
- Adjustment Disorder
- Agoraphobia, Anxiety, Depression, Panic Attacks
- Allergic dermatitis
- Arthritis
- Asperger Syndrome (High functioning – ASD)
- Asthma
- Attention Deficit Hyperactivity Disorder (ADHD) / Attention Deficit Disorder (ADD)
- Autoimmune Disorder
- Auditory Processing Disorder and Visual-Perceptual Dysfunction (Scotopic Sensitivity / Irlen Syndrome)
- Autism Spectrum Disorder
- Bilateral Tendinopathy
- Bipolar Disorder
- Cancer-related health conditions
- Carpal Tunnel Syndrome
- Cerebral Palsy
- Chronic Fatigue Syndrome
- Chronic Pain
- Crohn's Disease
- Congenital Nystagmus (Eye Disorder)

⁸ This table reports the number of adjustments for the past five years only. In 2023, numbers for years 2019–2023 are reported. For the numbers for 2018, refer to the 2022 Technical Report. For the numbers for 2016 and 2017, refer to the 2021 Technical Report.

- Diabetes
- Depression
- Dyslexia, Dyscalculia
- Endometriosis
- Epilepsy
- Fibromyalgia
- Functional Neurological Disorder (FND)
- Heart arrhythmia
- Hypotension
- Irritable Bowel Syndrome
- Irlen Syndrome
- Low Working Memory
- Lupus
- Migraine
- Multiple Sclerosis
- Narcolepsy
- Neurocysticercosis
- Neurofibromatosis 1 (NF1)
- Obsessive Compulsive Disorder and Pronounced Exam Phobia
- Osteogenesis Imperfecta
- Osteomyelitis
- Paralysis
- Parkinson's Disease
- Peripheral Neuropathy
- Pigmented Paravenous Chorioretinal Atrophy
- Pregnancy-related health conditions
- Profoundly Deaf / hearing impairment
- Pulmonary Hypertension
- Psychotic Illness
- Post-Traumatic Stress Disorder (PTSD)
- Schizophrenia
- Scoliosis
- Sleep apnoea
- Sleep disorder
- Spinal Stenosis
- Stroke
- Nerve Pain
- Temporary physical conditions, e.g. broken shoulder, broken wrist, back injury, surgery recovery
- Thyroid issues
- Tourette Syndrome
- Turners Syndrome
- Traumatic Brain Injury
- Visual Impairment / Legally Blind

Types of accommodations granted

- Emergency Action Plan (for Epilepsy – seizures)
- Extra time (20 minutes or more per test component)
- Management of hearing impairment for test sessions conducted by remote proctoring (communication via chat box only)
- Permission to bring blood-insulin monitor, EpiPen, and/or food and drinks relating to medical condition
- Permission to bring support aids (heat pack, cushion, pillow, essential oil, ergonomic mouse and mobility aids)
- Permission to wear brace/splint/wrist support
- Permission to take medication (e.g. Ventolin inhaler and diabetes/glucose monitoring kit)
- Permission to use eye drops
- Permission to use a fidget item
- Permission to stand and stretch
- Permission to magnify text and to wear Irlen Spectral Filters / coloured glasses / coloured overlay for the computer monitor
- Permission to use software that inverts the computer screen
- Permission to use a second monitor
- Permission to use lined blank paper
- Permission to use a highlighter
- Permission to use a ruler
- Permission to use a calculator provided by the test centre
- Permission to use text-to-speech software or screen reader
- Permission to read aloud
- Permission to use personal mouse
- Permission to wear ear plugs or noise-cancelling headphones during the test session
- Provision of paper copy of the test
- Provision of additional blank scratch paper
- Provision of a small group test environment (no more than 5 candidates per test room)
- Provision of a fan in the test room
- Provision of ergonomic office chair or adjustable desk
- Provision of a human reader
- Removal of ticking clock from the test room
- Rest breaks
- Seated near bathroom
- Seated at the front of the test room (for hearing loss) and other special seating requests for the front and back of the test room, and near the aisle, or away from the lights
- Seated in a quiet room
- Special support for candidates with limited mobility (i.e. limit time standing in the registration queue)
- Test supervisor to provide written assistance during the instructions component of the test sessions
- Provision of an Auslan interpreter
- Permission to bring support/assistance animal

3 Candidate Performance

This section describes the performance of candidates who participated in the test in 2023. The analysis divides the cohort of candidates into two groups: first-attempt candidates (the majority) and those who did not achieve the standard at their first attempt and resat the test. It presents the distributions of candidate performance overall, by subscale and by candidates collected demographic information: gender, age group, program type, program type by year level, course category, and location of testing.

3.1 Scale score distributions

Figure 1 and Figure 2 present the distributions of first-attempt candidate performance on the literacy component and numeracy component, respectively. The vertical line in each figure represents the standard for that component of the test.

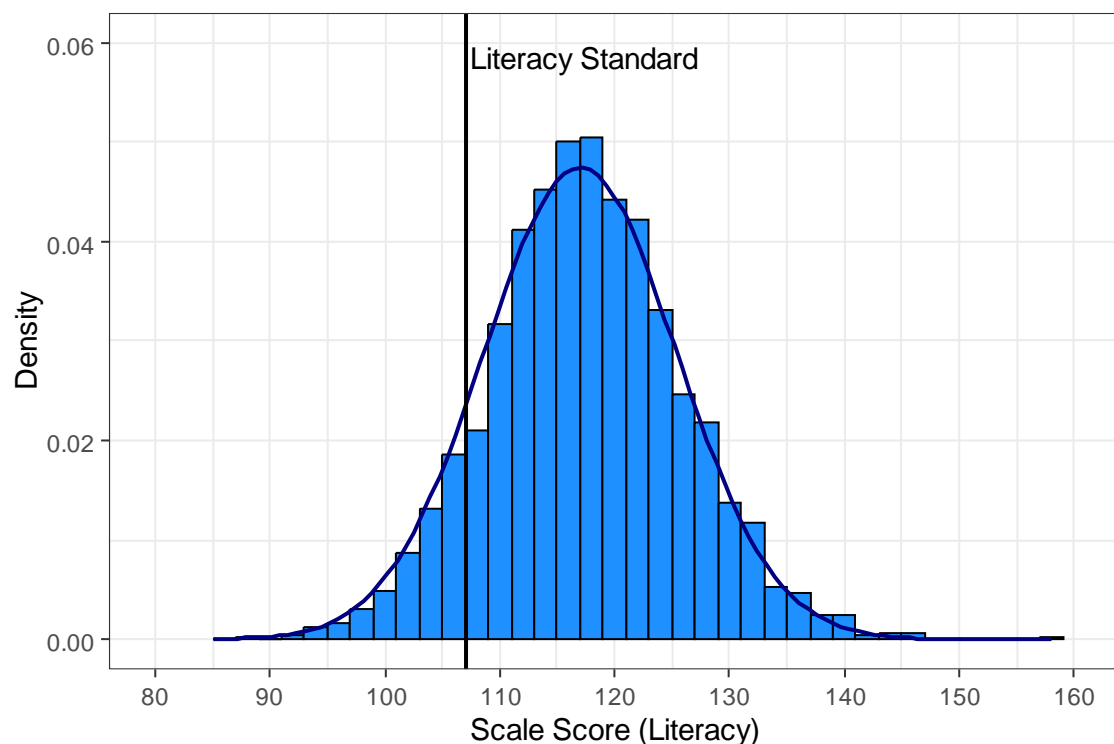


Figure 1: Distribution of candidate scale scores for literacy⁹

⁹ The scale score of the literacy standard is 107.

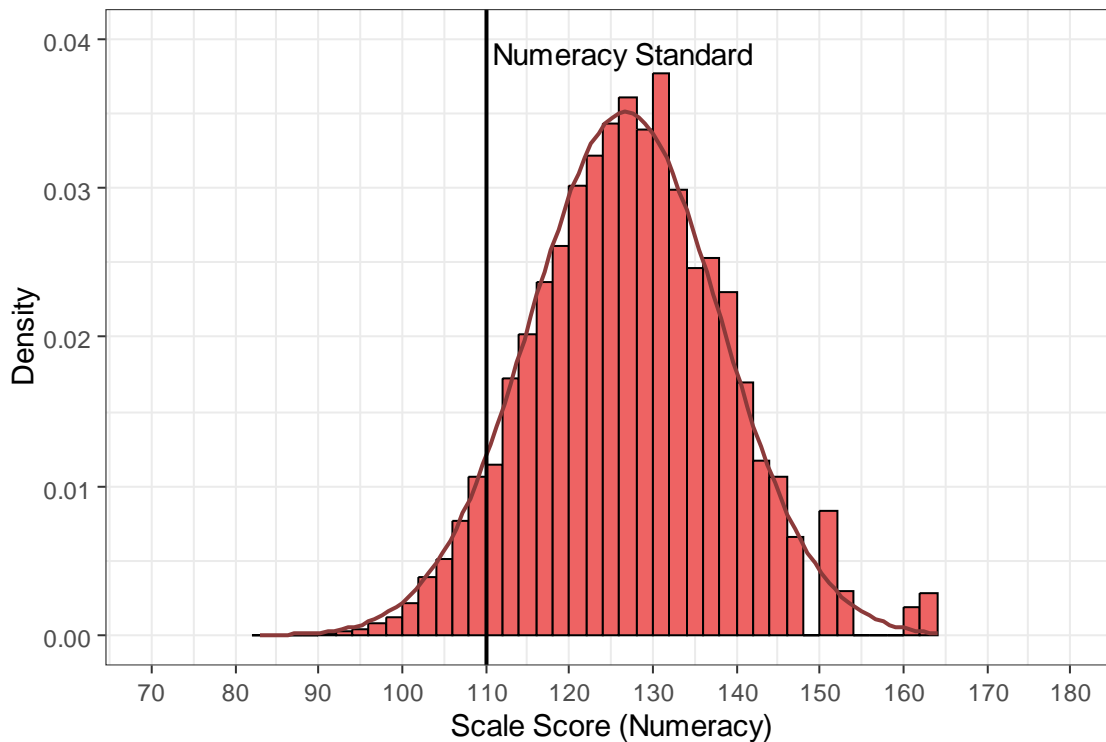


Figure 2: Distribution of candidate scale scores for numeracy¹⁰

Figure 1 and Figure 2 show that scores in both tests are approximately normally distributed and that the tests spread candidates acceptably across the score scales. For both literacy and numeracy, the majority of candidates achieved scale scores above the standard at their first attempt. A proportion of candidates achieved scale scores below the standard at their first attempt.

3.2 Candidate scale scores by subscales and subgroups

Table 21 shows the performance of first-attempt candidates in 2023. It shows the number (N) of candidates, the mean scale scores and standard deviation (S.D.) of the scale scores, overall and by subscale. The pass rates for the literacy and numeracy components for this cohort of candidates are also shown in this table. The overall mean scale score for literacy was 117 (similar to 2022), with a pass rate of 89.6% (90.6% in 2021, 90.3% in 2022). The overall mean scale score for numeracy was 126.7 (up from 125.9 in 2022), with a pass rate of 93.5% (up from 92.1% in 2022).

Table 21 also shows the performance of candidates on each subscale. As for previous years, the average performance of candidates on the numeracy subscale 'calculator not available' was lower than the average performance on the numeracy subscale 'calculator available', with a difference of 1 scale point. The trend over time, however, is that the difference has decreased. It was 3.5 scale score points in 2017, 2.5 scale score points in 2018, 1.0 scale score point in 2020, rising slightly for 2021 and 2022 and then back to 1.0 scale score point in 2023. The decrease in difference is mostly due to improving performance on the 'calculator not available' subscale, possibly indicating greater attention to the basic number sense and computational skills required.

Scale score frequency distributions for the candidates who participated in the tests are shown in Appendix 3.

¹⁰ The scale score of the numeracy standard is 110.

Table 21: Candidate performance overall and by subscale for first-attempt candidates

Component	Whole test and subscale	N	Mean	S.D.	Pass Rate
Literacy	Overall	17565	117.0	8.4	89.6
	Reading		117.0	9.0	
	Technical skills of writing		117.1	9.9	
Numeracy	Overall	17623	126.7	11.4	93.5
	Number & algebra		127.0	12.7	
	Measurement & geometry		126.9	12.2	
	Statistics & probability		125.8	11.6	
	Calculator available		126.8	11.2	
	Calculator not available		125.8	14.7	

Table 22 shows the number of candidates (N), mean scale score, and pass rate for first-attempt candidates by demographic characteristics, for both literacy and numeracy.

Table 22: Performance by demographic characteristics for first-attempt candidates

Characteristic	Category	Literacy			Numeracy		
		N	Mean	Pass Rate	N	Mean	Pass Rate
Gender	Female	12906	116.4	88.2	12964	125.0	92.0
	Male	4629	118.7	93.6	4629	131.6	97.6
	Indeterminate/intersex	30	122.0	100.0	30	127.9	100.0
Age	17–25	11085	116.1	89.5	11114	126.0	93.4
	26–30	2486	118.1	89.8	2515	127.8	92.9
	31–35	1461	118.7	90.2	1473	128.7	93.8
	36–40	1100	118.3	89.5	1097	128.1	95.2
	41–45	727	119.3	89.1	722	128.6	94.3
	46+	706	119.7	90.5	702	126.9	93.4
International Students	No	16324	117.4	90.9	16356	126.5	93.3
	Yes	1241	112.5	72.8	1267	129.2	96.3
English as a First Language	Yes	14940	117.7	92.2	14968	126.7	93.8
	No	2625	112.9	75.1	2655	126.8	91.5
Indigenous	No	16934	117.1	89.7	16985	126.8	93.5
	Yes	371	114.5	85.2	366	123.5	92.1
	Not disclosed	260	117.6	87.7	272	129.0	94.1
Residential Area	Metropolitan areas	14088	117.0	89.4	14130	126.7	93.3
	Regional areas	3266	117.2	90.5	3284	126.8	94.3
	Remote areas	145	117.0	87.6	144	126.2	91.7
	International	24	121.6	91.7	23	135.0	100.0
	Invalid or Missing	42	117.8	88.1	42	127.5	92.9
Program Type	Undergraduate	11527	115.7	88.7	11520	125.0	92.5
	Postgraduate	6020	119.6	91.3	6084	130.0	95.4
	Pathway	18	115.5	88.9	19	123.3	84.2
Program Type by Year Level	Undergraduate first year	1735	115.1	86.2	1716	125.6	92.5
	Undergraduate second year	3628	115.3	87.4	3565	125.0	92.4
	Undergraduate third year	4026	115.7	89.4	4003	124.9	92.3
	Undergraduate fourth year	1794	116.8	92.7	1886	125.1	93.1
	Undergraduate fifth year or above	279	116.6	88.9	293	123.7	93.5
	Undergraduate graduated	65	111.5	75.4	57	119.6	78.9
	Postgraduate first year	3426	119.7	91.5	3451	131.4	96.8
	Postgraduate second year	1861	119.7	91.7	1896	129.0	94.7
	Postgraduate third year	331	119.0	89.4	334	126.0	91.3
	Postgraduate fourth year	193	117.6	90.2	190	125.0	90.0

	Postgraduate fifth year or above	158	119.7	90.5	163	129.0	92.6
	Postgraduate graduated	51	114.6	84.3	50	124.4	88.0
	Pathway first year	6	108.3	66.7	7	113.7	57.1
	Pathway second year	4	124.0	100.0	4	133.5	100.0
	Pathway third year	2	119.0	100.0	2	132.0	100.0
	Pathway fourth year	5	115.6	100.0	5	126.4	100.0
	Pathway fifth year or above	0	-	-	0	-	-
	Pathway graduated	1	117.0	100.0	1	116.0	100.0
Course Category	Early childhood	1051	113.3	78.1	1094	122.9	88.0
	Primary	7441	116.1	88.8	7454	124.9	92.3
	Secondary	6824	119.1	93.4	6837	130.0	96.4
	Special education	124	116.1	91.1	120	124.8	94.2
	Other	2125	115.5	86.0	2118	125.0	91.1

The t-test and Cohen's *d* for effect size were used to determine if group mean scale scores were significantly different for first-attempt candidates. Only differences where $p \leq 0.05$ and $d > 0.2$ or $d < -0.2$ are reported here as significant.

Table 22 shows that male candidates again significantly outperformed female candidates in both literacy and numeracy. For the 2023 cohort, the literacy mean scale score of male candidates (118.7) was significantly higher (effect size 0.27) than the literacy mean scale score of female candidates (116.4), which were similar values to 2022. The pass rate of the female candidates on the literacy component (88.2%) was considerably lower than that of the male candidates (93.6%). For numeracy, the difference was even greater. The numeracy mean scale score of the male candidates (131.6) was significantly higher (effect size -0.60) than that of the female candidates (125). The pass rate of the female candidates on the numeracy component (92%) was considerably lower than that of the male candidates (97.6%).

As for previous years, achievement on the literacy test tended to increase with the age of the candidates, but this was less evident for numeracy. For literacy, the youngest group of candidates, aged 17–25 (mean scale score 116.1), achieved significantly lower (effect size 0.30) than candidates aged over 25 (118.1–119.7). The numeracy mean scale score of candidates aged over 25 (126.9–128.7) was also significantly greater (effect size 0.18) than that of those aged 17–25 (126).

As for all previous years, in 2023 the mean scale score of international candidates (112.5) for literacy was significantly lower (effect size 0.58) than the mean scale score of other candidates (117.4). For numeracy, the mean scale score of international candidates (129.2) was significantly higher (effect size 0.24) than the mean scale score of other candidates (126.5).

As for 2017–2022, in 2023, the mean scale score for literacy of candidates for whom English was a first language (117.7) was significantly higher (effect size 0.58) than the mean scale score for literacy of other candidates (112.9). For numeracy, the mean scale scores were 126.7 and 126.8 respectively. This difference was not significant (effect size 0.01).

As for 2017–2022, in 2023, for both literacy and numeracy, the mean scale scores of candidates who identified as Aboriginal or Torres Strait Islander were significantly lower (effect size 0.30 and 0.29 respectively) than for other candidates. For literacy, the mean scale scores were 114.5 (similar to 114.9 in 2022) and 117.1 respectively; and for numeracy, 123.5 and 126.8 respectively. However, it is worth noting that the pass rates of first-attempt candidates who identified as Aboriginal or Torres Strait Islander were still relatively high at 85.2% for literacy (up from 81% in 2017, 83% in 2018, and 84% in 2020, but slightly lower than 87% in 2021 and 87.2% in 2022) and 92.1% for numeracy (up from 81% in 2020, 87% in 2021 and 87.9% in 2022). For literacy, the pass rate of candidates identifying as Aboriginal or Torres Strait Islander was higher than that of international candidates (72.8%) and candidates for whom English was not a first language (75.1%). The

reverse was true for numeracy. The pass rate of candidates identifying as Aboriginal or Torres Strait Islander was lower than that of international candidates (96.3%) and candidates for whom English was not a first language (91.5%).

Residential postcode data were used to place candidates into four main categories: metropolitan, regional, remote and international. Where postcodes could not be matched to an indicator they were categorised as missing or invalid. As for 2017–2022, in 2023, for both literacy and numeracy, there was little difference in achievement by Australian residential areas (metropolitan, regional and remote). Unlike in 2022, in 2023 a significant difference between literacy candidates with international postcodes and candidates with Australian residential addresses was not apparent. For numeracy, the mean scale score of candidates with international postcodes was significantly higher than for candidates with metropolitan postcodes (135 compared to 126.7, effect size 0.78).

As for previous years, for both literacy and numeracy, the mean scale scores of postgraduate candidates were significantly higher in 2022 than for undergraduate candidates. For literacy, this was 115.7 and 119.6 respectively, with an effect size of 0.48, and for numeracy 130 and 125 respectively, with an effect size of 0.45. The difference in mean scale scores was approximately 4 scale score points for the literacy component and 5 scale score points for the numeracy component.

For literacy, the mean scale score of the 18 Pathways candidates (115.5) was above the standard (107) and just over 7 scale score points below the mean scale score of undergraduate candidates (115.7), with an effect size of 0.02. For numeracy, the mean scale score of the 19 Pathways candidates (123.3) was above the standard (110) but nearly two scale score points below the mean scale score of undergraduate candidates (125), with an effect size of 0.16. Note that the very small number of Pathways candidates means that summary statistics based on such a small sample can vary substantially from year to year, and that differences from other groups of candidates are in general not statistically significant.

As for previous years, for both literacy and numeracy, the mean scale scores of candidates in the secondary education course category were significantly higher than those of candidates in the other four course categories, with the greatest differences occurring for numeracy. For literacy, there was a 3 scale score points difference between the primary cohort (116.1) and secondary cohort (119.1), and a 2.8 scale score points difference between the primary cohort (116.1) and the early years cohort (113.3). The effect sizes for these differences were 0.37 and 0.34 respectively.

For numeracy, there was 5.1 scale score points difference between the primary cohort (124.9) and the secondary cohort (130), and 2 scale score points difference between the primary cohort (124.9) and the early years cohort (122.9). The effect sizes for these differences were 0.46 and 0.18 respectively.

The mean scale scores for candidates in the Special education category were significantly lower than those for the secondary education course category for both literacy (116.1) and numeracy (124.8). The effect sizes for these differences were 0.36 and 0.46 respectively.

Table 23 summarises the significant differences in mean scale scores for the 8 demographic characteristics.

Table 23: Subgroups showing significantly higher mean scale scores

Characteristic	Literacy	Numeracy
Gender	Male	Male
Age	Above 25 years	Above 25 years
International	Domestic	International
Language background	English as first language	None
Indigeneity	Non-Indigenous	Non-Indigenous
Residential location	None	International > Metropolitan
Program type	Postgraduate	Postgraduate
Course category	Secondary > Primary > Early Childhood	Secondary > Primary > Early Childhood

In addition to comparing cohorts by mean scale scores, figures 3 to 6 display scale score distributions for first-attempt candidates in 2023. The top panel of each figure shows literacy scale score distributions and the bottom panel of each figure shows numeracy scale score distributions. The vertical line in each figure represents the standard scale score for each component of the test.

The bold vertical line in each plot represents the cut-score for the standard (located at 107 scale score points for literacy, and 110 scale score points for numeracy).

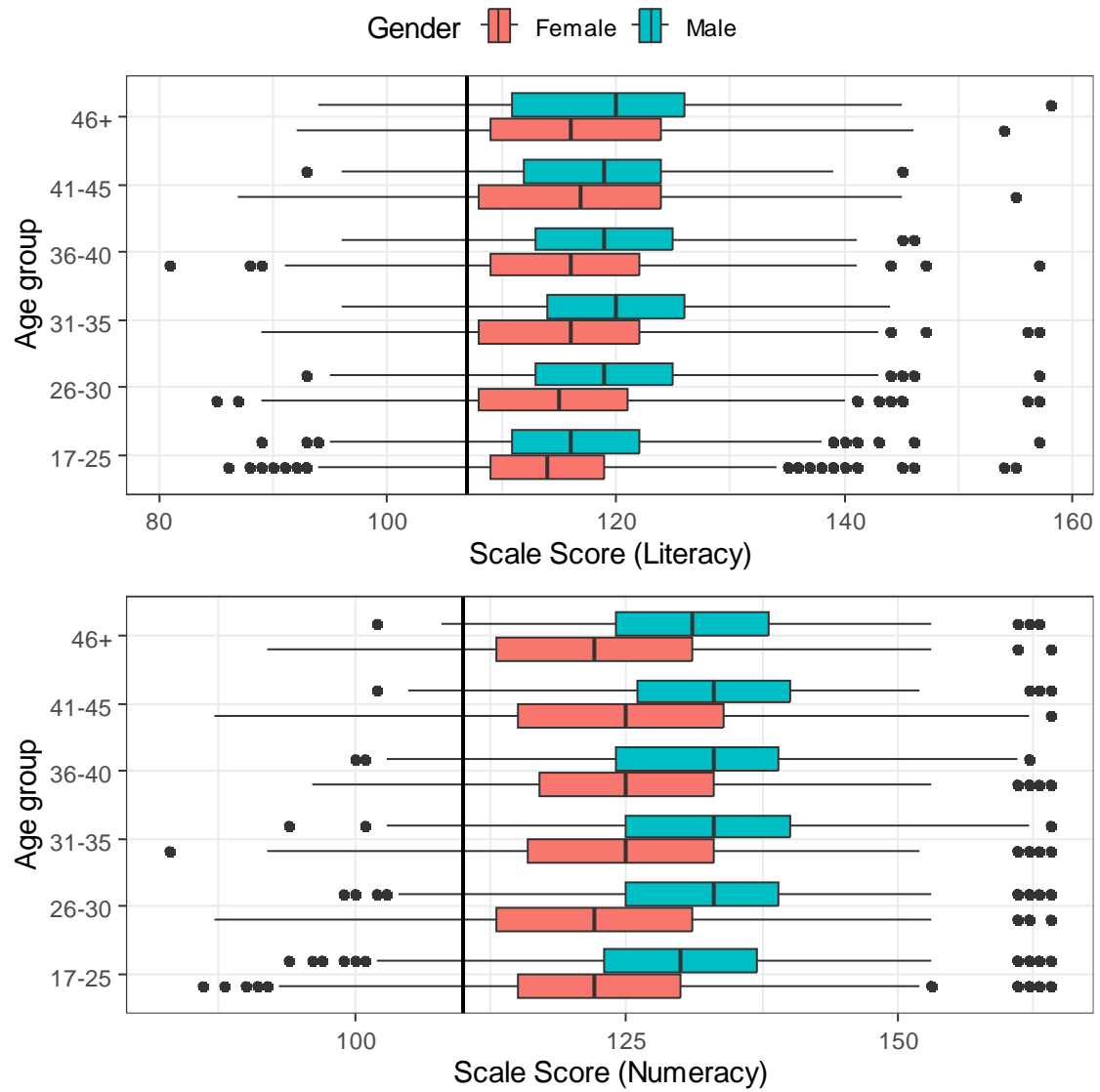


Figure 3: Score distributions by gender and age group, literacy and numeracy

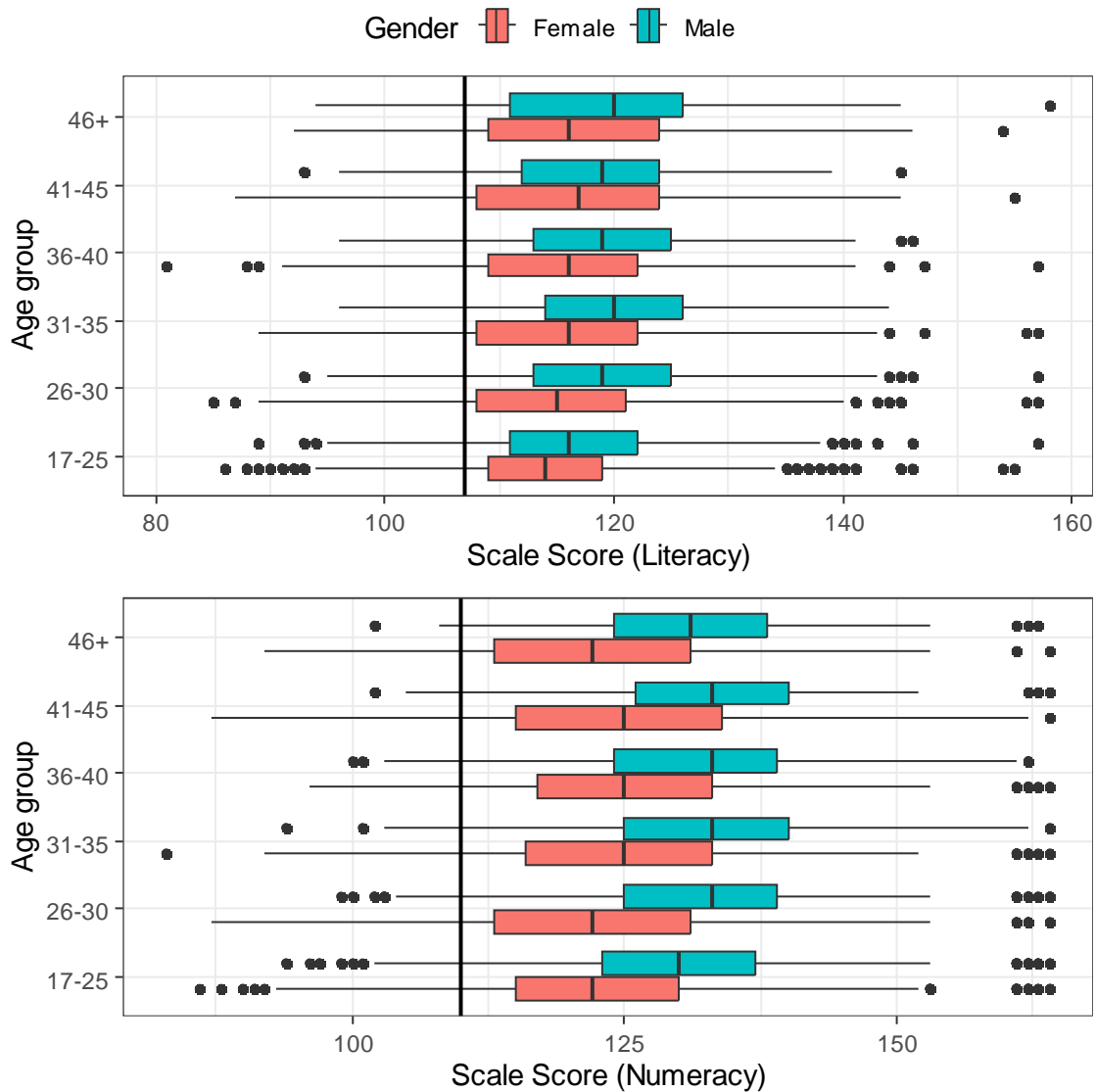


Figure 3 shows that, for all age groups, the difference in achievement between male candidates and female candidates is more pronounced for numeracy than for literacy. However, in each age category and for male or female, there are candidates who achieve well above the standard.

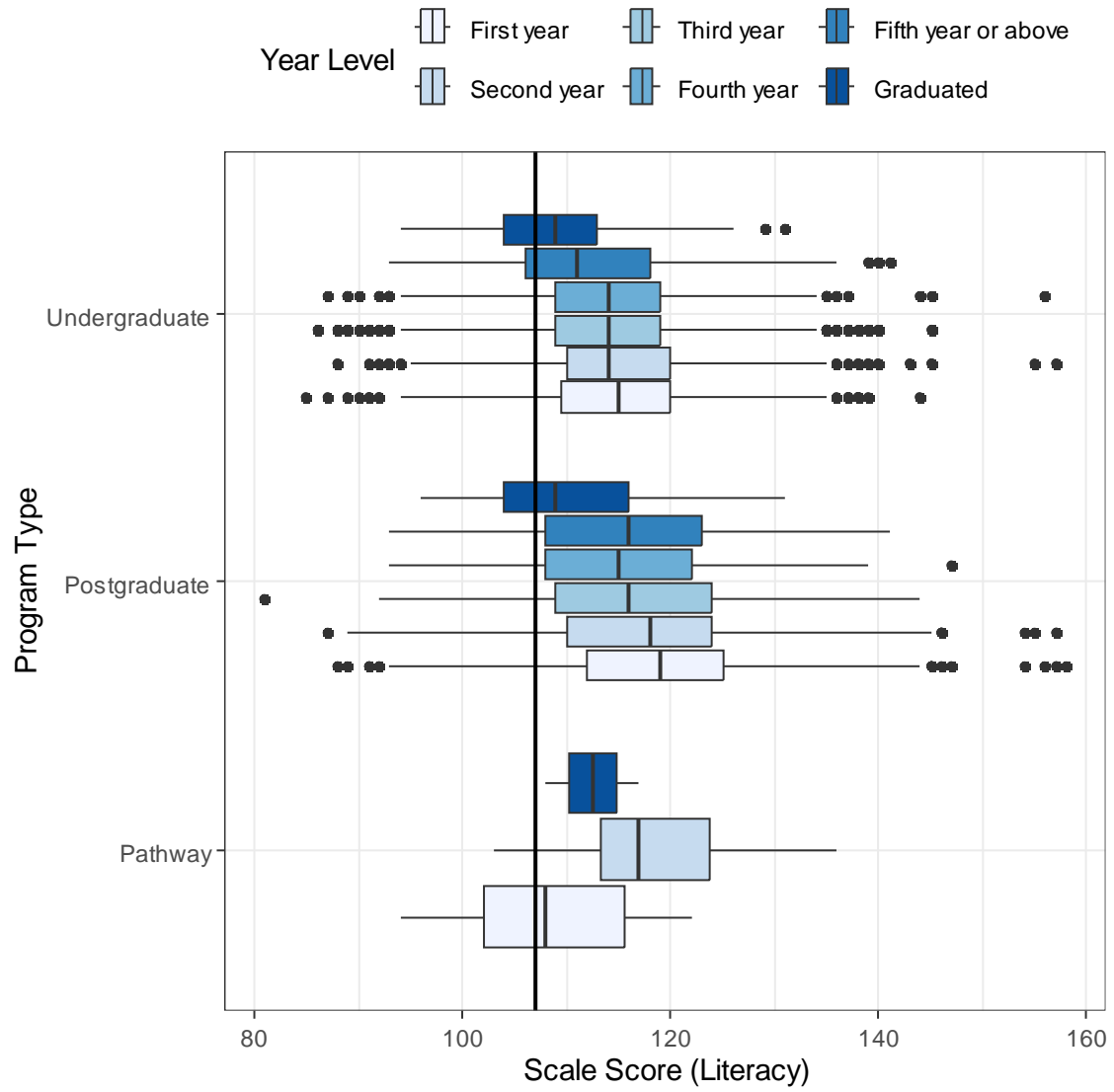


Figure 4: Score distributions by program type and year level, literacy

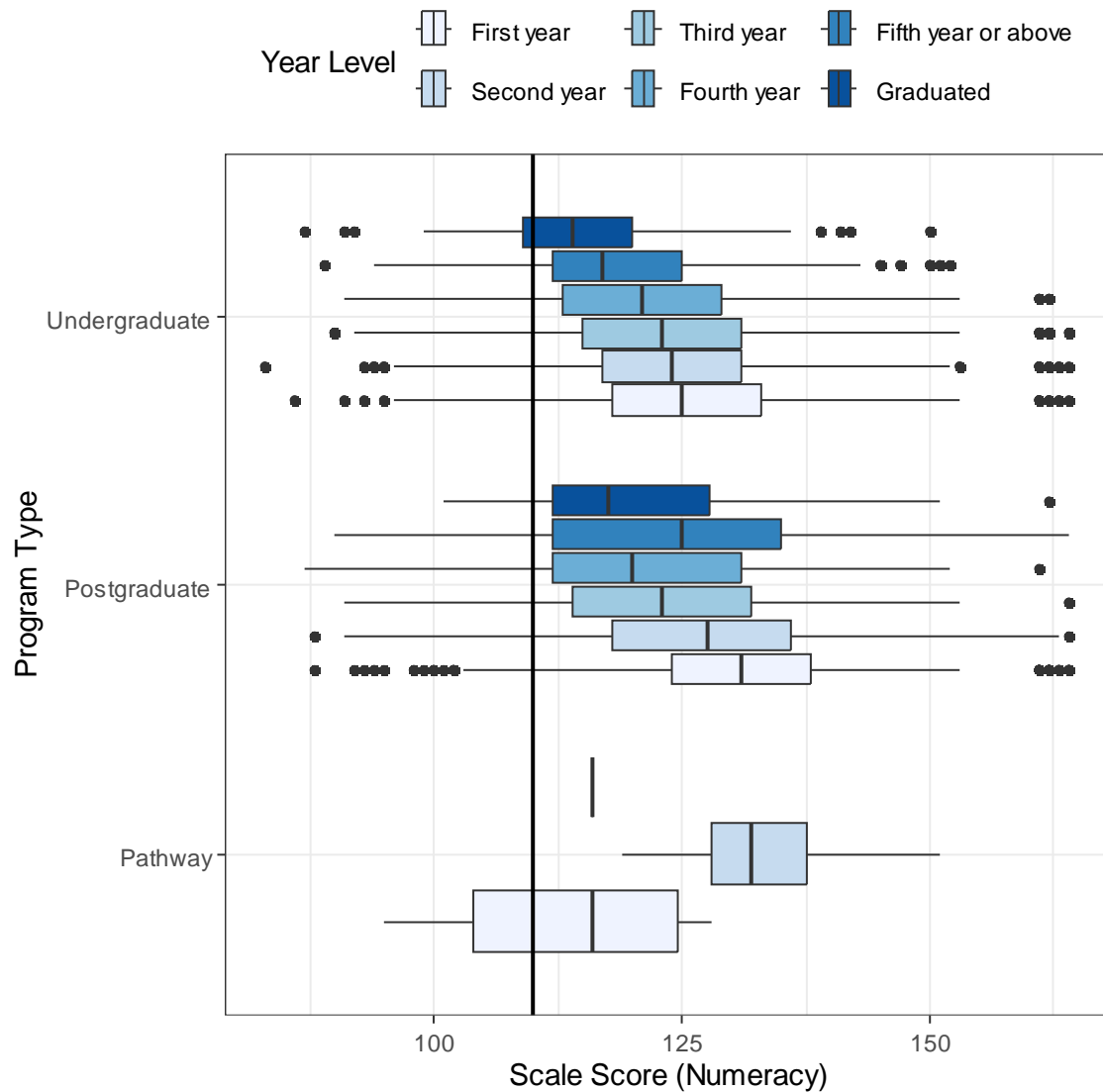


Figure 5: Score distributions by program type and year level, numeracy

Figures 4 and 5 show that, for all year levels, the difference in achievement between postgraduate candidates and undergraduate candidates is similar for literacy and numeracy, with the achievement of postgraduate candidates higher than that of undergraduate candidates. While the achievement of the Pathways cohort is lower for both components, most candidates achieve the standard in each component.

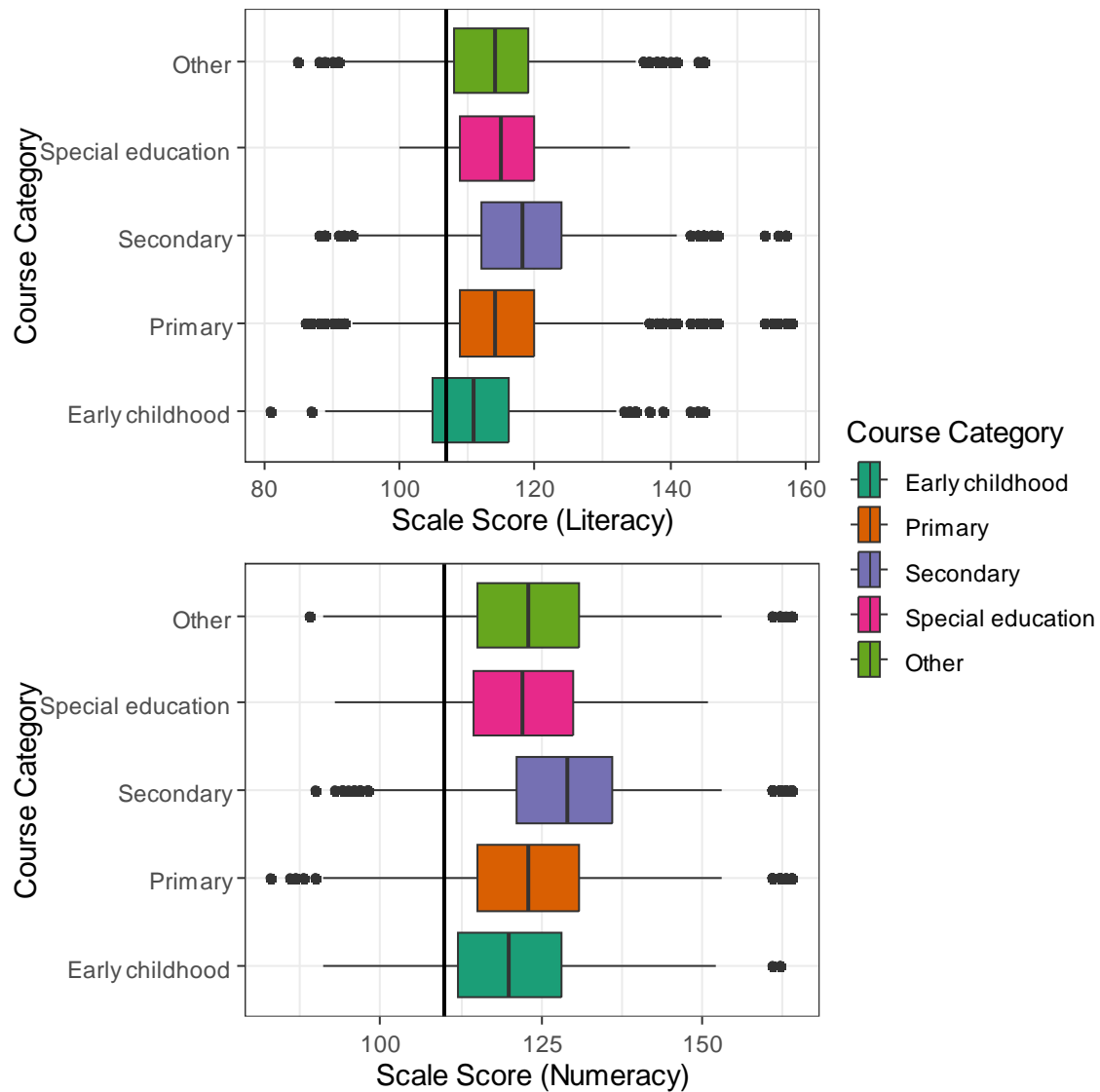


Figure 6: Score distributions by course category, literacy and numeracy

Figure 6 shows that, although candidates in secondary education courses achieve highest in both literacy and numeracy, there are candidates who achieve well above the standard in each of the other courses. For example, for both literacy and numeracy, the achievement of the top 25% of candidates in the early childhood category is broadly equivalent to the top 50% of candidates in the secondary category.

3.3 Candidate performance by test centres and remote proctoring

Table 24 shows performance by test centres and remote proctoring. It can be seen from the last three rows that the performance of candidates using remote proctoring was similar to the performance of candidates who took tests in capital city test centres and regional city test centres, with two scale score points separating the mean scale scores of the three groups for the literacy component and slightly over two scale score points separating the mean scale scores for the numeracy component. Pass rates were very similar.

Table 24: Performance by test centres and remote proctoring

Characteristic	Category	Literacy				Numeracy			
		N	Mean	S.D.	Pass Rate	N	Mean	S.D.	Pass Rate
Test Centre	Adelaide	857	116.3	8.7	86.8	850	127.2	11.8	92.2
	Albury	27	119.0	6.2	100.0	29	128.6	10.9	96.6
	Armidale	14	123.6	11.0	100.0	13	131.2	15.0	92.3
	Ballarat	92	118.0	9.4	85.9	94	127.6	12.1	90.4
	Brisbane	1524	118.9	8.0	94.7	1546	128.7	11.2	95.7
	Cairns	42	118.8	10.0	90.5	39	128.5	13.3	92.3
	Canberra	321	119.5	8.4	93.8	329	128.9	11.7	94.8
	Darwin	141	112.7	9.1	71.6	137	126.6	11.6	92.0
	Geelong	46	116.6	9.9	82.6	41	125.7	11.7	90.2
	Gold Coast	300	117.9	8.1	91.0	294	127.1	11.3	94.2
	Hobart	126	120.6	8.0	96.0	140	130.6	11.8	97.1
	Melbourne	1650	117.6	9.0	89.0	1635	127.6	11.6	93.8
	Mildura	3	116.7	4.0	100.0	4	128.0	10.7	100.0
	Newcastle	363	117.7	8.1	91.5	366	126.3	10.5	94.5
	Orange	14	118.2	8.4	92.9	10	130.5	15.3	100.0
	Parramatta	177	116.7	9.3	89.3	174	127.0	11.2	93.7
	Perth	1062	117.3	8.2	91.0	1079	127.1	11.1	94.2
	Reasonable Adjustments	23	115.8	5.3	95.7	27	122.7	9.4	96.3
	Remote proctoring	8786	116.2	8.1	88.5	8829	125.6	11.1	92.8
	Rockhampton	17	119.2	4.9	100.0	18	132.8	12.0	100.0
	Sunshine Coast	97	120.4	7.7	96.9	94	129.1	12.1	96.8
	Sydney	1674	117.9	9.0	90.1	1668	128.2	12.0	93.7
	Townsville	61	117.4	7.4	91.8	60	127.6	9.4	100.0
	Wagga Wagga	14	117.1	7.1	92.9	13	126.8	8.6	92.3
	Warrnambool	10	119.5	5.4	100.0	11	128.6	8.7	100.0
	Wollongong	124	119.0	7.0	96.0	123	130.2	11.5	96.7
	Capital cities	7555	117.8	8.7	90.5	7585	127.9	11.6	94.1
	Regional cities	1224	118.2	8.2	92.0	1209	127.6	11.3	94.8
	Remote proctoring	8786	116.2	8.1	88.5	8829	125.6	11.1	92.8

3.4 Candidates who did not achieve the standard after one attempt

Table 25 shows the number and proportion of candidates who did not achieve the test standard in 2023 after one attempt. The proportion of first-attempt candidates who did not achieve the standard on the literacy component was 10.4% (9.7% in 2022). The proportion of first-attempt candidates who did not achieve the standard on the numeracy component was 6.5% (down from 7.9% in 2022). The percentage of first-attempt candidates who did not achieve either standard in 2023 was 3.2% (down from 3.5% in 2022).

Table 25: Number and proportion of first-attempt candidates who did not achieve the standard

	Number	Percentage
Candidates who did not achieve the literacy standard	1826	10.4
Candidates who did not achieve the numeracy standard	1147	6.5
Candidates who did not achieve the literacy and the numeracy standard	484	3.2

3.5 Performance of resitting candidates

Table 26 shows the performance of candidates who had multiple attempts at the test, overall and by subscale. As expected, the performance of resit candidates was lower than the performance of the majority of candidates who achieved the standard at their first attempt. For example, for the 1,908 second-attempt candidates for literacy in 2023, their overall mean scale score was 107.1 with a pass rate of 54.7% (compared to 117 and 89.6% for first-attempt candidates in 2023, as shown in Table 21). For the 1,359 second-attempt candidates for numeracy in 2023, their overall mean scale score for numeracy was 111.8 with a pass rate of 64% (compared to 126.7 and 93.5% for first-attempt candidates in 2023).

It can be seen from Table 26 that pass rates for literacy declined from the second attempt, with a pass rate of 54.7%, to the fifth attempt, with a pass rate of 53.5%. For numeracy, the pass rate decreased from 64% for the second attempt to 61.4% for the third attempt. It then increased to 69.5% for the fourth attempt, and then further increased to 73.5% for the fifth attempt (49 candidates).

For the literacy subscales, the mean scale score of resit candidates were slightly lower for Reading than for Technical skills of writing. For the numeracy subscales, the mean scale scores of resit candidates for the 'calculator not available' subscale were lower than the mean scale scores of resit candidates on the other numeracy subscales for all resit attempts.

Table 26: Resit candidate performance overall and by subscale

Component	Whole test and subscale	Second Attempt			Third Attempt			Fourth Attempt			Fifth Attempt		
		(Resit 1)			(Resit 2)			(Resit 3)			(Resit 4)		
		N	Mean	Pass Rate	N	Mean	Pass Rate	N	Mean	Pass Rate	N	Mean	Pass Rate
Literacy	Overall	1908	107.1	54.7	761	106.2	49.3	386	106.5	48.4	101	107.4	53.5
	Reading		106.6			105.4			105.7			106.5	
	Technical skills of writing		107.9			108.0			108.2			109.2	
Numeracy	Overall	1359	111.8	64.0	567	111.3	61.4	239	112.6	69.5	49	112.7	73.5
	Number & algebra		111.2			110.7			112.6			112.9	
	Measurement & geometry		112.2			111.9			112.8			113.0	
	Statistics & probability		112.6			111.8			112.3			112.3	
	Calculator available		112.4			111.5			112.6			112.6	
	Calculator not available		109.1			109.9			111.9			112.1	

It can be seen from Table 27 that, for both literacy and numeracy, there is very little difference in the mean scale score change between first and second attempts regardless of the time taken between the attempts.

Table 27: Change in scale score between first and second attempts by time

Component	Mean score change (scale score points)				
	Less than 2 months	More than 2 months	From 4 to <6 months	More than 6 months	All
Literacy	3.7	3.7	4.0	5.2	4.4
Numeracy	4.5	5.7	5.9	8.1	6.8

Overall, each second-attempt cohort in 2023 improved their scale scores (4.4 points for literacy and 6.8 points for numeracy). However, after taking performance (Band level *after* second attempt) into account, it can be seen from Table 28 that the change in scale scores was not uniform. The mean scale score change of the least able cohort (those with second-attempt scores below Band 1) was –5.6 scale score points for literacy and –3.8 scale score points for numeracy. That is, on average, the scores of the candidates below Band 1 were lower for their second attempt than they were for their first attempt. In general, the higher the performance of the second-attempt candidates, the more they were able to improve their scores between their first and second attempts.

Table 28: Change in scale score between first and second attempts by performance (Band)

Component	Mean score change (scale score points)				
	Below Band 1	Band 1	Band 2	Band 3 and above	All
Literacy	–5.6	1.1	7.1	14.6	4.4
Numeracy	–3.8	2.7	8.4	21.6	6.8

The findings above suggest it is more likely that the change in score between first and second attempts is explained more by performance than it is by the time between testing.

Additional analysis investigated the impact of resit candidates on pass rates. Table 29 categorises candidates by their most recent result come the end of 2023, grouping by number of test attempts for each candidate. The table shows that, for literacy, the pass rates in 2023 were 94.2% for no-resit candidates (first-attempt), slightly higher than for 2022 (94.1%). They ranged from 36% to 68.7% for resit candidates. For numeracy, the pass rates in 2023 was 96% for no-resit candidates and ranging from 42.9% to 100% (2 candidates) for resit candidates.

Table 29: Candidate performance by number of test sittings, 2019–2023¹¹

Component	Year	Number of Test Sittings	Number of Unique Candidates	Standard Achieved	Standard Not Achieved	Pass Rate
Literacy	2019	1 (no resits)	18661	18330	331	98.2
		2	1327	1129	198	85.1
		3	518	353	165	68.1
		4	163	91	72	55.8
		5	35	16	19	45.7
		All	20704	19919	785	96.2
	2020	1 (no resits)	15024	14788	236	98.4
		2	969	853	116	88.0
		3	388	291	97	75.0
		4	125	80	45	64.0
		5	30	20	10	66.7
		All	16536	16032	504	97.0
	2021	1 (no resits)	19233	18927	306	98.4
		2	1152	1026	126	89.1
		3	439	312	127	71.1
		4	141	104	37	73.8
		5	40	23	17	57.5
		8	1	1	0	100.0

¹¹ This table only shows results for the past five years, which in 2023 means the period 2019–2023. For 2016 and 2017 data, refer to Table 30 in the 2021 Technical Report. For 2018 data, refer to Table 30 in the 2022 Technical Report.

Numeracy	2022	All	21006	20393	613	97.1
		1 (no resits)	17729	17385	344	98.1
		2	1211	1077	134	88.9
		3	432	332	100	76.9
		4	129	104	25	80.6
		5	43	27	16	62.8
		6	3	2	1	66.7
		All	19547	18927	620	96.8
		1 (no resits)	16715	15739	976	94.2
		2	1518	1043	475	68.7
		3	615	376	239	61.1
		4	346	187	159	54.0
		5	93	54	39	58.1
		6	25	9	16	36.0
		All	19312	17408	1904	90.1
	2023	1 (no resits)	18539	18157	382	97.9
		2	1236	1014	222	82.0
		3	541	384	157	71.0
		4	185	116	69	62.7
		5	40	19	21	47.5
		All	20541	19690	851	95.9
		1 (no resits)	14863	14635	228	98.5
		2	1001	878	123	87.7
		3	492	386	106	78.5
		4	167	132	35	79.0
		5	48	34	14	70.8
		All	16571	16065	506	96.9
		1 (no resits)	19133	18798	335	98.2
		2	1129	988	141	87.5
		3	464	358	106	77.2
		4	145	119	26	82.1
		5	36	29	7	80.6
		All	20907	20292	615	97.1
	2021	1 (no resits)	17987	17641	346	98.1
		2	1104	953	151	86.3
		3	433	338	95	78.1
		4	120	101	19	84.2
		5	38	25	13	65.8
		6	2	2	0	100.0
		8	1	0	1	0.0
		All	19685	19060	625	96.8
	2022	1 (no resits)	17155	16476	679	96.0
		2	1143	871	272	76.2
		3	505	348	157	68.9
		4	224	166	58	74.1
		5	44	36	8	81.8
		6	7	3	4	42.9
		7	1	1	0	100.0
		All	19079	17901	1178	93.8

4 Prospective students in 2023

In 2023, prospective students were allowed to sit the LANTITE tests. A 'prospective student' in the context of LANTITE refers to individuals who are not currently enrolled in an accredited initial teacher education program but are seeking to demonstrate their literacy and numeracy competence. The introduction of prospective students to the LANTITE assessment emerged from policy decisions aimed at increasing the inclusivity and accessibility of the teaching profession. By allowing individuals outside of traditional teacher education pathways to sit the LANTITE, education authorities aim to broaden the pool of qualified candidates for teaching positions, addressing potential teacher shortages and ensuring a diverse range of entrants into the profession.

Table 30 reports the number of prospective students who sat in each test window of 2023, by domain. Note that the timing of the change in policy meant that prospective students could sit the test starting in test window 2 in 2023, which is why there were 0 prospective students in test window 1. Table 31 describes the demographic characteristics of the prospective student cohorts by domain.

Table 30: Counts of prospective students sitting in each test window of 2023

Test	TW1	TW2	TW3	TW4	Total
Both literacy and numeracy	0	28	51	94	173
Literacy only	0	5	18	37	60
Numeracy only	0	7	10	28	45
Total sittings	0	40	79	159	278

Table 31: Demographic characteristics of all unique prospective student candidates in 2023

Characteristic	Category	Literacy		Numeracy	
		N	%	N	%
Gender	Female	176	78.6	170	78.7
	Male	46	20.5	44	20.4
	Indeterminate/intersex	2	0.9	2	0.9
Age	17–25	86	38.4	80	37.0
	26–30	43	19.2	41	19.0
	31–35	30	13.4	32	14.8
	36–40	33	14.7	31	14.4
	41–45	15	6.7	15	6.9
	46+	17	7.6	17	7.9
English as a First Language	Yes	160	71.4	153	70.8
	No	64	28.6	63	29.2
Indigenous	No	212	94.6	206	95.4
	Yes	5	2.2	4	1.9
	Not disclosed	7	3.1	6	2.8
Residential Area	Metropolitan areas	178	79.5	175	81.0
	Regional areas	41	18.3	35	16.2
	Remote areas	1	0.4	1	0.5
	International	3	1.3	4	1.9
	Invalid or Missing	1	0.4	1	0.5

Table 32 breaks down the prospective students by their initial year of registration for LANTITE and their number of test attempts. This table shows that the vast majority of prospective students were registering for the test(s) for the first time in 2023. Note that some prospective students had attempted the tests in previous years, but in 2023 they were no longer enrolled in their course and so were eligible to register as prospective students.

Table 32: Prospective students by year of registration and total number of attempts

Domain	Year of registration	Number of unique candidates	Unique candidates who had 1 attempt only (%)	Unique candidates who had 2 attempts only (%)	Unique candidates who had 3 attempts only (%)	Unique candidates who had 4 attempts only (%)	Unique candidates who had 5 attempts only (%)	Unique candidates who had 6 attempts only (%)	Unique candidates who had 7 attempts only (%)	Unique candidates who had 8 attempts only (%)
Literacy	2016	2	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0
	2017	6	0.0	0.0	16.7	16.7	33.3	33.3	0.0	0.0
	2018	4	0.0	0.0	25.0	50.0	25.0	0.0	0.0	0.0
	2019	4	0.0	0.0	25.0	25.0	0.0	50.0	0.0	0.0
	2020	2	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0
	2021	0	-	-	-	-	-	-	-	-
	2022	2	0.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0
	2023	204	96.1	3.9	0.0	0.0	0.0	0.0	0.0	0.0
	2016–23	224	87.5	4.0	1.8	2.2	2.2	2.2	0.0	0.0
Numeracy	2016	1	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
	2017	4	0.0	0.0	0.0	25.0	75.0	0.0	0.0	0.0
	2018	2	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0
	2019	3	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
	2020	0	-	-	-	-	-	-	-	-
	2021	1	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
	2022	0	-	-	-	-	-	-	-	-
	2023	205	98.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
	2016–23	216	93.5	2.8	0.5	1.4	1.4	0.5	0.0	0.0

Table 33 reports the pass rates of prospective students by their attempt number. Overall, 74.7% of prospective students attempting the literacy test were successful, and 88.5% of prospective students attempting the numeracy test were successful. These pass rates are lower than the pass rates observed for currently enrolled ITE candidates.

Table 34 reports the mean scale scores achieved by prospective students who first attempted the test in 2023. The performance of these prospective students was below the level of performance observed for currently enrolled ITE candidates who first attempted the test in 2023 (see Table 21), for both domains and in terms of both mean scale scores and pass rates.

Table 33: Pass rates of prospective student sittings by test window and attempt number

		TW1	Pass rate	TW2	Pass rate	TW3	Pass rate	TW4	Pass rate	Total	Pass rate
Literacy	First sitting	0	-	32	78.1	66	78.8	105	79.0	203	78.8
	Second sitting	0	-	0	-	1	100.0	8	50.0	9	55.6
	Third sitting	0	-	0	-	0	-	4	50.0	4	50.0
	Fourth sitting	0	-	1	100.0	1	0.0	4	50.0	6	50.0
	Fifth sitting	0	-	0	-	1	0.0	5	40.0	6	33.3
	Sixth sitting	0	-	0	-	0	-	5	40.0	5	40.0
	Total sittings	0	-	33	78.8	69	76.8	131	72.5	233	74.7
Numeracy	First sitting	0	-	32	90.6	60	91.7	112	88.4	204	89.7
	Second sitting	0	-	2	100.0	0	-	4	25.0	6	50.0
	Third sitting	0	-	1	100.0	0	-	0	-	1	100.0
	Fourth sitting	0	-	0	-	0	-	3	100.0	3	100.0
	Fifth sitting	0	-	0	-	0	-	3	66.7	3	66.7
	Sixth sitting	0	-	0	-	1	100.0	0	-	1	100.0
	Totals sittings	0	-	35	91.4	61	91.8	122	86.1	218	88.5

Table 34: Prospective student performance overall and by subscale, for first-attempt candidates only

Component	Whole test and subscale	N	Mean	S.D.	Pass Rate
Literacy	Overall	203	114.6	9.9	78.8
	Reading		114.5	10.5	-
	Technical skills of writing		115.0	11.2	-
Numeracy	Overall	204	125.9	12.1	89.7
	Number & algebra		126.4	13.3	-
	Measurement & geometry		126.7	13.7	-
	Statistics & probability		123.9	11.4	-
	Calculator available		125.7	11.8	-
	Calculator not available		125.9	16.3	-

5 Phase 9 Trial Item Analysis

5.1 In-test trialling

Following review by the Expert Groups, 102 literacy items and 96 numeracy items were trialled within the live tests. These items were placed in small clusters (5-item clusters for literacy, and 4-item 'calculator available' clusters and a 1-item 'calculator not available' cluster for numeracy). Candidates were unaware of the location of these trial items. The trial items did not contribute to a candidate's score. The items were trialled in multiple test windows until sufficient candidates had attempted them. In this way, robust trial item estimates were obtained to enable selection of new, balanced clusters for refreshment of the tests in test window 3 and test window 4 in 2024.

5.2 Trial item analysis

Table 35 shows that the acceptable¹² Phase 9 trial items were well-targeted by difficulty, with most numeracy items and literacy items achievable by candidates in Bands 2 and 3. A small number were achievable by candidates above Band 3 and by candidates in Band 1, as required by the test construct. A small number of Phase 9 trial items (9 from literacy and 3 from numeracy) were below Band 1 and may not be selected for the test.

Table 35: Distribution of Phase 9 trial items by Band

Achievable by candidates ...	Number of literacy items	Number of numeracy items
above Band 3	4	9
in Band 3: Clearly above the standard	18	25
in Band 2: At and above the standard	41	45
in Band 1: Below the standard	29	13
below Band 1	9	3
Total	101	95

5.3 Differential item functioning

During the item development and revision phase, avoiding items that might favour one subgroup of candidates over another is attempted. Despite this, it is normal for a proportion of items to show differential item functioning (DIF).

DIF analysis was performed on all trial items. Only analysis where subgroup size exceeds 50 candidates can be reported reliably. On many occasions, no obvious content or context bias is observable. Investigating reasons for a particular item showing DIF for a particular group involves looking for an explanatory connection between actual characteristics of the item and assumed or posited characteristics of the group.

It is often not possible to withhold all items showing DIF from the live tests, so the approach is to attempt to 'balance' the tests accordingly and thereby minimise the likelihood of any test bias. Selected items with DIF are spread across the clusters. No candidate attempts all clusters, so no candidate is required to attempt all items showing DIF.

¹² Note that one trial item was removed from each of the literacy and numeracy item calibrations during the Phase 9 trial analysis. In both cases, the item was removed due to content issues identified upon review of initial results.

Table 36 shows the number of Phase 9 items showing significant differential item functioning. There were an insufficient number of candidates to reliably report DIF for Indigenous candidates, English not as first language candidates, or international candidates.

For literacy and numeracy, there were more items observed potentially favouring female candidates than potentially favouring male candidates. There were more items favouring candidates aged 26+ years for both literacy and numeracy. Items identified from the DIF analysis based on course category favoured early childhood & primary candidates over secondary candidates, for both literacy and numeracy. The DIF analysis by candidate residential area identified only a few potential items, which tended to favour regional and remote area candidates in both domains.

Items showing DIF are investigated for unfair content and where this is found to exist the items are not selected. Usually, this is not the case and the DIF is performance related; that is, the favoured subgroup is simply better at the skills being assessed for a variety of reasons. To minimise differential test functioning, DIF 'cancelling' methodology is applied at the cluster formation stage. That is, items showing DIF are paired with items showing DIF in the opposite direction. In this way, clusters are well-balanced and the tests from which the clusters are created are fair.

Table 36: Summary of Phase 9 trial items identified as exhibiting DIF

Group	Potentially favours	Number of literacy items	Number of numeracy items
Age	17–25 years	1	1
	26+ years	3	3
Course Category	Early childhood & primary	1	3
	Secondary	0	1
Gender	Female	3	3
	Male	1	0
Residential area	Metropolitan areas	0	1
	Regional and Remote areas	1	3
Program Type	Postgraduate	1	0
	Undergraduate	2	2

The detailed DIF analysis may be found in Appendix 5.

6 Phase 9 Test Development

During 2022/2023, 125 Phase 9 literacy items (87 Reading and 38 Technical skills of writing) and 103 Phase 9 numeracy items, mapped against the Assessment Framework, were developed. The items were reviewed by the Expert Groups in February 2023 and were revised based upon reviewers' feedback. A small proportion will be retired. A selection of at least 60 literacy items and at least 60 numeracy items were in-test trialled in test windows 3 and 4 of 2023 and test window 1 of 2024. A selection of these will be used to refresh the test in 2024.

7 The LANTITE Trial in 2023

The National Teacher Workforce Action Plan's LANTITE trial is a strategic initiative by the Australian Government to address teacher workforce challenges. The trial aims to contribute to a well-qualified teaching workforce by providing more support for students. The trial began in September 2023 and will conclude in November 2024.

Two features of the existing LANTITE ambit have been changed during the trial period.

1. Students enrolled in accredited ITE courses across all states and territories will have unlimited attempts to pass the test. This trial acts as a test limit amnesty, meaning that any failed attempts made during the trial will not count towards the total number of attempts once the trial concludes.
2. Candidates will receive more detailed feedback with clear advice on areas for improvement for candidates who were unsuccessful in meeting the standard.

The trial commenced in test window 4 of 2023, so sitting candidates from this test window are included in the trial. However, performance of candidates during the trial period will be reported elsewhere and is not a focus of this technical report.

It can be noted that, as a result of the removal of a cap on test attempts, the number of candidates with multiple previous attempts sitting in test window 4 increased compared to the numbers in test windows 1 to 3 (see Table 5).

8 Conclusion

The year 2023 saw two changes to LANTITE: the introduction of allowing prospective students to sit the test, and the commencement of the LANTITE trial towards the end of the year. The test was successfully administered in four test windows in all Australian states and territories to approximately 21,500 candidates. Another set of new items was successfully trialled enabling the test to be refreshed.

Item difficulty and targeting of the new set of trial items against the revised Assessment Framework was such that equivalent test clusters can be created. Differential item functioning was found to be manageable, ensuring that unbiased clusters can be created to refresh the test in mid-2024.

Of the candidates who first registered in 2023, by the end of the year, 92.5% had achieved the literacy standard and 95.3% had achieved the numeracy standard. Over the eight years of testing, 96.2% of candidates have achieved the literacy standard and 96.5% of candidates have achieved the numeracy standard. Of the 151,705 candidates presenting for the test in the eight-year period 2016–2023, 94.7% have achieved both standards, thereby meeting the requirements as outline in the test construct.

9 Appendices

9.1 Appendix 1: Proportion of candidates by test centre and by attempt

Table 37 shows the number and proportion of candidates participating at each test centre and by remote proctoring for literacy. Table 38 shows the same for numeracy. In 2023, about half of first-attempt candidates (compared to 22% in 2019) sat the test by remote proctoring. Attendances at many test centres continues to decline from pre-COVID-19 attendances. For example, the Melbourne CBD test centre accounted for about 9% of all first attempt candidates in 2023, compared with 21% in 2019.

Table 37: Number and proportion of candidates who participated by test centre, literacy

Test Centre	First attempt		Second attempt		Third attempt		Fourth attempt		Fifth attempt		Sixth attempt	
	N	%	N	%	N	%	N	%	N	%	N	%
Adelaide	857	4.9	160	8.4	57	7.5	25	6.5	6	5.9	1	4.0
Albury	27	0.2	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Armidale	14	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ballarat	92	0.5	4	0.2	1	0.1	2	0.5	1	1.0	0	0.0
Brisbane	1524	8.7	83	4.4	30	3.9	9	2.3	2	2.0	1	4.0
Cairns	42	0.2	2	0.1	1	0.1	0	0.0	0	0.0	0	0.0
Canberra	321	1.8	17	0.9	7	0.9	4	1.0	0	0.0	1	4.0
Darwin	141	0.8	31	1.6	25	3.3	10	2.6	3	3.0	0	0.0
Geelong	46	0.3	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0
Gold Coast	300	1.7	15	0.8	2	0.3	0	0.0	1	1.0	0	0.0
Hobart	126	0.7	6	0.3	0	0.0	1	0.3	2	2.0	0	0.0
Melbourne	1650	9.4	164	8.6	45	5.9	24	6.2	8	7.9	2	8.0
Mildura	3	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Newcastle	363	2.1	28	1.5	7	0.9	1	0.3	0	0.0	0	0.0
Orange	14	0.1	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Parramatta	177	1.0	18	0.9	3	0.4	2	0.5	0	0.0	0	0.0
Perth	1062	6.0	103	5.4	44	5.8	13	3.4	3	3.0	1	4.0
Reasonable Adjustments	23	0.1	13	0.7	7	0.9	20	5.2	5	5.0	2	8.0
Remote proctoring	8786	50.0	1109	58.1	466	61.1	242	62.7	58	57.4	13	52.0
Rockhampton	17	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sunshine Coast	97	0.6	9	0.5	0	0.0	1	0.3	0	0.0	0	0.0
Sydney	1674	9.5	130	6.8	64	8.4	31	8.0	11	10.9	4	16.0
Townsville	61	0.3	3	0.2	2	0.3	0	0.0	0	0.0	0	0.0
Wagga Wagga	14	0.1	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
Warrnambool	10	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wollongong	124	0.7	10	0.5	0	0.0	1	0.3	1	1.0	0	0.0
Total	17565	100.0	1908	100.0	763	100.0	386	100.0	101	100.0	25	100.0

Table 38: Number and proportion of candidates who participated by test centre, numeracy

Test Centre	First attempt		Second attempt		Third attempt		Fourth attempt		Fifth attempt		Sixth Attempt or greater	
	N	%	N	%	N	%	N	%	N	%	N	%
Adelaide	850	4.8	92	6.8	46	8.1	17	7.1	2	4.1	0	0.0
Albury	29	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Armidale	13	0.1	0	0.0	0	0.0	0	0.0	1	2.0	0	0.0
Ballarat	94	0.5	5	0.4	1	0.2	1	0.4	0	0.0	0	0.0
Brisbane	1546	8.8	62	4.6	23	4.1	4	1.7	0	0.0	0	0.0
Cairns	39	0.2	2	0.1	1	0.2	1	0.4	0	0.0	0	0.0
Canberra	329	1.9	16	1.2	5	0.9	0	0.0	0	0.0	0	0.0
Darwin	137	0.8	9	0.7	5	0.9	2	0.8	0	0.0	0	0.0
Geelong	41	0.2	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Gold Coast	294	1.7	13	1.0	1	0.2	0	0.0	1	2.0	0	0.0
Hobart	140	0.8	2	0.1	3	0.5	2	0.8	0	0.0	0	0.0
Melbourne	1635	9.3	109	8.0	38	6.7	16	6.7	1	2.0	0	0.0
Mildura	4	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Newcastle	366	2.1	18	1.3	3	0.5	3	1.3	0	0.0	0	0.0
Orange	10	0.1	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Parramatta	174	1.0	6	0.4	4	0.7	1	0.4	0	0.0	0	0.0
Perth	1079	6.1	68	5.0	30	5.3	7	2.9	3	6.1	0	0.0
Reasonable Adjustments	27	0.2	13	1.0	12	2.1	9	3.8	6	12.2	4	44.4
Remote proctoring	8829	50.1	841	61.8	357	63.0	159	66.5	30	61.2	5	55.6
Rockhampton	18	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sunshine Coast	94	0.5	3	0.2	1	0.2	0	0.0	0	0.0	0	0.0
Sydney	1668	9.5	91	6.7	33	5.8	16	6.7	5	10.2	0	0.0
Townsville	60	0.3	1	0.1	1	0.2	0	0.0	0	0.0	0	0.0
Wagga Wagga	13	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Warrnambool	11	0.1	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Wollongong	123	0.7	6	0.4	3	0.5	1	0.4	0	0.0	0	0.0
Total	17623	100.0	1360	100.0	567	100.0	239	100.0	49	100.0	9	100.0

9.2 Appendix 2: Proportion of candidates by test centre and by test window

Table 39 and Table 40 show the number and proportion of candidates participating at each test centre in test windows 1–4 for literacy and for numeracy respectively. These tables show that some test centres in some locations were not used for some test windows.

Table 39: Number of candidates in test centres by test windows, literacy

Test Centre	TW1		TW2		TW3		TW4	
	N	%	N	%	N	%	N	%
Adelaide	255	5.5	266	4.9	244	5.0	341	5.9
Albury	0	0.0	13	0.2	15	0.3	0	0.0
Armidale	0	0.0	8	0.1	6	0.1	0	0.0
Ballarat	0	0.0	49	0.9	51	1.0	0	0.0
Brisbane	355	7.6	354	6.5	355	7.2	585	10.2
Cairns	0	0.0	29	0.5	16	0.3	0	0.0
Canberra	84	1.8	99	1.8	79	1.6	88	1.5
Darwin	40	0.9	39	0.7	48	1.0	83	1.4
Geelong	0	0.0	48	0.9	0	0.0	0	0.0
Gold Coast	110	2.4	105	1.9	103	2.1	0	0.0
Hobart	24	0.5	40	0.7	36	0.7	35	0.6
Melbourne	407	8.8	494	9.1	491	10.0	501	8.7
Mildura	0	0.0	3	0.1	0	0.0	0	0.0
Newcastle	132	2.8	135	2.5	132	2.7	0	0.0
Orange	0	0.0	15	0.3	0	0.0	0	0.0
Parramatta	0	0.0	103	1.9	97	2.0	0	0.0
Perth	342	7.4	350	6.4	252	5.1	282	4.9
Reasonable Adjustments	13	0.3	16	0.3	17	0.3	24	0.4
Remote proctoring	2356	50.7	2624	48.3	2440	49.5	3254	56.6
Rockhampton	0	0.0	17	0.3	0	0.0	0	0.0
Sunshine Coast	37	0.8	35	0.6	35	0.7	0	0.0
Sydney	480	10.3	476	8.8	402	8.2	556	9.7
Townsville	0	0.0	31	0.6	35	0.7	0	0.0
Wagga Wagga	0	0.0	15	0.3	0	0.0	0	0.0
Warrnambool	10	0.2	0	0.0	0	0.0	0	0.0
Wollongong	0	0.0	64	1.2	72	1.5	0	0.0
Total	4645	100.0	5428	100.0	4926	100.0	5749	100.0

Table 40: Number of candidates in test centres by test windows, numeracy

Test Centre	TW1		TW2		TW3		TW4	
	N	%	N	%	N	%	N	%
Adelaide	259	5.7	262	5.1	185	3.9	301	5.6
Albury	0	0.0	14	0.3	15	0.3	0	0.0
Armidale	0	0.0	7	0.1	7	0.1	0	0.0
Ballarat	0	0.0	51	1.0	50	1.1	0	0.0
Brisbane	366	8.0	338	6.5	356	7.6	575	10.6
Cairns	0	0.0	28	0.5	15	0.3	0	0.0
Canberra	80	1.8	100	1.9	75	1.6	95	1.8
Darwin	30	0.7	28	0.5	36	0.8	59	1.1
Geelong	0	0.0	42	0.8	0	0.0	0	0.0
Gold Coast	102	2.2	105	2.0	102	2.2	0	0.0
Hobart	28	0.6	37	0.7	42	0.9	40	0.7
Melbourne	384	8.4	474	9.2	451	9.6	490	9.1
Mildura	0	0.0	4	0.1	0	0.0	0	0.0
Newcastle	124	2.7	133	2.6	133	2.8	0	0.0
Orange	0	0.0	11	0.2	0	0.0	0	0.0
Parramatta	0	0.0	92	1.8	93	2.0	0	0.0
Perth	350	7.7	332	6.4	230	4.9	275	5.1
Reasonable Adjustments	15	0.3	16	0.3	16	0.3	24	0.4
Remote proctoring	2289	50.1	2507	48.5	2371	50.5	3054	56.4
Rockhampton	0	0.0	18	0.3	0	0.0	0	0.0
Sunshine Coast	27	0.6	39	0.8	32	0.7	0	0.0
Sydney	499	10.9	430	8.3	383	8.2	501	9.3
Townsville	0	0.0	27	0.5	35	0.7	0	0.0
Wagga Wagga	0	0.0	13	0.3	0	0.0	0	0.0
Warrnambool	12	0.3	0	0.0	0	0.0	0	0.0
Wollongong	0	0.0	66	1.3	67	1.4	0	0.0
Total	4565	100.0	5174	100.0	4694	100.0	5414	100.0

9.3 Appendix 3: Score frequency distributions

Table 41: Literacy score frequency distribution of first-attempt candidates

Scale Score	Frequency	Percentile
85	1	0.0
87	2	0.0
88	5	0.0
89	2	0.1
90	1	0.1
91	7	0.1
92	10	0.2
93	22	0.3
94	22	0.4
95	21	0.5
96	35	0.7
97	41	1.0
98	63	1.3
99	80	1.8
100	91	2.3
101	134	3.1
102	173	4.0
103	191	5.1
104	272	6.7
105	313	8.5
106	340	10.4
107	358	12.4
108	380	14.6
109	499	17.4
110	616	20.9
111	665	24.7
112	783	29.2
113	769	33.6
114	821	38.2
115	805	42.8
116	955	48.3
117	802	52.8
118	968	58.3
119	932	63.6
120	624	67.2
121	790	71.7
122	693	75.6
123	619	79.2
124	543	82.3
125	490	85.0
126	374	87.2
127	426	89.6
128	340	91.5
129	287	93.2
130	199	94.3

Standard in 2017 TW3–4, 2018 to 2023

131	227	95.6
132	183	96.6
133	97	97.2
134	87	97.7
135	99	98.2
136	67	98.6
137	53	98.9
138	30	99.1
139	54	99.4
140	29	99.6
141	13	99.6
143	8	99.7
144	12	99.8
145	19	99.9
146	6	99.9
147	3	99.9
154	2	99.9
155	2	99.9
156	2	100.0
157	7	100.0
158	1	100.0

Table 42: Numeracy score frequency distribution of first-attempt candidates

Scale Score	Frequency	Percentile
83	1	0.0
86	1	0.0
88	2	0.0
90	2	0.0
91	2	0.0
92	3	0.1
93	6	0.1
94	7	0.1
95	10	0.2
96	16	0.3
97	12	0.4
98	21	0.5
99	23	0.6
100	44	0.9
101	33	1.0
102	65	1.4
103	74	1.8
104	69	2.2
105	111	2.8
106	129	3.6
107	143	4.4
108	176	5.4
109	197	6.5
110	188	7.6
111	214	8.8

Standard in 2017 TW3–4, 2018 to 2023

112	290	10.4
113	319	12.2
114	366	14.3
115	347	16.3
116	393	18.5
117	444	21.0
118	474	23.7
119	444	26.2
120	517	29.2
121	546	32.3
122	540	35.3
123	592	38.7
124	572	42.0
125	637	45.6
126	683	49.4
127	587	52.8
128	622	56.3
129	573	59.6
130	715	63.6
131	613	67.1
132	426	69.5
133	627	73.1
134	599	76.5
135	268	78.0
136	663	81.7
137	229	83.0
138	504	85.9
139	306	87.6
140	243	89.0
141	354	91.0
142	211	92.2
143	200	93.4
144	108	94.0
145	267	95.5
146	84	96.0
147	147	96.8
150	166	97.7
151	128	98.5
152	77	98.9
153	28	99.1
161	66	99.4
162	65	99.8
163	14	99.9
164	20	100.0

Table 43 shows the percentage of candidates who sat the test in 2023 for each of the three bands for both literacy and numeracy. For literacy, 56.8% of candidates who registered in 2023 and sat the literacy component in 2023 were located in Band 2: At or above the standard, while 30.5% were located in Band 3: Well above the standard or above Band 3. For numeracy, 32.2% were located in Band 2: At or above the standard, while 41.4% were located in Band 3: Well above the standard or above Band 3.

Table 43: Candidates attempting the test in 2023 by Band

Component	Year of Registration	No. of Unique Candidates	Below Band 1 (%)	Band 1 (%)	Band 2 (%)	Band 3 (%)	Above Band 3 (%)
Literacy	2023	17565	0.2	10.2	56.8	30.5	2.3
	2023 plus the 2016–23 resitters	19312	0.2	9.7	60.1	27.9	2.1
Numeracy	2023	17623	0.2	6.3	32.2	44.3	17.0
	2023 plus the 2016–23 resitters	19079	0.2	6.0	36.7	41.4	15.7

The distribution of candidate scale scores across the bands in 2023 was similar to that in 2022 for both literacy and numeracy.

9.4 Appendix 4: Performance by demographic characteristics and test windows

Tables 44–47 show performance by demographic characteristics for each test window. In general, the overall findings in Section 3 (Candidate Performance) are also true for each test window.

Undergraduate candidates in their first year were more likely to attempt the test in test windows 2, 3 or 4, whereas the reverse was true for undergraduate candidates in their fourth year, who were more likely to attempt the test in test window 1.

Postgraduate candidates in their first year were most likely to attempt the test in test windows 2, 3 and 4. However, postgraduate candidates in their second year were more likely to attempt the test in test window 1.

Table 44: Performance by demographic characteristics in test window 1

Characteristic	Category	Literacy		Numeracy	
		N	Pass Rate	N	Pass Rate
Gender	Female	3536	84.4	3510	88.1
	Male	1102	91.1	1049	96.2
	Indeterminate/intersex	6	100.0	6	100.0
Age	17–25	2860	86.1	2803	90.0
	26–30	681	87.2	697	88.4
	31–35	421	87.2	411	90.3
	36–40	304	85.2	294	92.2
	41–45	211	84.4	191	92.7
	46+	167	80.8	169	87.6
International Students	No	4352	87.4	4348	89.9
	Yes	292	66.1	217	91.7
English as a First Language	Yes	3903	89.1	3973	90.6
	No	741	69.6	592	85.5
Indigenous	No	4449	86.1	4370	90.0
	Yes	112	82.1	111	86.5
	Not disclosed	83	86.7	84	91.7
Residential Area	Metropolitan areas	3757	85.8	3697	89.6
	Regional areas	827	87.5	811	92.0
	Remote areas	38	76.3	39	82.1
	International	11	81.8	8	100.0
	Invalid or Missing	11	100.0	10	90.0
Program Type	Undergraduate	3163	84.8	3072	89.2
	Postgraduate	1459	88.8	1470	91.7
	Pathway	22	86.4	23	82.6
Program Type by Year Level	Undergraduate first year	115	83.5	112	92.0
	Undergraduate second year	650	86.8	630	91.4
	Undergraduate third year	1274	84.9	1203	90.5
	Undergraduate fourth year	905	85.5	918	87.9
	Undergraduate fifth year or above	125	83.2	129	82.9

	Undergraduate graduated	94	66.0	80	72.5
	Postgraduate first year	422	93.1	436	96.1
	Postgraduate second year	740	87.8	751	91.5
	Postgraduate third year	115	87.8	116	83.6
	Postgraduate fourth year	52	92.3	49	87.8
	Postgraduate fifth year or above	66	83.3	63	90.5
	Postgraduate graduated	64	75.0	55	81.8
	Pathway first year	6	66.7	7	57.1
	Pathway second year	6	83.3	4	100.0
	Pathway third year	2	100.0	5	80.0
	Pathway fourth year	5	100.0	6	100.0
	Pathway fifth year or above	1	100.0	0	-
	Pathway graduated	2	100.0	1	100.0
Course Category	Early childhood	351	73.2	335	80.3
	Primary	2114	84.6	2125	88.8
	Secondary	1593	91.8	1562	94.2
	Special education	28	78.6	29	86.2
	Other	558	83.3	514	88.5

Table 45: Performance by demographic characteristics in test window 2 (including resits)

Characteristic	Category	Literacy		Numeracy	
		N	Pass Rate	N	Pass Rate
Gender	Female	4004	83.8	3825	88.0
	Male	1414	91.6	1337	96.9
	Indeterminate/intersex	9	100.0	11	90.9
Age	17–25	3583	86.2	3408	90.0
	26–30	743	86.7	751	90.1
	31–35	415	86.0	385	92.5
	36–40	313	81.8	276	91.7
	41–45	187	84.0	176	93.2
	46+	186	84.9	177	87.6
International Students	No	4916	87.1	4696	89.6
	Yes	511	74.0	477	96.9
English as a First Language	Yes	4447	88.9	4288	90.2
	No	980	72.0	885	90.6
Indigenous	No	5254	86.0	4997	90.4
	Yes	106	78.3	102	86.3
	Not disclosed	67	88.1	74	87.8
Residential Area	Metropolitan areas	4433	85.9	4207	90.0
	Regional areas	934	86.4	906	91.5
	Remote areas	44	75.0	44	88.6
	International	6	100.0	6	100.0
	Invalid or Missing	10	90.0	10	100.0
Program Type	Undergraduate	3547	83.8	3300	87.8
	Postgraduate	1880	89.8	1873	94.8
	Pathway	0	-	0	-
Program Type by Year Level	Undergraduate first year	577	87.3	513	91.6
	Undergraduate second year	1067	84.7	994	89.5
	Undergraduate third year	1133	82.8	1035	87.3
	Undergraduate fourth year	643	83.0	639	83.6
	Undergraduate fifth year or above	114	73.7	113	83.2
	Undergraduate graduated	13	69.2	6	66.7
	Postgraduate first year	1123	92.3	1151	97.6
	Postgraduate second year	526	86.7	493	90.7
	Postgraduate third year	113	87.6	111	91.0
	Postgraduate fourth year	61	80.3	56	94.6
	Postgraduate fifth year or above	48	91.7	53	83.0
	Postgraduate graduated	9	44.4	9	77.8
	Pathway first year	0	-	0	-
	Pathway second year	0	-	0	-
	Pathway third year	0	-	0	-
	Pathway fourth year	0	-	0	-
	Pathway fifth year or above	0	-	0	-
	Pathway graduated	0	-	0	-
Course Category	Early childhood	397	69.5	359	85.0
	Primary	2143	83.9	2034	87.4
	Secondary	2196	92.3	2129	95.3
	Special education	34	79.4	28	92.9
	Other	657	81.1	623	85.6

Table 46: Performance by demographic characteristics in test window 3 (including resits)

Characteristic	Category	Literacy		Numeracy	
		N	Pass Rate	N	Pass Rate
Gender	Female	3669	83.1	3507	91.2
	Male	1250	90.8	1180	97.5
	Indeterminate/intersex	7	100.0	7	100.0
Age	17–25	3103	85.7	2964	93.2
	26–30	732	83.6	679	90.1
	31–35	394	82.2	371	92.2
	36–40	276	85.5	286	96.5
	41–45	200	84.0	201	94.0
	46+	221	87.8	193	90.7
International Students	No	4450	87.7	4368	92.5
	Yes	476	60.7	326	96.6
English as a First Language	Yes	4020	90.0	3986	93.3
	No	906	63.4	708	90.0
Indigenous	No	4752	85.1	4534	92.9
	Yes	108	81.5	99	89.9
	Not disclosed	66	87.9	61	93.4
Residential Area	Metropolitan areas	3911	84.2	3709	92.8
	Regional areas	951	89.1	925	93.3
	Remote areas	49	79.6	42	85.7
	International	2	100.0	2	100.0
	Invalid or Missing	13	76.9	16	87.5
Program Type	Undergraduate	3225	84.8	3131	91.8
	Postgraduate	1701	85.6	1563	94.9
	Pathway	0	-	0	-
Program Type by Year Level	Undergraduate first year	571	84.2	575	95.3
	Undergraduate second year	975	87.9	939	93.1
	Undergraduate third year	1137	83.6	1062	92.4
	Undergraduate fourth year	434	84.6	449	86.6
	Undergraduate fifth year or above	98	76.5	99	79.8
	Undergraduate graduated	10	50.0	7	28.6
	Postgraduate first year	1088	86.1	954	96.6
	Postgraduate second year	437	86.0	425	93.9
	Postgraduate third year	73	84.9	74	93.2
	Postgraduate fourth year	59	88.1	65	87.7
	Postgraduate fifth year or above	38	71.1	38	81.6
	Postgraduate graduated	6	33.3	7	71.4
	Pathway first year	0	-	0	-
	Pathway second year	0	-	0	-
	Pathway third year	0	-	0	-
	Pathway fourth year	0	-	0	-
	Pathway fifth year or above	0	-	0	-
	Pathway graduated	0	-	0	-
Course Category	Early childhood	350	68.9	296	85.8
	Primary	2063	85.7	2011	91.7
	Secondary	1800	89.1	1709	95.8
	Special education	38	89.5	39	92.3
	Other	675	80.6	639	91.4

Table 47: Performance by demographic characteristics in test window 4 (including resits)

Characteristic	Category	Literacy		Numeracy	
		N	Pass Rate	N	Pass Rate
Gender	Female	4389	77.1	4150	85.7
	Male	1352	86.5	1255	95.6
	Indeterminate/intersex	8	100.0	9	100.0
Age	17–25	3385	81.7	3249	89.4
	26–30	839	76.4	799	84.6
	31–35	540	76.1	491	88.2
	36–40	404	79.0	344	90.7
	41–45	289	72.3	246	83.7
	46+	292	73.6	285	82.8
International Students	No	5195	82.1	5089	87.8
	Yes	554	53.1	325	91.4
English as a First Language	Yes	4501	86.4	4541	89.0
	No	1248	53.8	873	83.0
Indigenous	No	5525	79.4	5197	88.1
	Yes	136	77.9	136	85.3
	Not disclosed	88	72.7	81	91.4
Residential Area	Metropolitan areas	4621	78.6	4340	87.7
	Regional areas	1053	82.1	1004	89.4
	Remote areas	55	80.0	53	86.8
	International	6	100.0	7	100.0
	Invalid or Missing	14	85.7	10	90.0
Program Type	Undergraduate	3883	79.1	3719	86.8
	Postgraduate	1866	79.8	1695	90.7
	Pathway	0	-	0	-
Program Type by Year Level	Undergraduate first year	564	81.7	557	87.8
	Undergraduate second year	1253	81.2	1174	91.0
	Undergraduate third year	1327	81.3	1248	86.2
	Undergraduate fourth year	548	72.4	550	82.0
	Undergraduate fifth year or above	171	60.2	164	75.0
	Undergraduate graduated	20	60.0	26	80.8
	Postgraduate first year	1033	85.4	961	95.3
	Postgraduate second year	568	75.7	471	89.4
	Postgraduate third year	111	70.3	108	80.6
	Postgraduate fourth year	73	65.8	71	69.0
	Postgraduate fifth year or above	69	66.7	77	77.9
	Postgraduate graduated	12	41.7	7	71.4
	Pathway first year	0	-	0	-
	Pathway second year	0	-	0	-
	Pathway third year	0	-	0	-
	Pathway fourth year	0	-	0	-
	Pathway fifth year or above	0	-	0	-
	Pathway graduated	0	-	0	-
Course Category	Early childhood	441	62.1	379	79.2
	Primary	2555	79.7	2445	86.4
	Secondary	2007	84.2	1891	92.9
	Special education	54	83.3	47	85.1
	Other	692	74.4	652	85.6

Figures 7–10 show achievement distributions in literacy and numeracy by demographic characteristics for each test window.

Figure 7 shows that, for literacy, the distributions of the scale scores of female candidates and male candidates are very similar to each other across test windows. For numeracy, while the distributions of the scale scores of male candidates were higher up the scale than those of female candidates, in each test window most female candidates achieved well above the numeracy standard. Furthermore, female candidates were also achieving very high numeracy scores. The median scale scores were lowest in test window 4 for both males and females for literacy and numeracy.

Figure 8 shows that, for literacy, there are no observable patterns in the scale score distributions of undergraduates except that there is a decline in achievement of candidates after their graduation. This is primarily due to the higher proportions of resit candidates in the later year cohorts.

Figure 9 shows similar downward trends for numeracy as those shown in Figure 8 for literacy.

Figure 10 shows that the only observable pattern between test windows in the scale score distributions of the course categories for both literacy and numeracy is for test window 2.

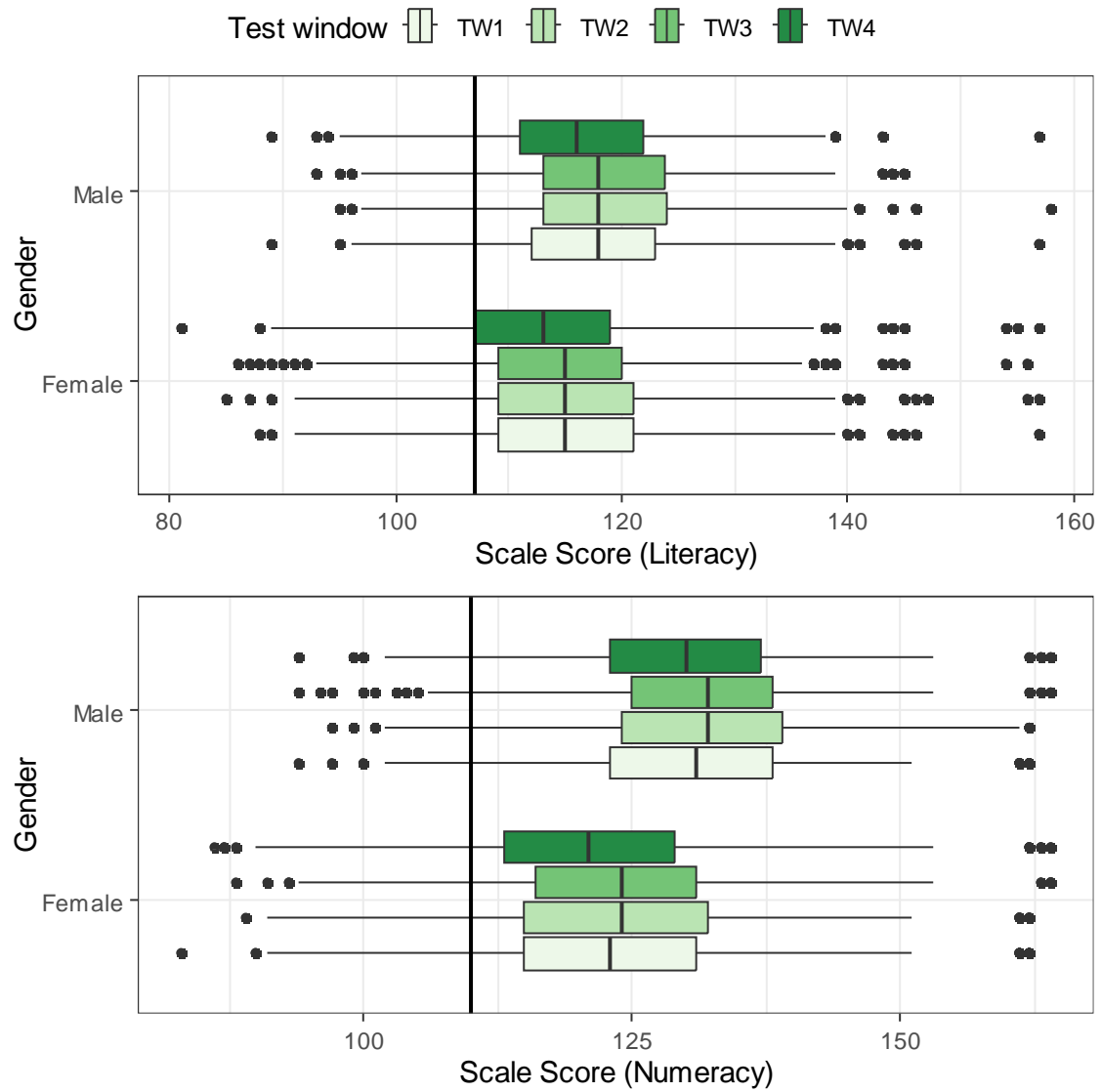


Figure 7: Score distributions by gender and test window, literacy and numeracy

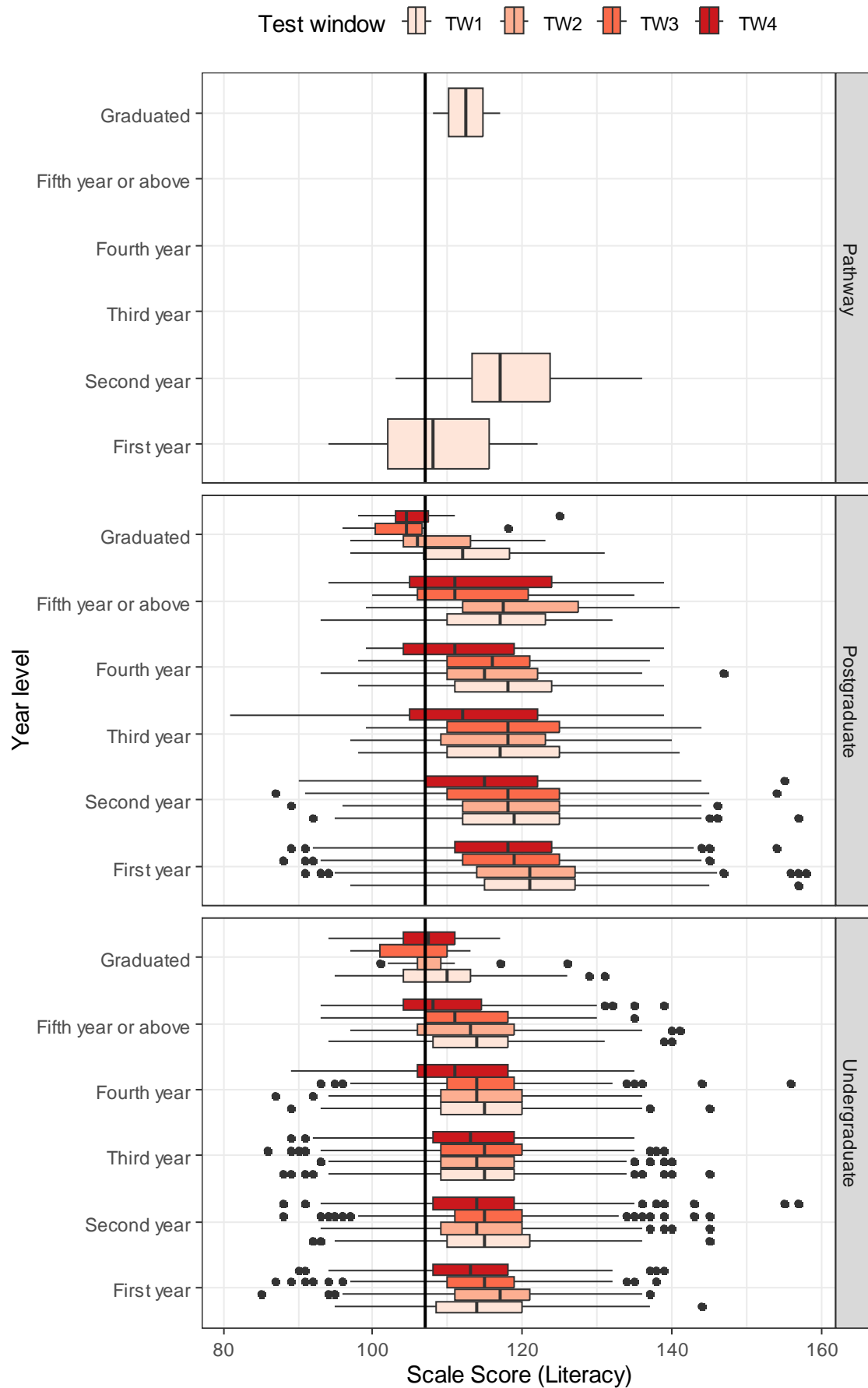


Figure 8: Score distributions by program type, year level and test window, literacy

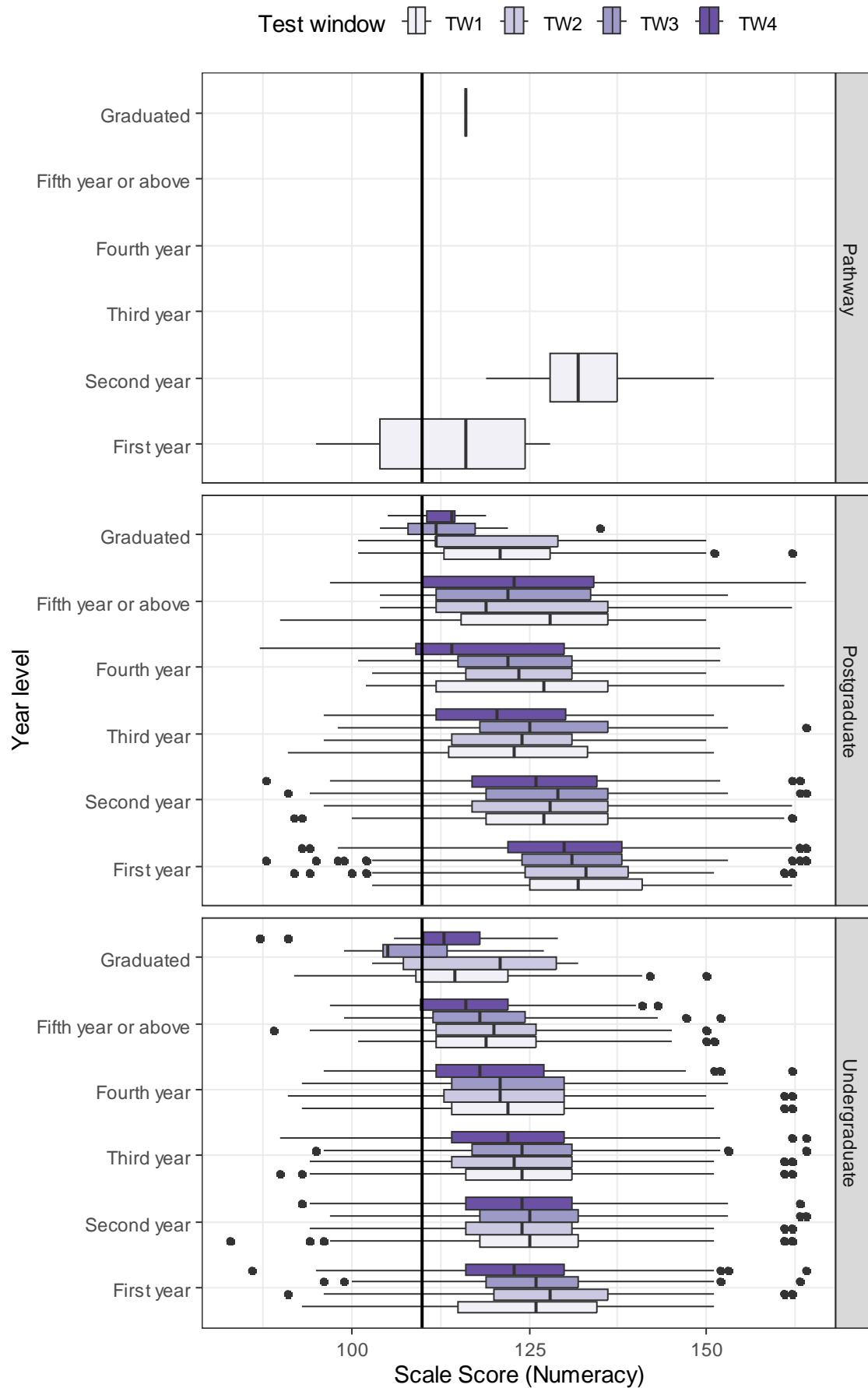


Figure 9: Score distributions by program type, year level and test window, numeracy

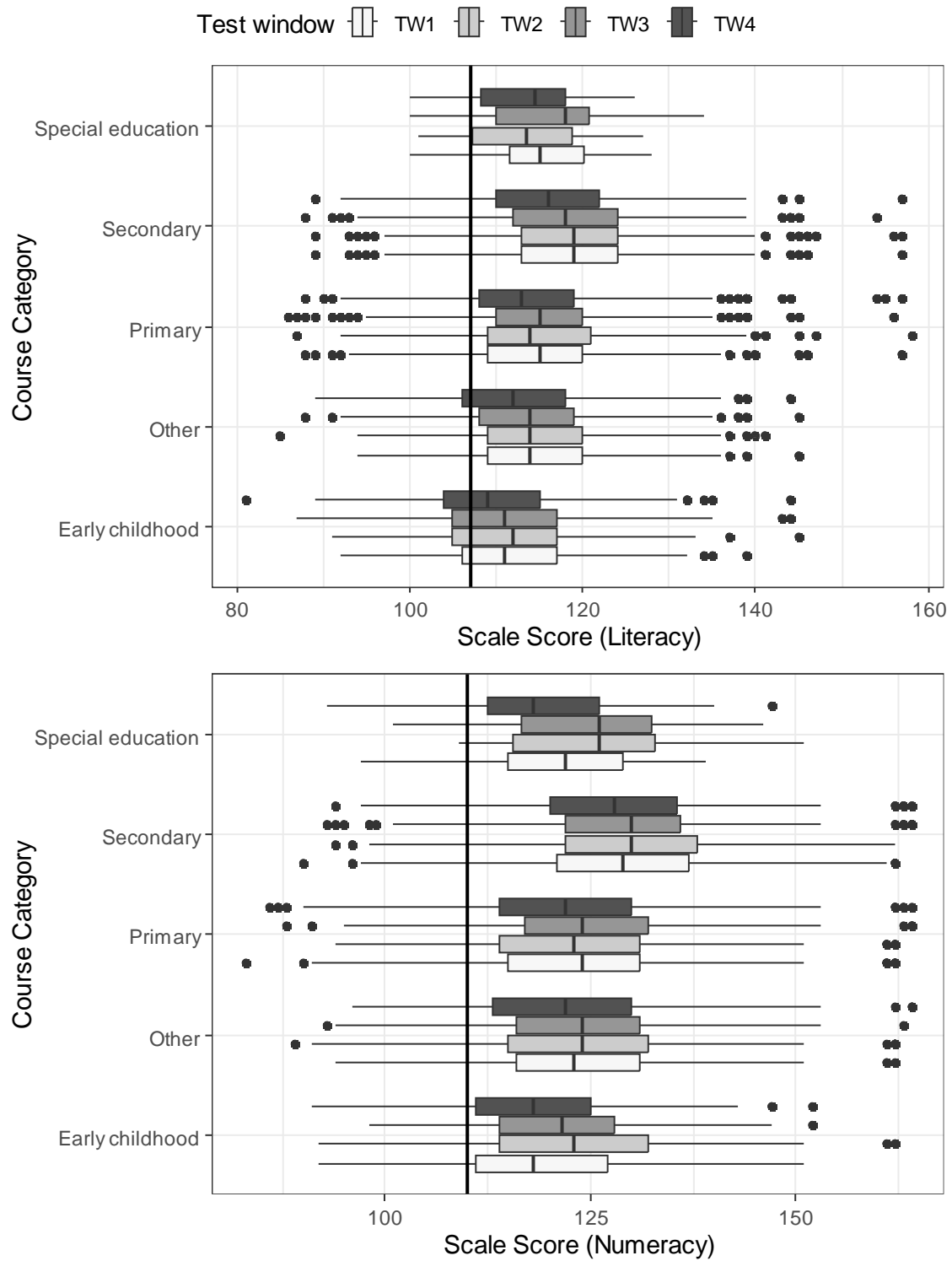


Figure 10: Score distributions by course category and test window, literacy and numeracy

9.5 Appendix 5: Analysis of differential item functioning

Differential item functioning (DIF) analysis was performed to investigate if there are any trial items that may favour one subgroup over another. DIF analysis was not performed for Indigenous candidates, international candidates, and English not as a first language candidates due to insufficient sample size.

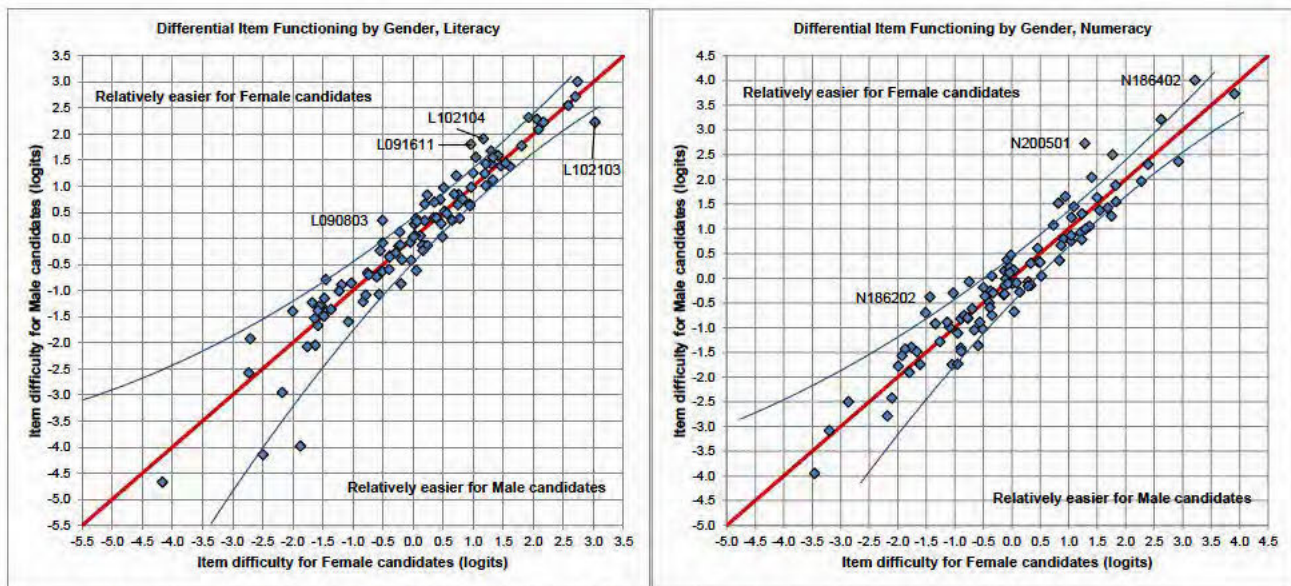


Figure 11: DIF analysis summary plot of trial items by gender, literacy and numeracy

As shown in Figure 11, several trial items are relatively distant from the confidence intervals, and these are listed in Table 48. The table shows that, for literacy, of the 102 trial items, three items significantly favoured females and one item significantly favoured males.

For numeracy, of the 96 trial items, three items significantly favoured females and no items significantly favoured males.

Table 48: Phase 9 trial items potentially exhibiting DIF by gender

Domain	Sub-domain	Item ID	Item Title	Diff. (logits)	Std. diff.	χ^2	Group favoured
Literacy	R	L091611	Bandicoots in Australian English	-0.84	-4.65	21.59, $p < 0.001$	Female
Literacy	TSW	L102103	New Principal	0.80	4.01	16.09, $p < 0.001$	Male
Literacy	TSW	L102104	New Principal	-0.74	-4.08	16.64, $p < 0.001$	Female
Literacy	TSW	L090803	Pre-School Food Safety	-0.85	-4.12	16.97, $p < 0.001$	Female
Numeracy	MG, CA	N186402	Pyramid Package	-0.79	-3.13	9.82, $p = 0.002$	Female
Numeracy	SP, CA	N186202	Club Choice	-1.05	-3.92	15.35, $p < 0.001$	Female
Numeracy	SP, CA	N200501	Achievement Trends	-1.45	-7.46	55.71, $p < 0.001$	Female

Figure 12 shows the DIF plots for age groups (17–25-year-olds compared to 26+-year-olds). There are six items outside the confidence interval limits for both literacy and numeracy.

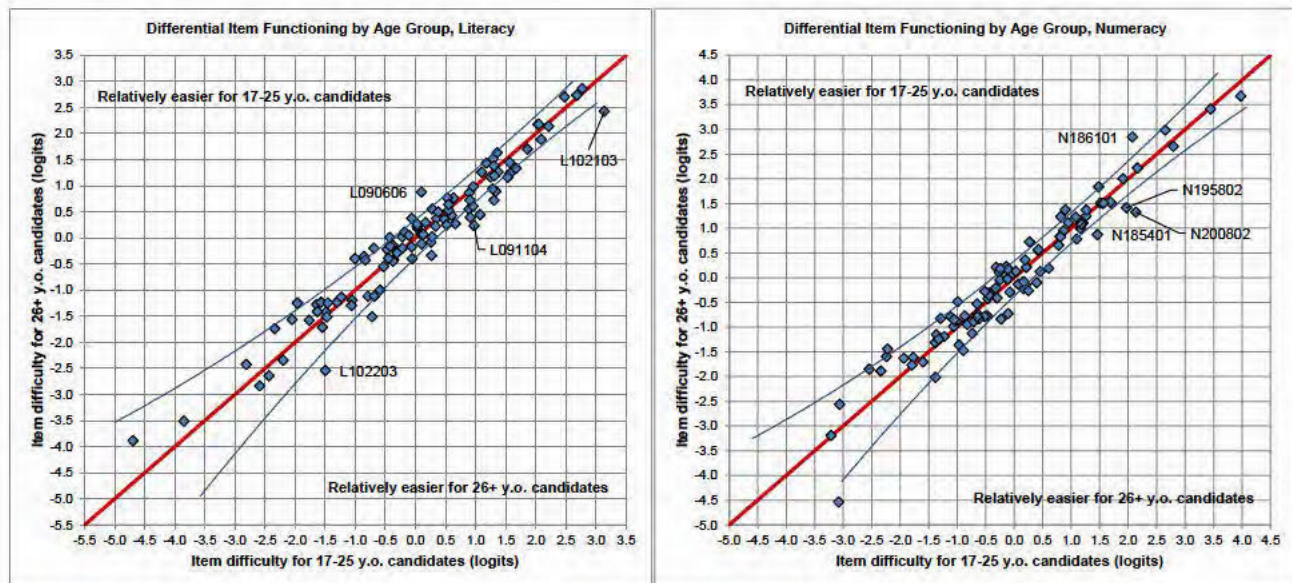


Figure 12: DIF analysis summary plot of trial items by age group, literacy and numeracy

Table 49 lists the trial items with potential DIF by age group. Of the four literacy items showing significant age DIF, most (three) favoured candidates aged over 25, a similar finding to previous years. This is not a surprising finding given the achievement of candidates on the literacy component tends to increase with age. Of the four numeracy items showing significant age DIF, most (three) favoured candidates aged 26+.

Table 49: Phase 9 trial items potentially exhibiting DIF by age group

Domain	Sub-domain	Item ID	Item Title	Diff. (logits)	Std. diff.	χ^2	Group favoured
Literacy	R	L090606	Career Development Framework	-0.78	-4.16	17.32, $p < 0.001$	17-25 y.o.
Literacy	R	L091104	NCCD Quick Guide	0.74	4.28	18.29, $p < 0.001$	26+ y.o.
Literacy	TSW	L102203	Community Festival	1.04	3.11	9.69, $p = 0.002$	26+ y.o.
Literacy	TSW	L102103	New Principal	0.71	3.83	14.70, $p < 0.001$	26+ y.o.
Numeracy	MG, CA	N195802	Carpet Tiles	0.55	4.61	21.27, $p < 0.001$	26+ y.o.
Numeracy	SP, CA	N186101	Results Boxplot	-0.78	-4.19	17.55, $p < 0.001$	17-25 y.o.
Numeracy	MG, CNA	N200802	Poster Display	0.81	4.59	21.06, $p < 0.001$	26+ y.o.
Numeracy	NA, CNA	N185401	Kilometre Distance	0.59	3.21	10.28, $p = 0.001$	26+ y.o.

Figure 13 shows the DIF plots for program type (undergraduate compared to postgraduate).

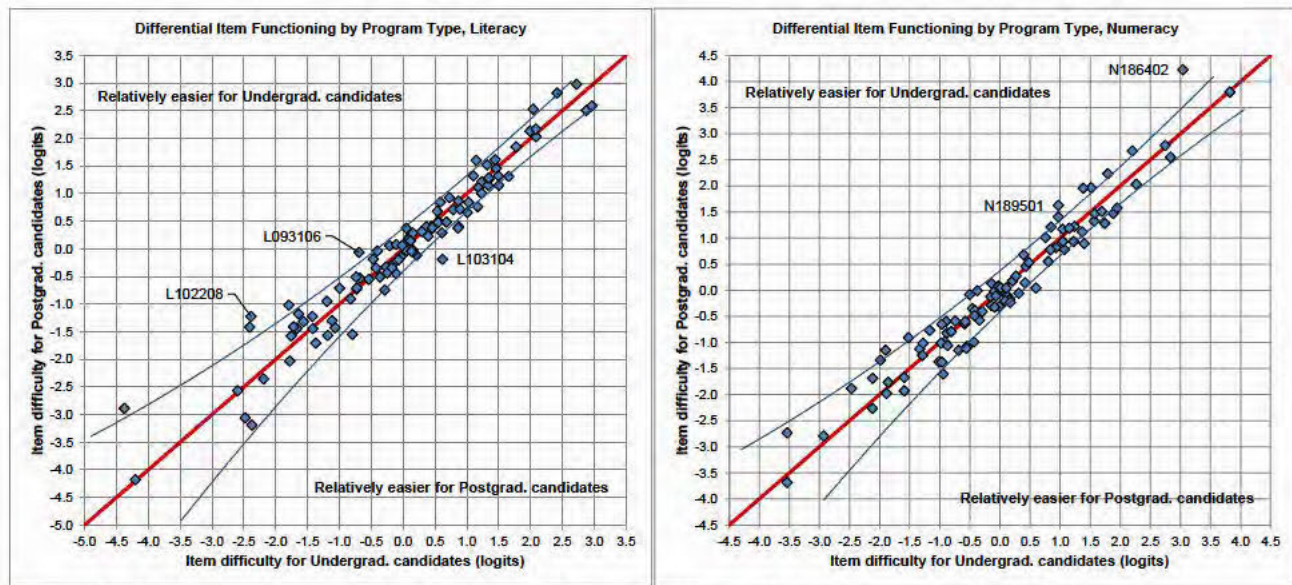


Figure 13: DIF analysis summary plot of trial items by program type, literacy and numeracy

Table 50 lists the trial items with potential DIF by program type. For literacy, two of the three items showing significant DIF by program type favoured undergraduate candidates. For numeracy, there were two items showing significant DIF by program type, and both favoured undergraduates.

Table 50: Phase 9 trial items potentially exhibiting DIF by program type

Domain	Sub-domain	Item ID	Item Title	Diff. (logits)	Std. diff.	χ^2	Group favoured
Literacy	R	L093106	What Is It to Read	-0.63	-3.10	9.62, $p = 0.002$	Undergrad.
Literacy	TSW	L102208	Community Festival	-1.17	-3.82	14.57, $p < 0.001$	Undergrad.
Literacy	TSW	L103104	Yard Duty	0.81	4.13	17.07, $p < 0.001$	Postgrad.
Numeracy	MG, CA	N186402	Pyramid Package	-1.18	-4.86	23.62, $p < 0.001$	Undergrad.
Numeracy	MG, CA	N189501	PL Hours	-0.66	-3.65	13.35, $p < 0.001$	Undergrad.

Figure 14 shows the DIF plots for course category (early childhood & primary compared to secondary).

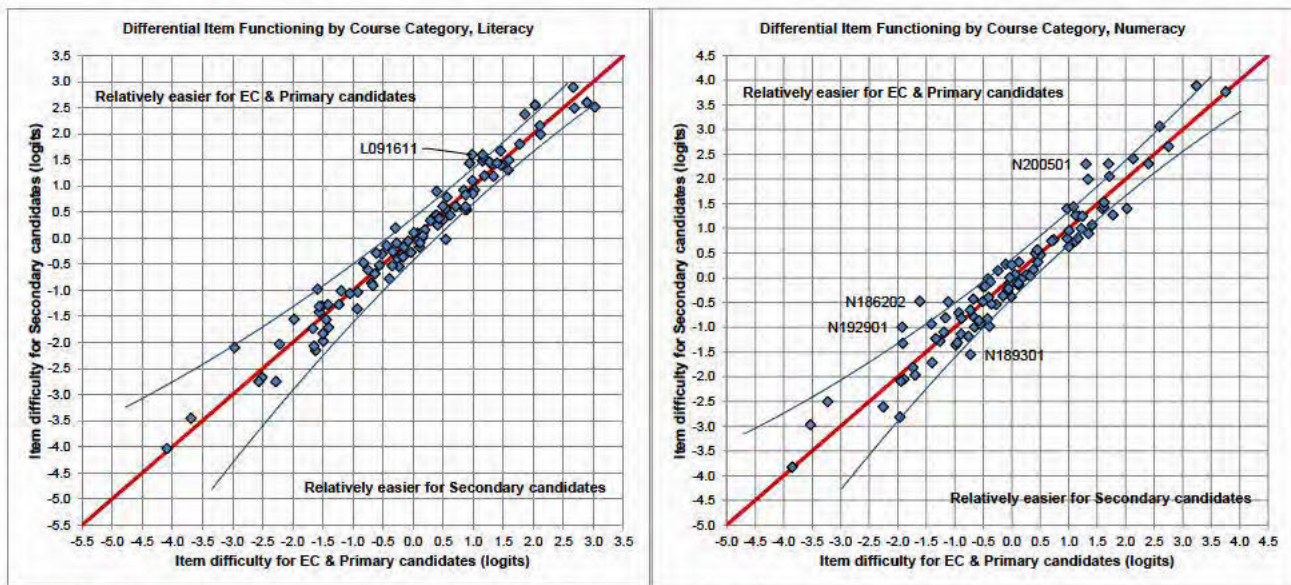


Figure 14: DIF analysis summary plot of trial items by course category, literacy and numeracy

For literacy, it can be seen from Figure 14 that only one item was identified as exhibiting DIF, and the item was relatively easier for Early Childhood and Primary course students. For numeracy, three of the four identified DIF items favoured Early Childhood and Primary candidates.

Table 51 lists the items with significant course category DIF. Of the two literacy items that favoured Early Childhood and Primary candidates, one assessed Reading and one assessed Technical skills of writing. Of the two items that favoured Secondary candidates, one assessed Reading and one assessed Technical skills of writing. Of the three numeracy items, all favouring Early Childhood and Primary candidates, two were Measurement and geometry items and the remaining one was a Statistics item.

Table 51: Phase 9 trial items potentially exhibiting DIF by course category

Domain	Sub-domain	Item ID	Item Title	Diff. (logits)	Std. diff.	χ^2	Group favoured
Literacy	R	L091611	Bandicoots in Australian English	-0.62	-3.64	13.22, $p < 0.001$	EC & Primary
Numeracy	SP, CA	N186202	Club Choice	-1.14	-4.39	19.28, $p < 0.001$	EC & Primary
Numeracy	SP, CA	N200501	Achievement Trends	-1.00	-5.46	29.76, $p < 0.001$	EC & Primary
Numeracy	SP, CA	N189301	Energy Tracker	0.83	3.10	9.61, $p = 0.002$	Secondary
Numeracy	NA, CA	N192901	Budget Plan	-0.93	-3.23	10.41, $p = 0.001$	EC & Primary

Figure 15 shows the DIF plots for residential area (metropolitan areas compared with regional and remote areas).

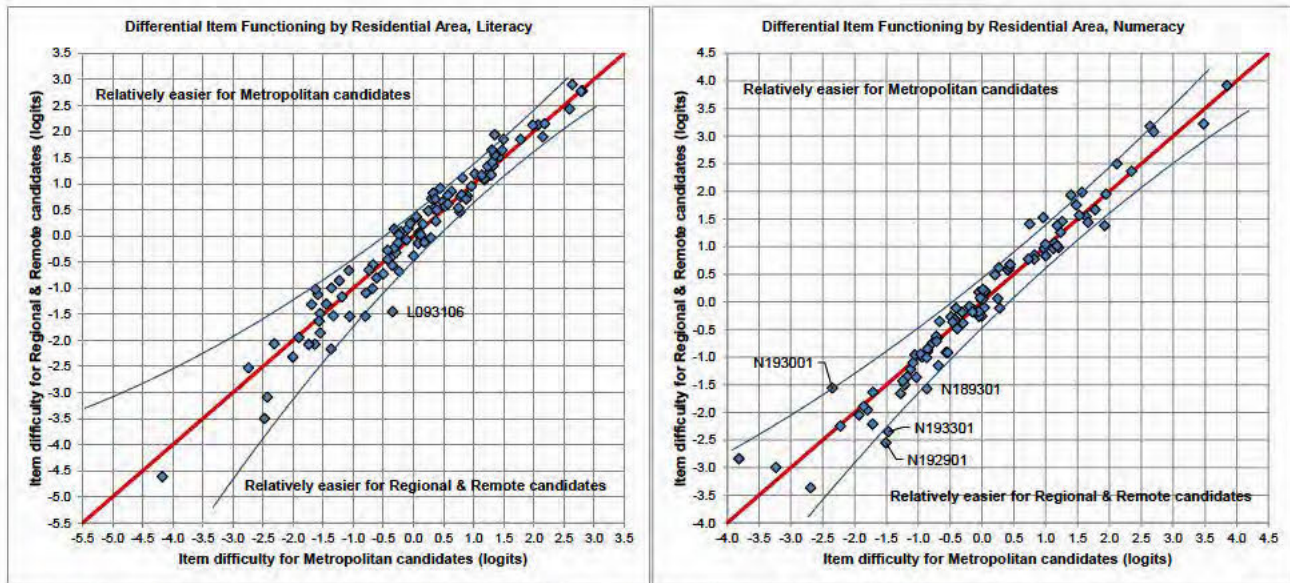


Figure 15: DIF analysis summary plot of trial items by residential area, literacy and numeracy

For literacy, only one item showed a difference in item difficulty between metropolitan area candidates and regional/remote candidates. There were four numeracy items exhibiting DIF, with three items being relatively easier for regional and remote candidates.

Table 52: Phase 9 trial items potentially exhibiting DIF by residential area

Domain	Sub-domain	Item ID	Item Title	Diff. (logits)	Std. diff.	χ^2	Group favoured
Literacy	R	L093106	What Is It to Read	1.10	3.27	10.68, $p = 0.001$	Regional, Rural
Numeracy	SP, CA	N193001	Data Table	-0.80	-2.28	5.21, $p = 0.022$	Metropolitan
Numeracy	SP, CA	N189301	Energy Tracker	0.71	2.34	5.49, $p = 0.019$	Regional, Rural
Numeracy	NA, CA	N192901	Budget Plan	1.04	2.32	5.37, $p = 0.020$	Regional, Rural
Numeracy	MG, CNA	N193301	Foaming soap	0.88	2.20	4.84, $p = 0.028$	Regional, Rural

Three literacy items and five numeracy items exhibited DIF in more than one subgroup analysis, as shown in Table 53.

Table 53: Phase 9 trial items exhibiting DIF in more than one subgroup analysis

Domain	Sub-domain	Item ID	Item Title	Groups favoured
Literacy	R	L091611	Bandicoots in Australian English	Female EC & Primary
Literacy	TSW	L102103	New Principal	Male 26+ y.o.
Literacy	R	L093106	What Is It to Read	Undergrad. Regional, Rural
Numeracy	MG, CA	N186402	Pyramid Package	Female Undergrad.
Numeracy	SP, CA	N186202	Club Choice	Female EC & Primary
Numeracy	SP, CA	N200501	Achievement Trends	Female EC & Primary
Numeracy	SP, CA	N189301	Energy Tracker	Secondary Regional, Rural
Numeracy	NA, CA	N192901	Budget Plan	EC & Primary Regional, Rural

It is also worth noting that some stimulus texts had multiple items showing DIF, as shown in Table 54. This occurred more often with literacy texts, mainly because they were associated with larger item sets.

Table 54: Phase 9 trial stimulus texts associated with more than one item exhibiting DIF

Domain	Sub-domain	Item ID	Item Title	Groups favoured
Literacy	TSW	L102203	Community Festival	26+ y.o.
Literacy	TSW	L102208	Community Festival	Undergrad.
Literacy	TSW	L102103	New Principal	Male, 26+ y.o.
Literacy	TSW	L102104	New Principal	Female