

PAT Spelling Skills

Reference groups 2023



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October 2023

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Introduction

When assessing the level of achievement and progress of students completing PAT assessments, it is often helpful to be able to compare those results to the typical achievement of students in the same or similar year levels. For some assessments, ACER is able to provide normative data – that is data that is reflective of the Australian population at each year level. These norms are only possible when an assessment is being used by a significant and diverse proportion of the population – schools and students in every state and territory, across educational sectors, and geolocations.

Where such a dataset of results is not available, ACER endeavours to produce reference groups to aid comparisons. The data underpinning these reference groups are still drawn from the database of Australian test takers, but there are typically fewer cases spread out over a range of schools and institutions. Results are not a comparison with a well understood population but provide a reference for comparing and understanding student achievement.

PAT Spelling Skills was released in 2022 and usage of the assessment amongst Australian schools is significant enough for the production of reference groups from the available results data. A reference group was explored for each targeted year level and percentile achievement calculated for each test. Achievement in each year level, on all PAT Spelling Skills tests taken by students in that year level was used to determine the distribution of achievement for the reference groups. The population used comprises students located in Australian schools who completed PAT Spelling Skills assessments in the months of September to December 2022.



Foundation

Most cases in Foundation are from students in Victoria. There are no cases in Northern Territory, and very few in Australian Capital Territory. Distributions from other states and territories vary. The students present in the Foundation reference group are not representative of the Australian population distribution by State (see Appendix A).

The distribution of cases in Foundation by state and territory is given in Table 1.

Table 1 Distribution of observations by state/territory for PAT Spelling Skills in Foundation

State/territory	Students	%
Australian Capital Territory	45	2.1
New South Wales	239	11.1
Northern Territory	0	0
Queensland	179	8.3
South Australia	131	6.1
Tasmania	220	10.2
Victoria	1008	46.9
Western Australia	325	15.1
Total	2147	100

Most cases in Foundation completed test A1. There are only a small number of cases where the student completed tests not in Set A. The distribution of cases in Foundation by test is given in Table 2.

Table 2 Distribution of observations by test set and number for PAT Spelling Skills in Foundation

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1	1207	56.2	32	1.5	2	0.1					1241	57.8
2	526	24.5									526	24.5
3	132	6.1	5	0.2							137	6.3
4	243	11.3									243	11.3
5												
6												
Total	2108	98.1	37	1.7	2	0.1					2147	100

Year 1

The largest proportion of cases for year 1 are from students in Victoria. There are no cases for year 1 from Northern Territory. Distributions from other states and territories vary. The students present in the year 1 reference group are not representative of the Australian population distribution by State (see Appendix A).

The distribution of cases in year 1 by state and territory is given in Table 3.

Table 3 Distribution of observations by State/territory for PAT Spelling Skills in year 1

State/territory	Students	%
Australian Capital Territory	106	3.0
New South Wales	440	12.5
Northern Territory	0	0
Queensland	606	17.3
South Australia	200	5.7
Tasmania	193	5.5
Victoria	1301	37.1
Western Australia	665	18.9
Total	3511	100

Most cases in year 1 completed test B1. Most cases complete tests in Sets A and B, with very few tests in Sets C and D, and none in Set E. The distribution of cases in year 1 by test is given in Table 4.

Table 4 Distribution of observations by test set and number for PAT Spelling Skills in year 1

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1	620	17.7	1249	35.6	57	1.6	1	0			1927	54.9
2	307	8.7	229	6.5	3	0.1					539	15.3
3	509	14.5	98	2.8							607	17.3
4	369	10.5	65	1.9	2	0					436	12.4
5											0	0
6					2	0.1					2	0.1
Total	1805	51.4	1641	46.8	64	1.8	1	0			3511	100

Year 2

The largest proportion of cases for year 2 are from students in Victoria. There are no cases for year 2 in Northern Territory. Distributions from other states and territories vary. The students present in the year 2 reference group are not representative of the Australian population distribution by State (see Appendix A).

The distribution of cases in year 2 by state and territory is given in Table 5.

Table 5 Distribution of observations by state/territory for PAT Spelling Skills in year 2

State/territory	Students	%
Australian Capital Territory	120	2.5
New South Wales	677	13.9
Northern Territory	0	0
Queensland	1048	21.6
South Australia	332	6.8
Tasmania	224	4.6
Victoria	1663	34.2
Western Australia	794	16.3
Total	4858	100

Most cases in year 2 completed test B1. Most cases completed tests in Sets A, B and C, with very few completing Set D and E tests. The distribution of cases in year 2 by test is given in Table 6.

Table 6 Distribution of observations by test set and number for PAT Spelling Skills in year 2

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1	136	2.8	1459	30.0	659	13.6					2254	46.4
2	224	4.6	379	7.8	174	3.6	4	0.1			780	16.1
3	132	2.7	637	13.1	41	0.8					810	16.6
4	266	5.5	715	14.7	15	0.3					996	20.5
5					10	0.2					10	0.2
6					7	0.1					7	0.1
Total	758	15.6	3190	65.6	906	18.6	4	0.1			4858	100

Year 3

The largest proportion of cases for year 3 are from students in Victoria. There are no cases for year 3 in Northern Territory. Distributions from other states and territories vary. The students present in the year 3 reference group are not representative of the Australian population distribution by State (see Appendix A).

The distribution of cases in year 3 by state and territory is given in Table 7.

Table 7 Distribution of observations by state/territory for PAT Spelling Skills in year 3

State/territory	Students	%
Australian Capital Territory	106	2.1
New South Wales	718	13.9
Northern Territory	0	0
Queensland	1301	25.2
South Australia	329	6.4
Tasmania	207	4.0
Victoria	1558	30.2
Western Australia	942	18.3
Total	5161	100

Most cases in year 3 completed test C1. Most cases completed tests in Sets A, B and C, with very few completing tests in Sets D and E. The distribution of cases in year 3 by test is given in Table 8.

Table 8 Distribution of observations by test set and number for PAT Spelling Skills in year 3

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1	44	0.9	618	12.0	1716	33.2	99	1.9	11	0.2	2488	48.2
2	50	1.0	220	4.3	725	14.0	3	0.1			998	19.4
3	91	1.8	545	10.6	230	4.5	2	0			868	16.9
4	124	2.4	443	8.6	164	3.2	1	0			732	14.2
5					42	0.8					42	0.8
6					33	0.6					33	0.6
Total	309	6.1	1826	35.5	2910	56.3	105	2	11	0.2	5161	100

Year 4

The largest proportion of cases for year 4 are from students in Victoria. There are no cases for year 4 in Northern Territory, and very few in Australian Capital Territory. Distributions from other states and territories vary. The students present in the year 4 reference group are not representative of the Australian population distribution by State (see Appendix A).

The distribution of cases in year 4 by state and territory is given in Table 9.

Table 9 Distribution of observations by state/territory for PAT Spelling Skills in year 4

State/territory	Students	%
Australian Capital Territory	163	2.9
New South Wales	950	16.7
Northern Territory	0	0
Queensland	1282	22.5
South Australia	346	6.1
Tasmania	223	3.9
Victoria	1790	31.4
Western Australia	950	16.7
Total	5704	100

Most cases in year 4 completed test C1. Every test was used at least once. The distribution of cases in year 4 by test is given in Table 10.

Table 10 Distribution of observations by test set and number for PAT Spelling Skills in year 4

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1	98	1.7	316	5.5	1208	21.2	600	10.5	6	0.1	2228	39
2	8	0.1	358	6.3	798	14.0	119	2.1	2	0	1285	22.5
3	7	0.1	219	3.8	813	14.3	8	0.1			1047	18.3
4	80	1.4	213	3.7	508	8.9	17	0.3			818	14.3
5					218	3.8					218	3.8
6					108	1.9					108	1.9
Total	193	3.3	1106	19.3	3653	64.1	744	13	8	0.1	5704	100

Year 5

The largest proportion of cases for year 5 are from students in Victoria. There are no cases for year 5 in Northern Territory. Distributions from other states and territories vary. The students present in the year 5 reference group are not representative of the Australian population distribution by State (see Appendix A).

The distribution of cases in year 5 by state and territory is given in Table 11.

Table 11 Distribution of observations by state/territory for PAT Spelling Skills in year 5

State/territory	Students	%
Australian Capital Territory	212	4.0
New South Wales	547	10.3
Northern Territory	0	0
Queensland	1378	26.0
South Australia	388	7.3
Tasmania	245	4.6
Victoria	1668	31.5
Western Australia	863	16.3
Total	5301	100

Most cases in year 5 completed test D1 or C1. Every test was used at least once. The distribution of cases in year 5 by test is given in Table 12.

Table 12 Distribution of observations by test set and number for PAT Spelling Skills in year 5

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1	9	0.2	222	4.2	1008	19.0	1209	22.8	159	3.0	2607	49.2
2	5	0.1	184	3.5	282	5.3	267	5.0	3	0.1	741	14
3	7	0.1	59	1.1	485	9.1	76	1.4			627	11.7
4	11	0.2	69	1.3	583	11.0	60	1.1			723	13.6
5					363	6.8					363	6.8
6					240	4.5					240	4.5
Total	32	0.6	534	10.1	2961	55.7	1612	30.3	162	3.1	5301	100

Year 6

The largest proportion of cases for year 6 are from students in Victoria. There are no cases for year 6 in Northern Territory. Distributions from other states and territories vary. The students present in the year 6 reference group are not representative of the Australian population distribution by State (see Appendix A). The distribution of cases in year 6 by state and territory is given in Table 13.

Table 13 Distribution of observations by state/territory for PAT Spelling Skills in year 6

State/territory	Students	%
Australian Capital Territory	78	1.6
New South Wales	875	17.8
Northern Territory	0	0
Queensland	1097	22.3
South Australia	242	4.9
Tasmania	236	4.8
Victoria	1519	30.9
Western Australia	864	17.6
Total	4911	100

Most cases in year 6 completed test D1. Every test was used at least once. The distribution of cases in year 6 by test is given in Table 14.

Table 14 Distribution of observations by test set and number for PAT Spelling Skills in year 6

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1	8	0.2	58	1.2	677	13.8	1140	23.2	214	4.4	2097	42.8
2	3	0.1	94	1.9	263	5.4	485	9.9	26	0.5	871	17.8
3	9	0.2	22	0.4	193	3.9	385	7.8			609	12.3
4	5	0.1	44	0.9	379	7.7	332	6.8			760	15.5
5					256	5.2					256	5.2
6					318	6.5					318	6.5
Total	25	0.6	218	4.4	2086	42.5	2342	47.7	240	4.9	4911	100

Year 7

Data for year 7 students were collected between September and December in 2022.

The majority of cases for year 7 are from students in Queensland. There were no cases for year 7 in the Northern Territory or South Australia. Distributions from other states and territories vary. The students present in the year 7 reference group are not representative of the Australian population distribution by State (see Appendix A).

The distribution of cases in year 7 by state and territory is given in Table 15.

Table 15 Distribution of observations by state/territory for PAT Spelling Skills in year 7

State/territory	Students	%
Australian Capital Territory	188	20.4
New South Wales	57	6.2
Northern Territory	0	0
Queensland	469	50.8
South Australia	0	0
Tasmania	49	5.3
Victoria	155	16.8
Western Australia	5	0.5
Total	923	100

Most cases in year 7 completed test D1. There were very few cases where students completed tests in Sets A or B. The distribution of cases in year 7 by test is given in Table 16.

Table 16 Distribution of observations by test set and number for PAT Spelling Skills in year 7

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1	6	0.7	9	1.0	16	1.7	297	32.2	109	11.8	437	47.4
2					71	7.7	112	12.1	2	0.2	185	20.0
3			54	5.9	1	0.1	62	6.7			117	12.7
4	3	0.3			180	19.5	1	0.1			184	19.9
5												
6												
Total	9	1	63	6.9	268	29	472	51.1	111	12	923	100

Year 8

Data for year 8 students were collected between September and December in 2022.

The largest proportion of cases for year 8 are from students in Queensland. There were no cases for year 8 in Northern Territory or South Australia. The students present in the year 8 reference group are not representative of the Australian population distribution by State (see Appendix A).

The distribution of cases in year 8 by state and territory is given in Table 17.

Table 17 Distribution of observations by state/territory for PAT Spelling Skills in year 8

State/territory	Students	%
Australian Capital Territory	187	24.5
New South Wales	57	7.5
Northern Territory	0	0
Queensland	261	34.3
South Australia	0	0
Tasmania	89	11.7
Victoria	166	21.8
Western Australia	2	0.3
Total	762	100

Most cases in year 8 completed test C5. There were very few cases where students completed tests in Sets A or B. The distribution of cases in year 8 by test is given in Table 18.

Table 18 Distribution of observations by test set and number for PAT Spelling Skills in year 8

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1			5	0.7	62	8.1	52	6.8	105	13.8	224	29.4
2					2	0.3	117	15.4	6	0.8	125	16.5
3			1	0.1	77	10.1	143	18.8			221	29.0
4					2	0.3	1	0.1			3	0.4
5					189	24.8					189	24.8
6												
Total			6	0.8	332	43.6	313	41.1	111	14.6	762	100

Year 9

Data for year 9 students were collected between September and December in 2022. The largest proportion of cases for year 9 were from students in Queensland. There are no cases for year 9 in Northern Territory or South Australia, and very few in Western Australia. Distributions from other states and territories vary. The students present in the year 9 reference group are not representative of the Australian population distribution by State (see Appendix A).

The distribution of cases in year 9 by state and territory is given in Table 19.

Table 19 Distribution of observations by state/territory for PAT Spelling Skills in year 9

State/territory	Students	%
Australian Capital Territory	160	30.8
New South Wales	42	8.1
Northern Territory	0	0
Queensland	210	40.5
South Australia	0	0
Tasmania	32	6.2
Victoria	73	14.1
Western Australia	2	0.4
Total	519	100

Most cases in year 9 completed test D1. There were very few cases where students completed tests in Sets A, B or C. The distribution of cases in year 9 by test is given in Table 20.

Table 20 Distribution of observations by test set and number for PAT Spelling Skills in year 9

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1			5	1.0	3	0.6	162	31.2	100	19.3	270	52.1
2							74	14.3	9	1.7	83	16.0
3					36	6.9	79	15.2			115	22.1
4			1	0.2	1	0.2	49	9.4			51	9.8
5												
6												
Total			6	1.2	40	7.7	364	70.1	109	21.0	519	100

Year 10

Data for year 10 students were collected between September and December in 2022. The largest proportion of cases for year 10 were from students in Australian Capital Territory. There are no cases for year 10 in the Northern Territory, South Australia, or Western Australia. Distributions from other states and territories vary. The students present in the year 10 reference group are not representative of the Australian population distribution by State (see Appendix A).

The distribution of cases in year 10 by state and territory is given in Table 21.

Table 21 Distribution of observations by state/territory for PAT Spelling Skills in year 10

State/territory	Students	%
Australian Capital Territory	119	32.7
New South Wales	23	6.3
Northern Territory	0	0
Queensland	110	30.2
South Australia	0	0
Tasmania	31	8.5
Victoria	81	22.3
Western Australia	0	0
Total	364	100

Most cases in year 10 completed test D2. There were very few cases where students completed tests in Sets A, B or C. The distribution of cases in year 10 by test is given in Table 22.

Table 22 Distribution of observations by test set and number for PAT Spelling Skills in year 10

Test	Set A		Set B		Set C		Set D		Set E		Total	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
1			1	0.3	1	0.3			109	29.9	111	30.5
2							149	40.9	20	5.5	169	46.4
3							2	0.5			2	0.5
4			1	0.3			81	22.3			82	22.6
5												
6												
Total			2	0.6	1	0.3	232	63.7	129	35.4	364	100

Student achievement

Results from PAT Spelling Skills tests administered to the reference groups of Australian students were used to ascertain the scale score averages and standard deviations of each year level and – assuming a normal distribution – to calculate the percentile ranks associated with achieved scale scores.

The percentile rank of a score is the percentage of students who achieve less than that score. For example, a student with a percentile rank of 75th compared to year 3 has a scale score higher than 75 per cent of Australian year 3 students.

Table 23 and Figure 1 show the final PAT Spelling Skills scale score values for given percentile ranks, as well as the standard deviation of achievement, at each year level of the 2023 reference groups. The 50th percentile represents the mean, or average, achievement of each group.

Table 23 PAT Spelling Skills reference group student achievement by year level

Percentile rank	Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
95th	134	141	150	157	162	166	170	174	178	180	181
75th	119	126	134	141	146	150	154	158	161	163	165
50th (mean)	108	116	124	130	135	139	143	146	149	152	154
25th	97	106	113	118	124	129	132	135	137	140	143
5th	82	92	97	102	108	113	116	119	120	124	127
Standard deviation	15.9	15.0	16.0	16.7	16.6	16.0	16.3	16.5	17.5	17.0	16.4

PAT Spelling Skills student achievement by reference group

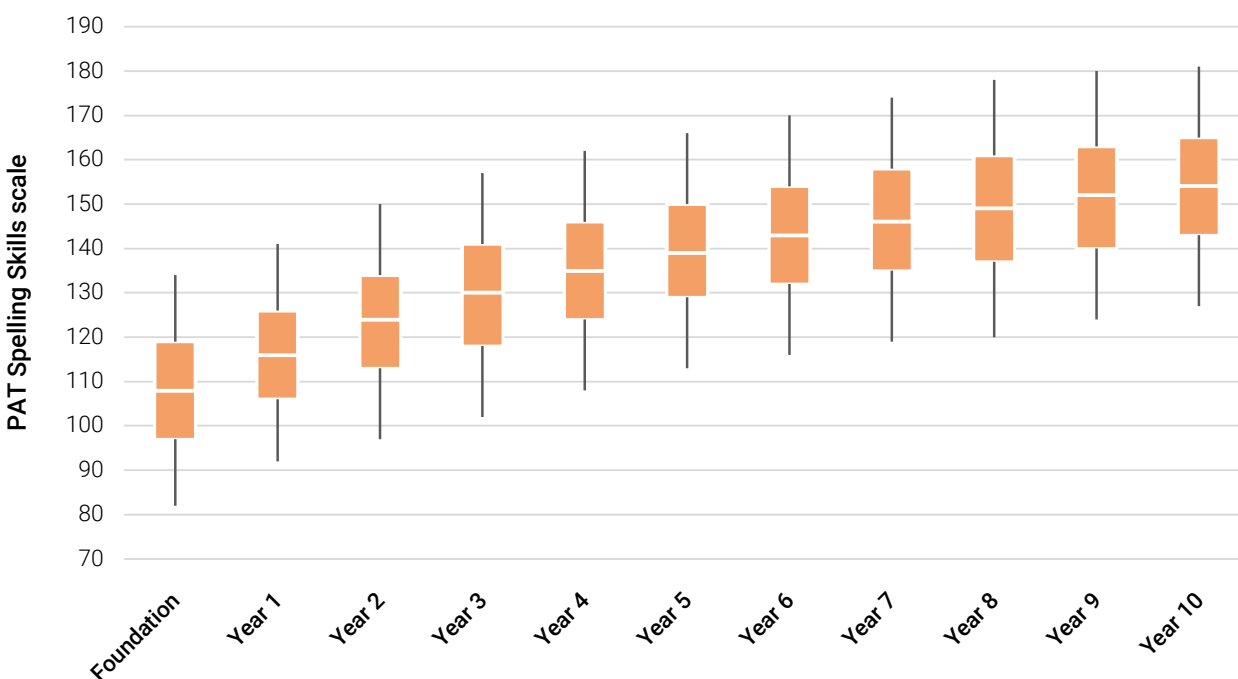


Figure 1 PAT Spelling Skills student achievement by reference group

Appendix A

Table 24 ABS Schools, Australia, 2022: FTE Students by state/territory

Year level	NSW		Vic		Qld		SA		WA		Tas		NT		ACT		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	Students
Foundation	98 482	31.10%	80 059	25.28%	65 202	20.59%	21 734	6.86%	35 243	11.13%	6339	2.00%	3444	1.09%	6144	1.94%	316 647
Year 1	97 643	30.87%	79 984	25.28%	66 762	21.10%	20 451	6.46%	36 006	11.38%	6071	1.92%	3463	1.09%	5958	1.88%	316 338
Year 2	98 254	30.93%	80 432	25.32%	67 336	21.20%	20 529	6.46%	35 195	11.08%	6362	2.00%	3409	1.07%	6116	1.93%	317 633
Year 3	99 366	31.02%	80 152	25.02%	68 343	21.33%	21 027	6.56%	35 498	11.08%	6445	2.01%	3479	1.09%	6036	1.88%	320 346
Year 4	101 237	31.22%	81 379	25.10%	69 150	21.33%	21 081	6.50%	35 585	10.98%	6350	1.96%	3394	1.05%	6045	1.86%	324 221
Year 5	100 033	31.27%	78 758	24.62%	68 973	21.56%	21 176	6.62%	35 074	10.97%	6518	2.04%	3457	1.08%	5879	1.84%	319 868
Year 6	99 307	31.09%	78 503	24.57%	69 920	21.89%	20 743	6.49%	35 262	11.04%	6456	2.02%	3332	1.04%	5941	1.86%	319 464
Year 7	98 441	30.66%	78 752	24.53%	71 792	22.36%	21 120	6.58%	34 884	10.87%	6643	2.07%	3242	1.01%	6154	1.92%	321 028
Year 8	97 862	30.80%	78 033	24.56%	70 504	22.19%	21 252	6.69%	34 368	10.82%	6799	2.14%	3038	0.96%	5866	1.85%	317 722
Year 9	98 777	30.89%	78 956	24.69%	70 480	22.04%	21 449	6.71%	34 687	10.85%	6708	2.10%	2969	0.93%	5753	1.80%	319 779
Year 10	96 431	30.86%	77 381	24.76%	69 018	22.09%	21 194	6.78%	33 347	10.67%	6566	2.10%	2776	0.89%	5768	1.85%	312 481
Total	1 085 833		872 389		757 480		231 756		385 149		71 257		36 003		65 660		3 505 527