
Technical Report

Supplement to the Australian Teacher Workforce Data:
National Teacher Workforce Characteristics Report
December 2021



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The ATWD initiative

Developed as part of the national initial teacher education reforms, the Australian Teacher Workforce Data (ATWD) initiative is a national project, jointly funded by the Australian Government and all state and territory governments.

The ATWD will deliver comprehensive national data that will identify trends in teacher education, the teacher supply pipeline and the teacher workforce in Australia, and help inform national policy on how to better support the profession and strengthen the impact our teachers have on the lives of the children and students they teach.

The ATWD is governed by the Australian Education Senior Officials Committee (AESOC) through the ATWD Oversight Board, which consists of representatives from Commonwealth, state and territory governments, the non-government school sector, teacher regulatory authorities, initial teacher education providers, and AITSL.

Acknowledgements

The ATWD Oversight Board acknowledges the traditional custodians of the land, sea, country and waterways from across Australia. We honour and pay our respects to their Elders past, present and future.

The ATWD Oversight Board, through the ATWD delivery team, has worked closely with education stakeholders in the development and implementation of the ATWD initiative. These include the state and territory education departments, the non-government education sectors, the state and territory teacher regulatory authorities, initial teacher education (ITE) providers and the Australian Government Department of Education, Skills and Employment.

The expert contribution of the Australian Institute of Health and Welfare (AIHW) has been critical. The ATWD Oversight Board also thanks key partners in the ATWD Technical Working Group.

About AITSL

The Australian Institute for Teaching and School Leadership (AITSL) was formed to provide national leadership for Commonwealth, state and territory governments in promoting excellence in the profession of teaching and school leadership, with funding provided by the Australian Government.

AITSL works to ensure that Australia has a high-quality education community in which teachers and school leaders have the greatest impact on the educational growth and achievement of every student. AITSL works in partnership with governments, jurisdictions, sectors and agencies to improve professional practice through evidence-based policies, standards and resources.

In December 2016, AITSL was tasked with the implementation of the ATWD initiative by Education Council, including delivery of the data model, data analysis and reporting.

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Chapter 1 Data sources

The Australian Teacher Workforce Data (ATWD) initiative is a national data linkage project designed to help better understand the teacher workforce and teacher profession. The data from all sources is collected, de-identified, linked and stored securely by the Australian Institute of Health and Welfare.

The ATWD initiative collects data in line with the items listed in the Agreed National Dataset for the ATWD initiative.

This Technical Report is designed to accompany the Australian Teacher Workforce Data: National Teacher Workforce Characteristics Report December 2021 (the ATWD Teacher Workforce Report) and should be read in conjunction with it. The ATWD Teacher Workforce Report is based on linked unit record data relating to the 2018 calendar year from the following sources:

- teacher registration and accreditation data at the unit record level provided by the participating teacher regulatory authorities in New South Wales, Northern Territory, South Australia and Victoria
- ATWD Teacher Survey data which was fielded in South Australia, New South Wales and the Northern Territory
- Higher Education Student Data Collection (HESDC).

Teacher registration data

The state and territory-based teacher regulatory authorities (TRAs) are independent statutory bodies that regulate the teaching profession within each jurisdiction. In order to fulfil their function as a regulatory authority, they must comply with specific legislation. **Table 1** lists the relevant legislation for each TRA.

Table 1: Legislation affecting participating regulatory authorities

State / Territory	Regulatory Authority	Legislation
NSW	NESA	<i>Board of Studies, Teaching and Educational Standards Act 2013</i>
VIC.	VIT	<i>Education and Training Reform Act 2006</i>
NT	TRB NT	<i>Teacher Registration (Northern Territory) Act</i> (as in force from 1 May 2016)
SA	TRB SA	<i>Teachers Registration and Standards Act 2004</i>

TRAs support the ATWD initiative by providing unit-record teacher registration data annually. This enables the ATWD to provide a census of administrative and statistical information on all teachers who are registered or accredited to teach in participating states and territories of Australia. TRA data includes both demographic and other information about the type of registration held by each registered teacher, and is provided in accordance with the TRA's relevant legislation.

The inaugural collection of data commenced in September 2018. To facilitate this, TRAs were able to submit their data in any format available, with the express purpose that analysis of the data received would inform the development of standardisation rules to apply to future collections.

ATWD Teacher Survey

Data collected

The ATWD Teacher Survey has been designed to collect the data that is needed to complete the Agreed National Data Set (ANDS) for the ATWD, but is not already collected elsewhere – i.e. by the Higher Education Student Data Collection (HESDC) or through teacher registration data collected from the regulatory authorities.

The ATWD Teacher Survey is voluntary and is fielded to all registered teachers by the TRA in each participating state or territory once per year. The ATWD Teacher Survey collects data on each teacher’s employment arrangements (including where they are working, contractual information, roles held, working hours, time spent on tasks during an average week, subjects taught, learner levels taught, career intentions and whether they have taken any extended time off since they started teaching), as well as details of ITE and non-ITE qualifications, induction experience for early career teachers, perceptions of professional development, country of birth, Aboriginal and Torres Strait Islander status, and disability status.

As the coverage and completeness of the regulatory authority data was uncertain at the time of collection, some fields were collected via both the ATWD Teacher Survey and the regulatory authorities (e.g., Aboriginal and Torres Strait Islander status).

Survey distribution

The ATWD Teacher Survey was distributed as a web-based survey link via direct email¹ to registered teachers in each participating jurisdiction. Each registered teacher was issued with a unique link to the survey by each participating TRA. Follow-up reminders were sent to teachers while the survey was in field to encourage teachers to complete the survey. **Table 2** lists the timings of the fielding of the inaugural ATWD Teacher Survey.

Table 2: Timing and fielding of the inaugural ATWD Teacher Survey

	New South Wales	Northern Territory	South Australia
Date survey opened	21 May 2019	29 April 2019	31 May 2018
Dates of reminder emails	13 June 2019	16 July 2019 5 August 2019	8 June 2018 15 June 2018 29 June 2018
Date survey closed	31 August 2019	31 August 2019	13 July 2018
Days survey open	102	124	43

The number of registered teachers who responded to the ATWD Teacher Survey in each participating state and territory is provided in **Table 3**.

¹ Some jurisdictions additionally embedded the survey into their regulatory authority portals.

Table 3: Number of respondents achieved for ATWD Teacher Survey 2018

	New South Wales	Northern Territory	South Australia
Number of registered teachers	169,367	5,737	36,318
Number of survey respondents (including non-completes)	8,927	860	8,324
Number of surveys completed	6,105	725	6,707
Proportion of respondents	5%	15%	23%

The surveys that were distributed in New South Wales and the Northern Territory were fielded during 2019, but asked about 2018. As a result, two decisions were made.

1. Those whose first year of teaching was in 2019 could not complete the standard survey, but were instead asked about 2019. Their data is not included in analyses.
2. Individuals who completed two surveys due to dual registration, either in 2018 through the South Australian collection, and in 2019 through New South Wales or the Northern Territory, were included in the results for the first jurisdiction in which they completed the survey in the main report.

Concordance files, including each teacher registration number and their matching unique survey link, were sent to the AIHW for linkage purposes at the conclusion of the survey by each participating TRA.

Higher Education Student Data Collection (HESDC)

The HESDC² is a census of administrative and statistical information on higher education students in Australia, based on data from all higher education providers (HEPs). It therefore represents a snapshot of students enrolled in higher education programs in each semester.

For the ATWD Teacher Workforce Characteristics Report data for all students who enrolled in an ITE program at an Australian tertiary institution between 2005 and 2017 (inclusive), and who were registered or accredited to teach in 2018 in New South Wales, South Australia and the Northern Territory, were analysed to provide details of the ITE qualifications obtained and the learner levels they were qualified to teach (i.e., early childhood, primary or secondary).

The HESDC included three separate data files which contained the following information:

- enrolment file – a record for every student enrolled in an ITE program in every year between 2005 and 2017
- load file – details of the units of study that each student was enrolled in between 2005 and 2017
- course file – details of the programs that each student was enrolled in between 2005 and 2017.

Data are collected by HEPs and submitted to the Australian Government Department of Education, Skills and Employment through the Higher Education Information Management System (HEIMS) under the *Higher Education Support Act 2003* (Cwlth).

Data linkage outcomes

Data in the ATWD is linked by the AIHW, a Commonwealth Government statutory body that has been appointed as the integrating authority for the ATWD. The AIHW performs this function in accordance

² The data is deidentified and includes data on enrolments, units of study, courses, and completions for students attending higher education that are eligible for Commonwealth assistance.

with the *Australian Institute of Health and Welfare Act 1987* and the *Privacy Act 1988* (Cwlth). Data linkage is primarily based on an individual's name, date of birth and gender.

All records from all data sources are analysed and data pertaining to different individuals are assigned different Personalised Project Numbers (PPNs) – these are unique alpha-numeric values which have no meaning outside of the ATWD and maintain data confidentiality. Multiple records associated with one PPN indicates that the records belong to the same individual.

The data collected for the ATWD in 2018 provides a snapshot of all 335,771 teachers who were registered in the participating states and territories as at end September 2018. Registration data could only be linked for teachers who received their ITE qualification in Australia after 2005.

Through the inaugural data linkage process, a total of 103,332 teachers (31%) were determined to have matching ITE records in the HESDC between 2005 and 2017 (see **Table 4** below). It is unknown what proportion of the records that could not be linked is due to teachers either completing ITE outside of Australia, or due to completing ITE in Australia prior to 2005, as opposed to not being able to obtain a match. This linked data was the primary source of the qualifications data reported in the ATWD Teacher Workforce Report (Chapter 6).

Table 4: Number of matched individual records in TRA and HESDC data

Jurisdiction	Number of teachers enrolled in ITE: Residing in any state/territory while studying	Match rate	Number of teachers enrolled in ITE: Residing within the state/territory while studying	Match rate
NSW	62,510	37%	57,118	34%
VIC.	28,083	22%	19,556	15%
NT	2,102	37%	1,252	22%
SA	12,230	34%	11,542	32%
Total (individual teachers)	103,332	31%	89,275	26%

Chapter 2 Variables in the data

Registration variables

Data item	Description	Treatment of variable
PPN	Personalised Project Number – Unique alpha-numeric value to distinguish between individuals in each data file	Used to find linked records across the datasets for the same individual.
gender	Self-nominated gender	Data provided for different jurisdictions varied in format and had to be standardised (male and female) before data summaries could be generated.
year_of_birth	Year of birth	Used to derive age of individual using formula (2018-Year of birth) + 1 .
ATSI_Flag	Aboriginal and Torres Strait Islander status	Data provided for different jurisdictions varied in format and had to be standardised before data summaries could be generated.
country_of_birth	Country of birth of the teacher	Data provided for different jurisdictions varied in format and had to be standardised before data summaries could be generated. Values were converted into 'Australia' and 'Overseas' for the current report.
residential_state	Residential address of the teacher, state/territory	Data provided for different jurisdictions varied in format and had to be standardised before data summaries could be generated.
residential_postcode	Residential address of the teacher, postcode	Used together with Australian Bureau of Statistics <i>1270.0.55.005 - Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2016</i> to derive remoteness value.
residential_country	Residential address of the teacher, country	Data provided for different jurisdictions varied in format and had to be standardised before data summaries could be generated. Values were converted into 'Australia' and 'Overseas' for the current report.
initial_registration_year	Initial registration conferral year (first date of registration / accreditation)	Used to derive period of registration/accreditation. For 38% of teachers accredited in NSW, data on the date first accredited was not populated. For the purposes of analysis of length of registration, these teachers were assumed to have commenced teaching prior to 2004, following advice from the NESAs member of the ATWD Technical Working Group on how data for this group of teachers was set up when accreditation with NESAs was initiated on 1 January 2018.

Data item	Description	Treatment of variable
registration_status	Type of registration / accreditation / authorisation provided to teacher	<p>Data provided for different jurisdictions varied in format and had to be standardised before data summaries could be generated:</p> <p>Full Registration – includes proficient accreditation status in NSW and full registration in all other states.</p> <p>Provisional Registration – teachers who have been registered to teach but have not achieved full registration – includes new graduates or returning to the profession; provisional includes 'conditional' registration in NSW.</p> <p>Limited – alternative authorisation to teach that is not registration e.g. Permission to Teach (PTT) in Victoria.</p>

ATWD Teacher Survey questions and sequence

Table 5 lists all the questions included in the ATWD Teacher Survey for the 2018 data collection. Logic applied to the question items meant that not all respondents received all questions and the last column in the table provides information on which respondents received any particular question. Except where noted in the question field (e.g., 'Select all that apply'), all questions only allowed one response.

Table 5: Questions and survey logic

Ref	Item category	Question ³	Answer Options	Visibility
1	Personalised Project Number (PPN)			All respondents – this variable is attached to all survey records by AIHW during the linkage process
2.1	Length of teaching experience	In what year were you first employed as a teacher /educator? In NSW and NT: a) In Australia b) Outside of Australia	Drop down box including years ranging from 2018 to 1975 and 'prior to 1975'	All respondents
2.2	Length of teaching experience	Since you started teaching, have you ever had a gap of at least one school term to continuous employment? For example, an extended gap between contracts or employment in schools / early childhood centres or a career break	Yes, No	All respondents
2.3	Length of teaching experience	About how long was (or is) that gap?	1: Unsure 2: 1 year 3: 2 years 4: 3 years 5: 4 years 6: 5 years	If 2.2 = 'Yes'

³ Sub-questions are noted with a letter – e.g. a), b), etc. – and indicate that survey respondents provided an answer for each sub-question.

Ref	Item category	Question ³	Answer Options	Visibility
			7: 6 years 8: 7 years 9: 8 years 10: 9 years 11: 10 + years	
3.1	Employment	Where were you employed? Please select the option that best describes your employment during 2018 only	1. In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special) 2. In an early childhood service / preschool (excluding one located in a school) 3. Employed in education, but not directly in a school, preschool or early childhood service 4. Employed, but not in the education sector 5. Employed as a teacher / educator outside of Australia 6. On an extended leave of absence from a school 7. On an extended leave of absence from an early childhood setting / preschool (excluding one located in a school) 8. Not in paid employment	All respondents
4.1	School	Please select the name of the school where you were last employed	List of schools is provided from ACARA Australian School List as at August 2018 <i>Drill down list: select state, then suburb, then school</i>	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)'
4.2	School	If you couldn't find the name of the school above, type it in here	Free text response	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)'
5.1	Early Childhood Service	Please select the name of the early childhood setting / preschool where you were last employed	List of early childhood services is provided from ACECQA National Register as at August 2018 <i>Drill down list: select state, then suburb, then early childhood service / preschool</i>	If 3.1 = 'In an early childhood service / preschool (excluding one located in a school)'

Ref	Item category	Question ³	Answer Options	Visibility
5.2	Early Childhood Service	If you couldn't find the name of the early childhood / preschool setting above, type it in here	Free text response	If 3.1 = 'In an early childhood service / preschool (excluding one located in a school)'
6.1	Main Role in School	Which of the following best describes your main role? Please select one only	For those working in schools: 1. teacher / educator 2. principal 3. deputy / assistant principal 4. school leadership role	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)' Or if 3.1 = 'On an extended leave of absence from a school'
6.2	Main Role in Early Childhood Service	Which of the following best describes your main role? Please select one only	For those working in early childhood services 1. principal / director / coordinator / educational leader 2. group leader 3. teacher / educator	If 3.1 = 'In an early childhood service / preschool (excluding one located in a school)' Or if 3.1 = 'On an extended leave of absence from an early childhood setting / preschool (excluding one located in a school)'
7.1	Other roles you had in 2018	Please select any other roles you had. Select all that apply	For those working in schools: 1. teacher/educator 2. principal 3. deputy/assistant principal 4. school leader other 5. teacher aide 6. teacher librarian 7. none of the above	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)' Or if 3.1 = 'On an extended leave of absence from a school'
7.2	Other roles you had in 2018	Please select any other roles you had. Select all that apply	For those working in early childhood services 1. principal / director / coordinator / educational leader 2. group leader 3. teacher / educator 4. none of the above	If 3.1 = 'In an early childhood service / preschool (excluding one located in a school)' Or if 3.1 = 'On an extended leave of absence from an early childhood setting / preschool (excluding one located in a school)'

Ref	Item category	Question ³	Answer Options	Visibility
8.1	Contract types	Which of the following best describes your last employment contract during 2018?	1: Ongoing / Permanent 2: Fixed-term / Contract more than 3 years 3: Fixed-term / Contract 1–3 years 4: Fixed-term / Contract of 1 year 5: Fixed-term / Contract of approx. 3 terms 6: Fixed-term / Contract of approx. 2 terms 7: Fixed-term / Contract of approx. 1 term 8: Casual / Temporary Relief	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)' Or if 3.1 = 'In an early childhood service / preschool (excluding one located in a school)'
8.2	Contract types	Why are you working as a casual / relief teacher?	1: I am unable to secure a contract or permanent position 2: Due to my personal circumstances (e.g. family commitments) 3: Due to my professional circumstances (e.g. study or other employment) 4: Other	If 8.1 = 'Casual / Temporary Relief'
8.3	Contract types	Other – please provide details	Free text	If 8.2 = 'Other'
8.4	Contract types	Did you have any other employment contracts during 2018?	Yes, No	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)' Or if 3.1 = 'In an early childhood service / preschool (excluding one located in a school)'
8.5	Contract types	If so, please tell us how many of each type of contract you had (only appears if ticked Yes above) Ongoing / Permanent Fixed-term / Contract more than 3 years Fixed-term / Contract 1–3 years Fixed-term / Contract of 1 year	1: 0 2: 1 3: 2 4: 3 5: 4 6: 5 7: 6	If 8.4 = 'Yes'

Ref	Item category	Question ³	Answer Options	Visibility
		This includes teaching a class, small group or individual, but excludes counselling or pastoral care		Or if 3.1 = 'In an early childhood service / preschool (excluding one located in a school)'
11.1	Tasks other than face-to-face teaching	<p>Approximately how many hours did you spend on each of the following tasks during an average teaching week?</p> <p>Please round up to the nearest hour and include tasks that took place during weekends, evenings or other off classroom hours</p> <p>Planning or preparation of lessons either at school or out of school</p> <p>Marking / assessing of student work</p> <p>Other teamwork and dialogue with colleagues within the school</p> <p>Student supervision and counselling</p> <p>General administrative work</p> <p>Communication with parents or carers</p> <p>Engaging in extracurricular activities</p>	<p>In SA: Drop down box with options from 0 to 60, and then '60+'</p> <p>In NSW and NT⁴: 1: 0 hours 2: 1–4 hours 3: 5–9 hours 4: 10+ hours</p>	<p>In NSW and NT: If 6.1 = 'teacher / educator' or 'other leadership role'</p> <p>In SA: If 6.1 = 'teacher / educator'</p>
11.2	Tasks other than face-to-face teaching	<p>Approximately how many hours did you spend on each of the following tasks during an average teaching week?</p> <p>Please round up to the nearest hour and include tasks that took place during weekends, evenings or other off classroom hours</p> <p>Administrative and leadership tasks and meetings</p> <p>Instructional leadership-related tasks and meetings</p>	<p>In SA: Drop down box with options from 0 to 60, and then '60+'</p> <p>In NSW and NT⁴: 1: 0 hours 2: 1–4 hours 3: 5–9 hours 4: 10+ hours</p>	<p>In NSW and NT: If 6.1 = 'principal' or 'deputy / assistant principal'</p> <p>In SA: If 6.1 = 'principal' or 'deputy / assistant principal' or 'other leadership role'</p>

⁴ Note that this was changed between the South Australian Teacher Survey and those delivered in New South Wales and the Northern Territory to a range of hours to reduce the time taken to answer this question from average of three minutes to one minute. Notes on alignment are presented in Chapter 4.

Ref	Item category	Question ³	Answer Options	Visibility
		Professional learning for school staff Student interactions Parent or carer interactions Interactions with local and regional community, business and industry		
12.1	About your teaching – curriculum type	Which of the following types of curriculum did you teach in 2018? Select all that apply	Australian Curriculum (F-10) Australian Curriculum (Senior Secondary) International Baccalaureate Primary Years Program International Baccalaureate Middle Years Program International Baccalaureate Diploma Program International Baccalaureate Career-related Program Vocational Education and Training Applied Learning Other	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)'
12.2	About your teaching – curriculum type	Other – please provide details	Free text	If 12.1 = 'Other'
12.3	About your teaching – year levels taught	Please select the year levels you taught during 2018. Select all that apply	Early Childhood / Kindergarten Prep / reception Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)'

Ref	Item category	Question ³	Answer Options	Visibility
			Year 11 Year 12	
12.4	About your teaching – subjects taught	Below is a list of subject areas. Please select every subject you taught in 2018. Select all that apply	<p>List of Primary subjects:</p> <ul style="list-style-type: none"> • All Primary Core Subjects • English • English as a second language / dialect • Mathematics • Science • Learning Support • Dance • Drama • Media Arts • Music • Visual Arts • Design and Technologies • Digital Technologies • Languages other than English • Physical Education • Health Education • Humanities and Social Sciences • Other <p>List of secondary subjects:</p> <ul style="list-style-type: none"> • English • Literature • Essential English • English as a second language / dialect • Mathematics • General Mathematics 	<p>If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)'</p> <p>List of subjects determined from responses to 12.3. Secondary subjects presented when any of the following were selected:</p> <p>Year 7 (<i>NSW and NT only</i>)</p> <p>Year 8</p> <p>Year 9</p> <p>Year 10</p> <p>Year 11</p> <p>Year 12</p>

Ref	Item category	Question ³	Answer Options	Visibility
			<ul style="list-style-type: none"> • Essential Mathematics • Specialist Mathematics • Mathematical Methods • Geography • History • Economics and Business • Civics and Citizenship • Accounting • Legal Studies • Modern History • Ancient History • Philosophy • Theory of knowledge • Languages other than English • Dance • Drama • Media Arts • Music • Visual Arts • Design and Technologies • Digital Technologies • Physical Education • Health Education • Learning Support • Science • Physics • Chemistry • Biology • Human Biology 	

Ref	Item category	Question ³	Answer Options	Visibility
			<ul style="list-style-type: none"> • Earth and Environmental Science • Psychology • Other 	
12.5		Other – please provide details	Free text	If 'Other' selected in 12.4
12.6	About your teaching – teacher training	<p>In NSW and NT:</p> <p>Did you complete at least one semester learning content knowledge or pedagogy in the following subject/s during your teacher education program or other tertiary study?</p> <p>Content knowledge Pedagogy</p> <p>In SA:</p> <p>Did you complete at least one semester of tertiary studies in the following subject/s during your teacher education program or other tertiary study?</p> <p>Did you complete tertiary studies in teaching methods for the following subject/s during your teacher education program or other tertiary study?</p>	<p>For all subjects selected in 12.4 and any free text response in 12.5:</p> <p>1: Yes 2: No 3: I'm unsure</p>	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)'
12.7	About your teaching – professional learning	<p>Did you complete any professional learning on content knowledge or pedagogy for the following subject/s?</p> <p>Content knowledge Pedagogy</p>	<p>For all subjects selected in 12.4 and any free text response in 12.5:</p> <p>1: Yes 2: No 3: I'm unsure</p>	<p><i>NT and NSW only:</i></p> <p>If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)'</p>
13.1	About your induction into the profession	Did you receive a formal induction process when you began as a newly graduated / early career teacher / educator?	<p>1: Yes 2: No</p>	<p>If 6.1 = 'teacher / educator' Or if 6.2 = 'teacher / educator'</p> <p>And when 2.1a ≥ 2016</p>

Ref	Item category	Question ³	Answer Options	Visibility
13.2	About your induction into the profession	In your experience, which, if any, of the following did you participate in as part of induction as an early career teacher/educator? Please select all that apply	<p>Options for teachers in schools:</p> <ul style="list-style-type: none"> • An orientation program – introduction to formal requirements (e.g. policies, procedures) and informal ways of operating (e.g. cultural, interpersonal and administrative) • Being mentored or coached • Contact and interactions with your leadership team • Participating in networks within your workplace • Participating in networks outside of your workplace • Collaboration with colleagues (e.g. Professional Learning Communities) • Targeted professional learning opportunities • Structured opportunities to discuss your experiences with other new teachers • Classroom observation and feedback from observer to improve your practice • Observation of experienced teachers teaching their classes • A reduced face-to-face teaching workload • Follow-up from your teacher education institution • Reflection on practice • Specific allocation of time to undergo induction • Observation of experienced educators in their practice • Observation and feedback from observer to improve your practice 	If 13.1 = 'Yes'

Ref	Item category	Question ³	Answer Options	Visibility
			<p>Options for teachers in early childhood services:</p> <ul style="list-style-type: none"> • An orientation program – introduction to formal requirements (e.g. policies, procedures) and informal ways of operating (e.g. cultural, interpersonal and administrative) • Being mentored or coached • Contact and interactions with your leadership team • Participating in networks within your workplace • Participating in networks outside of your workplace • Collaboration with colleagues (e.g. Professional Learning Communities) • Targeted professional learning opportunities • Structured opportunities to discuss your experiences with other new teachers • Classroom observation and feedback from observer to improve your practice • Observation of experienced teachers teaching their classes • A reduced face-to-face teaching workload • Follow-up from your teacher education institution • Reflection on practice • Specific allocation of time to undergo induction • Observation of experienced educators in their practice • Observation and feedback from observer to improve your practice • Structured opportunities to discuss your experiences with other new educators 	

Ref	Item category	Question ³	Answer Options	Visibility
13.3	About your induction into the profession	If you participated in other induction activities that were not listed above, please tell us what they were here	Free text	If 13.1 = 'Yes'
13.3	About your induction into the profession	How helpful or unhelpful were the following types of assistance to your teaching practice?	For each of the selected item in 13.2: 1: Very unhelpful 2: Unhelpful 3: Neutral 4: Helpful 5: Very helpful	If one or more options selected in 13.2
14.1	Your professional learning during 2018	Did you undertake any professional learning during 2018? Includes formal professional learning both inside and outside of your educational setting, but not any tertiary study you might have undertaken	1: Yes 2: No	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)' Or if 3.1 = 'In an early childhood service / preschool (excluding one located in a school)'
14.2	Your professional learning during 2018	About how many hours in total did you spend on professional learning? Please enter whole numbers only	Any whole number can be entered here	If 14.1 = 'Yes'
14.3	Your professional learning during 2018	To what extent do you agree or disagree with the following statements about the professional learning that you have undertaken? a) It is aligned to my own professional development needs b) It is aligned to the needs or priorities of my educational setting c) I have had opportunities to implement what I have learned d) I have had opportunities to reflect on / evaluate the impact it has had on student learning	1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly agree	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)' Or if 3.1 = 'In an early childhood service / preschool (excluding one located in a school)'

Ref	Item category	Question ³	Answer Options	Visibility
		e) I have had opportunities to reflect on / evaluate the impact it has had on learners		
15.1	About your tertiary qualifications other than initial teacher education	Are you undertaking or have you completed tertiary study other than initial teacher education?	1: Yes, undertaking 2: Yes, completed 3: No	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)' Or if 3.1 = 'On an extended leave of absence from a school' Or if 3.1 = 'In an early childhood service / preschool (excluding one located in a school)' Or if 3.1 = 'On an extended leave of absence from an early childhood setting / preschool (excluding one located in a school)'
15.2	About your tertiary qualifications other than initial teacher education	What is / was the highest level of that tertiary study?	1: Doctoral degree 2: Masters degree 3: Graduate Diploma 4: Graduate Certificate 5: Other postgraduate qualification 6: Bachelor (Honours) degree 7: Bachelor degree 8: Diploma or Advanced Diploma 9: Certificates I - IV 10: Short course 11: Other	If 15.1 = 'Yes, undertaking' or 'Yes, completed'
15.3	About your tertiary qualifications other than initial teacher education	Other – please specify	Free Text	If 15.2 = 'Other'

Ref	Item category	Question ³	Answer Options	Visibility
15.4	About your tertiary qualifications other than initial teacher education	In what field of study is / was the qualification?	1: Architecture and building 2: Behavioural studies 3: Business and management 4: Communication and media 5: Creative arts 6: Education (including Teacher Librarianship) 7: Engineering 8: Environmental studies 9: Food and hospitality 10: Health 11: Information technology 12: Language and literature 13: Law 14: Mathematics 15: Philosophy 16: Political studies 17: Religious studies 18: Sales and marketing 19: Science 20: Sports and recreation 21: Other	If 15.1 = 'Yes, undertaking' or 'Yes, completed'
15.5	About your tertiary qualifications other than initial teacher education	Other – please specify	Free Text	If 15.4 = 'Other'
16	National Certification of Highly Accomplished and Lead Teachers in Australia	Have you been / are you being certified as a Highly Accomplished or Lead Teacher? Select all that apply	<ul style="list-style-type: none"> No I have been certified as a Highly Accomplished Teacher I have been certified as a Lead Teacher 	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)' Or if 3.1 = 'On an extended leave of absence from a school'

Ref	Item category	Question ³	Answer Options	Visibility
			<ul style="list-style-type: none"> I am being assessed as a Highly Accomplished Teacher I am being assessed as a Lead Teacher 	<p>Or 3.1 = 'In an early childhood service / preschool (excluding one located in a school)'</p> <p>Or if 3.1 = 'On an extended leave of absence from an early childhood setting / preschool (excluding one located in a school)'</p>
17.1	About your career intentions	Do you think you will stop working in schools (in any capacity) permanently before you retire?	1: No 2: Yes	If 3.1 = 'In a school (primary, secondary, combined e.g. K-12, P-12, R-12, K-6 etc., or special)'
17.2	About your career intentions	Do you think you will stop working as a teacher / educator (in any capacity) permanently before you retire?	1: No 2: Yes	If 3.1 = 'In an early childhood service / preschool (excluding one located in a school)'
17.3	About your career intentions	Approximately how many more years can you see yourself working in schools (in any capacity)?	1: Unsure 2: 1 year 3: 2 years 4: 3 years 5: 4 years 6: 5 years 7: 6 years 8: 7 years 9: 8 years 10: 9 years 11: 10 + years	If 17.1 = 'Yes'
17.4	About your career intentions	Approximately how many more years can you see yourself working in early childhood education / preschools (in any capacity)?	1: Unsure 2: 1 year 3: 2 years 4: 3 years 5: 4 years 6: 5 years	If 17.2 = 'Yes'

Ref	Item category	Question ³	Answer Options	Visibility
			7: 6 years 8: 7 years 9: 8 years 10: 9 years 11: 10 + years	
17.5	About your career intentions	What are your reasons for considering leaving teaching? Please select as many of the following factors that apply to you	<ul style="list-style-type: none"> • I never intended teaching to be a long-term career • I have found that I am not suited to working in schools • I am not enjoying working in schools • Unsatisfactory relationships with other staff • To seek employment elsewhere in education, but not directly in schools • To seek employment outside of education • The workload is too heavy • Insufficient support staff • Class sizes too large • I'm facing challenges with student behaviour management • Insufficient professional recognition within the school • The poor public image of the profession • Changes imposed on schools from outside (e.g. from government) • Dissatisfaction with performance appraisal processes • The demands of professional regulation (e.g. professional learning, practice, etc.) are too heavy • Family reasons / Parental leave 	If 17.1 = 'Yes'

Ref	Item category	Question ³	Answer Options	Visibility
			<ul style="list-style-type: none"> • I am finding it too stressful / impacting my wellbeing or mental health • To achieve a better work / life balance • Insufficient pay • Other 	
17.6	About your career intentions	Other – please specify	Free Text	If 'Other' selected in 17.5
17.7	About your career intentions	What are your reasons for considering leaving teaching? Please select as many of the following factors that apply to you	<ul style="list-style-type: none"> • I never intended for early childhood education to be a long-term career • I have found that I am not suited to early childhood education • I am not enjoying early childhood education / preschool • Family reasons • Unsatisfactory relationships with other staff • To seek employment elsewhere in education, but not in early childhood education / preschool • The workload is too heavy • Insufficient support staff • I'm facing challenges with children's behaviour management • Insufficient professional recognition within the workplace • The poor public image of early childhood educators • Changes imposed on early childhood settings from outside (e.g. from government) • Dissatisfaction with performance appraisal processes 	If 17.2 = 'Yes'

Ref	Item category	Question ³	Answer Options	Visibility
			<ul style="list-style-type: none"> The demands of professional regulation (e.g. professional learning, practice, etc.) are too heavy Parental leave I am finding it too stressful / impacting on my wellbeing or mental health To achieve a better work / life balance To seek employment outside of early childhood education Insufficient pay Other 	
17.8	About your career intentions	Other – please specify	Free Text	If 'Other' selected in 17.7
18	Aboriginal and Torres Strait Islander status	Do you identify as being of Aboriginal or Torres Strait Islander origin? (prefer not to answer option offered)	<ol style="list-style-type: none"> No Yes, Aboriginal Yes, Torres Strait Islander Yes, both Aboriginal and Torres Strait Islander I prefer not to answer this question 	All respondents
19	Country of birth	In which country were you born?	<ol style="list-style-type: none"> Australia Afghanistan Albania Algeria Andorra Angola Anguilla Antigua & Barbuda Argentina Armenia Austria Azerbaijan Bahamas Bahrain Bangladesh Barbados Belarus Belgium Belize Benin Bermuda Bhutan Bolivia Bosnia & Herzegovina Botswana Brazil Brunei Darussalam Bulgaria Burkina Faso Burundi Cambodia Cameroon Canada Cape Verde Cayman Islands Central African Republic Chad Chile China Colombia Comoros Congo Cook Islands Costa Rica Croatia Cuba Cyprus Czech 	All respondents

Ref	Item category	Question ³	Answer Options	Visibility
			Republic 49: Democratic Republic of the Congo 50: Denmark 51: Djibouti 52: Dominica 53: Dominican Republic 54: Ecuador 55: Egypt 56: El Salvador 57: England 58: Equatorial Guinea 59: Eritrea 60: Estonia 61: Ethiopia 62: Federated States of Micronesia 63: Fiji 64: Finland 65: France 66: French Guiana 67: Gabon 68: Gambia 69: Georgia 70: Germany 71: Ghana 72: Great Britain 73: Greece 74: Grenada 75: Guadeloupe 76: Guatemala 77: Guinea 78: Guinea-Bissau 79: Guyana 80: Haiti 81: Honduras 82: Hungary 83: Iceland 84: India 85: Indonesia 86: Iran 87: Iraq 88: Ireland 89: Israel 90: Italy 91: Ivory Coast (Cote d'Ivoire) 92: Jamaica 93: Japan 94: Jordan 95: Kazakhstan 96: Kenya 97: Kiribati 98: Korea, Democratic Republic of (North Korea) 99: Korea, Republic of (South Korea) 100: Kosovo 101: Kuwait 102: Kyrgyz Republic (Kyrgyzstan) 103: Laos 104: Latvia 105: Lebanon 106: Lesotho 107: Liberia 108: Libya 109: Liechtenstein 110: Lithuania 111: Luxembourg 112: Madagascar 113: Malawi 114: Malaysia 115: Maldives 116: Mali 117: Malta 118: Marshall Islands 119: Martinique 120: Mauritania 121: Mauritius 122: Mayotte 123: Mexico 124: Micronesia 125: Moldova, Republic of 126: Monaco 127: Mongolia 128: Montenegro 129: Montserrat 130: Morocco 131: Mozambique 132: Myanmar/Burma 133: Namibia 134: Nauru 135: Nepal 136: Netherlands 137: New Zealand 138: Nicaragua 139: Niger 140: Nigeria 141: North Korea 142: Northern Ireland 143: Norway 144: Oman 145: Pacific Islands 146: Pakistan 147: Palau 148: Palestine 149: Panama 150: Papua New Guinea 151: Paraguay 152: Peru 153:	

Ref	Item category	Question ³	Answer Options	Visibility
			Philippines 154: Poland 155: Portugal 156: Puerto Rico 157: Qatar 158: Republic of Macedonia 159: Reunion 160: Romania 161: Russian Federation 162: Rwanda 163: Saint Kitts and Nevis 164: Saint Lucia 165: Saint Vincent's & Grenadines 166: Samoa 167: San Marino 168: Sao Tome and Principe 169: Saudi Arabia 170: Scotland 171: Senegal 172: Serbia 173: Seychelles 174: Sierra Leone 175: Singapore 176: Slovak Republic (Slovakia) 177: Slovenia 178: Solomon Islands 179: Somalia 180: South Africa 181: South Sudan 182: Spain 183: Sri Lanka 184: Sudan 185: Suriname 186: Swaziland 187: Sweden 188: Switzerland 189: Syria 190: Taiwan 191: Tajikistan 192: Tanzania 193: Thailand 194: Timor Leste 195: Togo 196: Tonga 197: Trinidad & Tobago 198: Tunisia 199: Turkey 200: Turkmenistan 201: Turks & Caicos Islands 202: Tuvalu 203: Uganda 204: Ukraine 205: United Arab Emirates 206: United States of America (USA) 207: Uruguay 208: Uzbekistan 209: Vanuatu 210: Vatican City 211: Venezuela 212: Vietnam 213: Virgin Islands (UK) 214: Virgin Islands (US) 215: Wales 216: Yemen 217: Zambia 218: Zimbabwe	
20.1	About your initial teacher education qualification	In which country did you gain your initial teacher education qualification?	1: Australia 2: Afghanistan 3: Albania 4: Algeria 5: Andorra 6: Angola 7: Anguilla 8: Antigua & Barbuda 9: Argentina 10: Armenia 11: Austria 12: Azerbaijan 13: Bahamas 14: Bahrain 15: Bangladesh 16: Barbados 17: Belarus 18: Belgium 19: Belize 20: Benin 21: Bermuda 22: Bhutan 23: Bolivia 24: Bosnia & Herzegovina 25: Botswana 26: Brazil 27: Brunei Darussalam 28: Bulgaria 29: Burkina Faso 30: Burundi 31: Cambodia 32: Cameroon	All respondents

Ref	Item category	Question ³	Answer Options	Visibility
			33: Canada 34: Cape Verde 35: Cayman Islands 36: Central African Republic 37: Chad 38: Chile 39: China 40: Colombia 41: Comoros 42: Congo 43: Cook Islands 44: Costa Rica 45: Croatia 46: Cuba 47: Cyprus 48: Czech Republic 49: Democratic Republic of the Congo 50: Denmark 51: Djibouti 52: Dominica 53: Dominican Republic 54: Ecuador 55: Egypt 56: El Salvador 57: England 58: Equatorial Guinea 59: Eritrea 60: Estonia 61: Ethiopia 62: Federated States of Micronesia 63: Fiji 64: Finland 65: France 66: French Guiana 67: Gabon 68: Gambia 69: Georgia 70: Germany 71: Ghana 72: Great Britain 73: Greece 74: Grenada 75: Guadeloupe 76: Guatemala 77: Guinea 78: Guinea-Bissau 79: Guyana 80: Haiti 81: Honduras 82: Hungary 83: Iceland 84: India 85: Indonesia 86: Iran 87: Iraq 88: Ireland 89: Israel 90: Italy 91: Ivory Coast (Cote d'Ivoire) 92: Jamaica 93: Japan 94: Jordan 95: Kazakhstan 96: Kenya 97: Kiribati 98: Korea, Democratic Republic of (North Korea) 99: Korea, Republic of (South Korea) 100: Kosovo 101: Kuwait 102: Kyrgyz Republic (Kyrgyzstan) 103: Laos 104: Latvia 105: Lebanon 106: Lesotho 107: Liberia 108: Libya 109: Liechtenstein 110: Lithuania 111: Luxembourg 112: Madagascar 113: Malawi 114: Malaysia 115: Maldives 116: Mali 117: Malta 118: Marshall Islands 119: Martinique 120: Mauritania 121: Mauritius 122: Mayotte 123: Mexico 124: Micronesia 125: Moldova, Republic of 126: Monaco 127: Mongolia 128: Montenegro 129: Montserrat 130: Morocco 131: Mozambique 132: Myanmar/Burma 133: Namibia 134: Nauru 135: Nepal 136: Netherlands 137: New Zealand 138: Nicaragua	

Ref	Item category	Question ³	Answer Options	Visibility
			139: Niger 140: Nigeria 141: North Korea 142: Northern Ireland 143: Norway 144: Oman 145: Pacific Islands 146: Pakistan 147: Palau 148: Palestine 149: Panama 150: Papua New Guinea 151: Paraguay 152: Peru 153: Philippines 154: Poland 155: Portugal 156: Puerto Rico 157: Qatar 158: Republic of Macedonia 159: Reunion 160: Romania 161: Russian Federation 162: Rwanda 163: Saint Kitts and Nevis 164: Saint Lucia 165: Saint Vincent's & Grenadines 166: Samoa 167: San Marino 168: Sao Tome and Principe 169: Saudi Arabia 170: Scotland 171: Senegal 172: Serbia 173: Seychelles 174: Sierra Leone 175: Singapore 176: Slovak Republic (Slovakia) 177: Slovenia 178: Solomon Islands 179: Somalia 180: South Africa 181: South Sudan 182: Spain 183: Sri Lanka 184: Sudan 185: Suriname 186: Swaziland 187: Sweden 188: Switzerland 189: Syria 190: Taiwan 191: Tajikistan 192: Tanzania 193: Thailand 194: Timor Leste 195: Togo 196: Tonga 197: Trinidad & Tobago 198: Tunisia 199: Turkey 200: Turkmenistan 201: Turks & Caicos Islands 202: Tuvalu 203: Uganda 204: Ukraine 205: United Arab Emirates 206: United States of America (USA) 207: Uruguay 208: Uzbekistan 209: Vanuatu 210: Vatican City 211: Venezuela 212: Vietnam 213: Virgin Islands (UK) 214: Virgin Islands (US) 215: Wales 216: Yemen 217: Zambia 218: Zimbabwe	
20.2	About your initial teacher education qualification	In what year did you graduate from that qualification?	1: not yet completed 2: 2019 3: 2018 4: 2017 5: 2016 6: 2015 7: 2014 8: 2013 9: 2012 10: 2011 11: 2010 12: 2009 13: 2008 14: 2007 15: 2006 16: 2005 17: 2004 18: 2003 19: 2002 20: 2001 21: 2000 22: 1999 23: 1998	All respondents

Ref	Item category	Question ³	Answer Options	Visibility
			24: 1997 25: 1996 26: 1995 27: 1994 28: 1993 29: 1992 30: 1991 31: 1990 32: 1989 33: 1988 34: 1987 35: 1986 36: 1985 37: 1984 38: 1983 39: 1982 40: 1981 41: 1980 42: 1979 43: 1978 44: 1977 45: 1976 46: 1975 47: 1974 48: 1973 49: 1972 50: 1971 51: 1970 52: 1969 53: 1968 54: 1967 55: 1966 56: 1965 57: 1964 58: 1963 59: 1962 60: 1961 61: 1960 62: 1959 63: 1958 64: 1957 65: 1956 66: 1955 67: 1954 68: 1953 69: 1952 70: 1951 71: 1950 72: 1949 73: 1948 74: 1947 75: 1946 76: 1945 77: 1944 78: 1943 79: 1942 80: 1941 81: 1940 82: 1939 83: 1938 84: 1937 85: 1936 86: 1935 87: 1934 88: 1933 89: 1932 90: 1931 91: 1930 92: 1929 93: 1928 94: 1927 95: 1926 96: 1925 97: 1924 98: 1923 99: 1922 100: 1921 101: 1920	
21.1	About you (Disability status)	Do you have a disability, impairment or long-term medical condition? A disability, impairment or long-term medical condition impacts daily activities, communication and / or mobility and has lasted or is likely to last 6 months or more	1: Yes 2: No 3: I prefer not to answer this question	All respondents
21.2	About you (Disability status)	Please indicate the area/s of impairment. Select all that apply	<ul style="list-style-type: none"> • Hearing • Mobility • Vision • Medical • Other 	If 21.1 = 'Yes'
21.3	About you (Disability status)	Other – please specify	Free Text	If 'Other' selected in 21.2

HESDC Variables

The variables available in the HESDC were detailed in the *Technical Report – Supplement to the National Initial Teacher Education Pipeline: Australian Teacher Workforce Data Report 1* (the ATWD ITE Pipeline Technical Report). This report utilised the enhanced detailed field of education data described in section 2.6.2 of that report for all respondents to the ATWD Teacher Survey who had linked records in the HESDC. These individuals were linked with the same PPN value in the ATWD Teacher Survey data file and the HESDC Enrolment, Course and Load files.

Harmonisation of variables across collections

Data collected in the Teacher Survey was typically analysed from the Teacher Survey collection. The one exception to this was for Aboriginal and Torres Strait Islander status, where the Teacher Survey data was combined with the other data sources such that a positive response in the Aboriginal and/or Torres Strait Islander field was considered a positive response in the Teacher Survey. This decision was made to ensure a large enough sample of Aboriginal and/or Torres Strait Islander teacher respondents.

The only case where a field was collected in the Teacher Survey but analysed from another collection was in the analyses of sample representativeness in **Appendix B**. To analyse sample representativeness, the field needs to be from the same source for both those participating in the Teacher Survey and those who did not participate, and therefore cannot come from the survey data.

Chapter 3 ATWD Teacher Survey sample

Overview

The sample size, completion rates, and sample representativeness were analysed to determine the appropriateness of the ATWD Teacher Survey sample for drawing conclusions on the teacher workforce in the participating jurisdictions.

The analyses reported in this section are focussed on the quality of data from within each jurisdiction. The overall sample is large, with an adequate sample size achieved for reliable inference in each participating jurisdiction. Completion rates were high in all jurisdictions, with over 75 percent of those who commenced the Teacher Survey completing it. The characteristics of those who completed surveys did not differ significantly from the registered workforce in each jurisdiction, although younger teachers were somewhat less likely to have participated in the Teacher Survey.

The overall sample contains a greater proportion of respondents from South Australia than would be expected based on the number of teachers registered across South Australia compared to the combined total across South Australia, New South Wales and the Northern Territory.

Sample size adequacy

The Australian Bureau of Statistics (ABS) provides a formula⁵ to determine the minimum sample size needed to represent a given population, while minimising standard errors in any measurements taken on the sample.

Using the ABS formula, a population of 5,000 would need a minimum sample of 370 to accurately measure a binary variable (e.g. gender) with a standard error of 5 percent. Similarly, a population of 100,000 would need a minimum sample of 398. The number of completed surveys achieved in the ATWD Teacher Survey for 2018 exceeded the minimum levels in all jurisdictions for analysis, indicating that there was sufficient sample size to report on both binary outcomes and more complex descriptive analysis of the data (**Table 6**).

Table 6: Minimum sample size guidelines for ATWD Teacher Survey 2018

	NSW	NT	SA
Total number of registered teachers	169,367	5,737	36,318
Number of survey respondents (including non-completes)	8,881	927	8,322
Number of surveys completed	6,105	725	6,707
Proportion of respondents	5%	15%	23%
Minimum no. of respondents required using ABS rules	Approx. 400	Approx. 370	Approx. 390

Relative standard error of survey respondent characteristics

To determine whether a sufficiently large number of responses were obtained for the analysis of each question, the relative standard error (RSE) was calculated (see **Appendix B**). The RSE is used by the

⁵ Australian Bureau of Statistics n.d., *Sample design*, Australian Bureau of Statistics, Canberra, <<https://www.abs.gov.au/websitedbs/D3310114.nsf/home/Basic+Survey+Design+-+Sample+Design>>.

Australian Bureau of Statistics to account for sampling variability⁶ and expresses how likely a survey estimate is to deviate from the general population. In general, a larger number of responses will reduce the sampling variability in the observed data, and therefore result in a lower RSE.

The RSE was applied during the analysis of ATWD Teacher Survey sample representativeness. Where the number of respondents for a particular question or question option fell below 100, the RSE was used to determine if the particular response category could be presented in the report. If an RSE greater than 25 percent was calculated for a response, the sample size would be determined to be insufficiently reliable to support valid inference; however, this did not occur during the sample representativeness analysis.

The reporting in each individual analysis used a simpler minimum cell size cut-off method; where a group required 50 or more respondents to be reported on. Frequency data was then only presented where the response was selected by five or more individuals. Where cell sizes fell below these cut-offs, cells were joined with other similar cells or were omitted where none existed. This strategy was selected given the focus on data description. Caution should be taken in interpreting results where cell sizes are less than 100.

Completion rates

The ATWD Teacher Survey had high rates of completion. Stratification of survey completion rates by the characteristics of the teacher workforce are not reported owing to the survey design. The groups of largest interest, e.g., registered teachers outside of the workforce, early career teachers, leaders, teachers of different learner levels, and Aboriginal and Torres Strait Islander teachers, were unknown at commencement of the survey. For some of these characteristics, the questions allowing identification of these subgroups are asked at the commencement of the survey, and others at the end of the survey. Higher completion rates for subgroups of the workforce will be present for groups identified at later points in the survey, as those who are actually members of this group but drop out of the survey early are never identified as being members from their responses.

Sample representativeness

Characteristics

As with all survey research, analyses of representativeness can only assess attributes known about the population. As such, it is possible that participants in the ATWD Teacher Survey differed from the population of registered teachers on unmeasured attributes. Overall, the comparisons determined that respondents from each participating state or territory were broadly representative of the registered teacher population, including from rural and remote areas and the sample achieved was representative of the population of teachers within each state/territory (see **Appendix B**). However, younger teachers (and therefore teachers with provisional registration and early career teachers) were slightly under-represented amongst ATWD Teacher Survey respondents. This has been taken into account in the analysis, interpretation and presentation of the data included in the ATWD Teacher Workforce Report.

Chi-squared tests were applied to statistically compare each respondent with the teacher population across a number of demographic and other characteristics using the registered teacher population data. This test is commonly used to assess whether the distribution of a particular variable (for example, gender distribution) is similar between two populations. The demographic characteristics analysed

⁶ Australian Bureau of Statistics 2019, *Relative standard error*, Australian Bureau of Statistics, Canberra, <<https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/1406.0.55.005main+features110User+Guide>>.

included age, gender, registration status, Aboriginal and Torres Strait Islander status, country of birth, and regionality based on residential location.

In addition, respondent teachers who worked in schools in 2018 were compared with the school population of teachers in each jurisdiction using ACARA School Profile data. The characteristics analysed included the school type, school regionality and school sector. Based on this analysis (see **Appendix B**), there were no characteristics for which the teacher respondents showed significant statistical differences compared with the teacher populations. The chi-square results for each characteristic compared were representative to within the specified degree of tolerance (all p-values > 0.05).

Jurisdiction of registration

With three of eight jurisdictions participating in Wave 1 of the ATWD Teacher Survey, the focus on representativeness was at the level of the characteristics, rather than ensuring each jurisdiction was contributing data in proportion to the size of its teacher workforce or aiming to be representative of the national teacher workforce.

South Australia and New South Wales contributed almost equally to the findings reported in the overall report. South Australia was over-represented relative to the number of teachers registered within the state, while New South Wales was under-represented. The Northern Territory had more participation than would be expected based on the number of teachers registered there (**Table 7**).

The data reported in the state and territory profiles has been established as representative of the teachers within each jurisdiction, based on the representativeness of their characteristics. It is unlikely that the over- or under- representation of certain jurisdictions has changed the composition of the sample due to the similar demographic structure of the workforce across jurisdictions. What may be more likely to differ due to the relative number of teachers completing surveys in each jurisdiction are the experiences in the workforce and the policy context, which cannot be assessed for representativeness.

Table 7: Expected versus observed jurisdiction of registration composition of the overall sample

	NSW	NT	SA
Expected – Proportion of registered teachers in participating jurisdictions	80.11%	2.71%	17.18%
Observed – Proportion of survey completions from participating jurisdictions	45.10%	5.36%	49.55%

Chapter 4 Transformed data

Most of the data presented in the ATWD Teacher Workforce Report was presented as proportions of the frequency distributions for the responses to the various survey questions. This chapter details where more complicated calculations or analyses were involved in generating the data presented. In particular, the selection criteria used to identify the different teacher workforce segments, the method used to generate numeric means from categorical data to determine the time spent on non-face-to-face teaching tasks (for teachers in New South Wales and the Northern Territory) and the principal components analysis undertaken to reduce respondents' reasons for leaving the profession into a number of meaningful sets.

Teacher workforce focal areas

The teacher focal areas reported on throughout the ATWD Teacher Workforce Report were determined by the responses to the ATWD Teacher Survey questions specified in **Table 8**.

Table 8: Selection criteria for focal teacher workforce segments

Teacher workforce focal segments	Selection criteria
Classroom teachers	Respondents who reported that they were working in schools or early childhood services and who selected their main role as a teacher / educator and who did not report having a leadership role
Teaching with leadership responsibilities	Respondents who reported that they were working in schools or early childhood services and who selected their main role as a teacher / educator and who reported having a leadership role as well
Leader only	Respondents who reported that they were working in schools or early childhood services and who selected their main role as one of the following leadership roles – Principal, Deputy/Assistant Principal, Other leader and who did not report having any other teaching role
Leaders with teaching responsibilities	Respondents who reported that they were working in schools or early childhood services and who selected their main role as one of the following leadership roles – Principal, Deputy/Assistant Principal, Other leader and who reported having a teaching role as well
Non-teaching workforce	Respondents who reported that they were either on extended leave from a school or early childhood service <ul style="list-style-type: none"> • working in education but not working in a school or early childhood service • working outside of education • not in paid employment • working as a teacher outside of Australia
Early career teacher	Any respondent who reported working in a school or early childhood service and who had a main or other role as a teacher and who reported that they had commenced teaching in 2014, 2015, 2016, 2017 or 2018. Note that only those who had started teaching from 2016 were presented with questions around induction

Teacher workforce focal segments	Selection criteria
Aboriginal and Torres Strait Islander teacher	This group was selected using linked registration and ATWD Teacher Survey data and included any respondent who reported working in a school or early childhood service and who had a main or other role as a teacher and who responded that they identified as Aboriginal, Torres Strait Islander or both in the survey or whose registration data included that they were Aboriginal, Torres Strait Islander or both

Working hours analysis

Data on working hours was collected as a continuous numeric data variable for South Australia for time spent on non-face-to-face teaching tasks. However, the time taken to respond to these questions took the most time and resulted in high numbers of teachers dropping out of the survey at this point (17.3% of drop-outs). In order to reduce the survey time and the drop-out rate for the survey when the Teacher Survey was fielded in New South Wales and the Northern Territory, the question on non-face-to-face teaching tasks was modified to categorical format and teachers were asked to complete a grid providing the options of 0 hours, 1–4 hours, 5–9 hours or 10 hours or more to select from for each non-face-to-face teaching task. This change allowed teachers to respond without shifting from use of the mouse to use of the keyboard, and reduced the average time taken on this section of the survey from around three minutes to around one minute.

As a result of this change, the data required transformation to ensure cross-jurisdiction consistency as follows:

Teacher / educator task analysis

For teachers and educators, the categorical data was converted to a numeric mean for respondents in New South Wales and the Northern Territory using the following method:

- The frequency distribution of the number of responses obtained for each task and time category was generated as shown in **Table 9**. Note that A_x to D_x represent the counts of the number of respondents who selected that particular option. The mid-point of the categories 1–4 hours and 5–9 hours was taken as the average number of hours spent on that task for that category (i.e. 2.5 for 1–4 hours and 7 for 5–9 hours). As the 10+ hour category did not have a numeric upper category limit, the average hours spent on the tasks by equivalent groups in South Australia was taken as the average time spent on the tasks for the 10+ category in the other jurisdictions.

Table 9: Sample frequency count for time spent on non-face-to-face teaching tasks for sample segment

Item number	Question	New South Wales and Northern Territory				South Australia
		Frequency				Numeric
		0 hours	1–4 hours	5–9 hours	10+ hours	
1	Planning or preparation of lessons either at school or out of school	A_1	B_1	C_1	D_1	H_1
2	Marking / assessing of student work	A_2	B_2	C_2	D_2	H_2
3	Other teamwork and dialogue with colleagues within the school	A_3	B_3	C_3	D_3	H_3
4	Student supervision and counselling	A_4	B_4	C_4	D_4	H_4
5	General administrative work	A_5	B_5	C_5	D_5	H_5

		New South Wales and Northern Territory				South Australia
6	Communication with parents or carers	A ₆	B ₆	C ₆	D ₆	H ₆

- For teachers and educators, the sample mean time spent on the task – e.g., planning or preparation of lessons either at school or out of school was calculated as follows:

$$hours_1 = \frac{(A_1 \times 0) + (B_1 \times 2.5) + (C_1 \times 7) + (D_1 \times \sum_{10} H_1)}{(A_1 + B_1 + C_1 + D_1)}$$

- The above method was repeated for all non-face-to-face teaching tasks.

Leader task analysis

For leaders, the categorical data was converted to a numeric mean for respondents in New South Wales and the Northern Territory using a similar method as was used for teachers and educators. The difference between the two methods was that rather than using the mid-point of the response category, the mean of South Australian respondents in the category range was used for all response categories, not just the 10+ category. For instance, if every leader in South Australia who said they worked on ‘planning or preparation of lessons either at school or out of school’ for between one and four hours had in fact selected one hour, then the value which would be imputed for leaders in New South Wales and the Northern Territory would be one hour.

The values to be imputed were calculated separately for principals and deputy principals, and was calculated independently for each question.⁷ This method makes no assumption about skewness within each response category, and does not assume uniform skewness across questions or across principals and deputy principals.

The frequency distribution of the number of responses obtained for each task and time category was generated – as shown in **Table 10** below.

Table 10: Sample frequency count for time spent on non-face-to-face teaching tasks for sample segment

		New South Wales and Northern Territory				South Australia
Item number	Question	Frequency				Numeric
		0 hours	1-4 hours	5-9 hours	10+ hours	
1	Administrative and leadership tasks and meetings	A ₁	B ₁	C ₁	D ₁	H ₁
2	Instructional leadership-related tasks and meetings	A ₂	B ₂	C ₂	D ₂	H ₂
3	Professional learning for school staff	A ₃	B ₃	C ₃	D ₃	H ₃
4	Student interactions	A ₄	B ₄	C ₄	D ₄	H ₄
5	Parent or carer interactions	A ₅	B ₅	C ₅	D ₅	H ₅
6	Interactions with local and regional community, business and industry	A ₆	B ₆	C ₆	D ₆	H ₆

⁷ Other leaders were only asked for their time on each task in South Australia, and so no mean imputation was required.

- For leaders, the sample mean time spent on the task – e.g., planning or preparation of lessons either at school or out of school was calculated as follows:

$$hours_1 = \frac{(A_1 \times 0) + (B_1 \times \sum_1^4 H_1) + (C_1 \times \sum_5^9 H_1) + (D_1 \times \sum_{10} H_1)}{(A_1 + B_1 + C_1 + D_1)}$$

- The above method was repeated for all non-face-to-face leading tasks.

Validity of mean imputation

To assess the validity of this mean imputation approach, the average number of hours worked on each task, and the average number of hours spent on face-to-face teaching were summed. This sum was then compared to the average number of working hours reported. For principals, an average of 60 of the 61.3 hours worked by school principals were accounted for by reported specific tasks and face-to-face teaching. For deputy principals it was 56.4 of the 60.0 hours. This suggests that the non-face-to-face teaching tasks provide very good to excellent coverage of all tasks that principals (97.8% coverage of hours worked) and deputy principals (94.0% coverage of hours worked) might perform.

Overall working hours as a percentage of contracted hours

To ensure that each individual in the workforce contributed equally.

For each group of contracted hours, 36–40, 31–35, 26–30, < 5 hours per week, the following numbers were calculated:

1. N – The number of teachers with this many contracted hours
2. $FTE_contracted$ – Upper limit of paid hours band as a proportion of full-time upper limit (40 hrs)
3. FTE_worked – Average hours worked by those in paid hours band as a proportion of full-time upper limit (40 hrs)

These numbers were then combined to create a working hours percentage of contracted hours such that:

$$\text{Working hours percentage} = \frac{\sum N \times FTE_worked}{\sum N \times FTE_contracted}$$

In this equation, \sum indicates the calculation is first done within the contracted hour band, and then summed across all bands.

Career intentions analysis

An analysis of career intentions is reported in Chapter 7. The methodology underpinning this analysis is described below.

Clustering groups of reasons

Due to the large number of reasons for leaving that could be reported on in the career intentions section, analysis of how these varied across workforce segments was facilitated by clustering reasons into similar groups. Principal components analysis (PCA) was selected due to the interest in co-occurrence and because there was no reason to believe latent variables were being modelled. PCA was used to cluster the 19 reasons into smaller sets of meaningful reasons. Reducing the number of dimensions in the data helps aid ease of interpretation.

To increase the separation between the components a Varimax rotation was used, which maximises the sum of the variance of the squared loading, where loadings are the correlation between variables and components. This process makes the interpretation easier as it leads to stronger associations between the responses and components scores, but can make groups of reasons appear more dissimilar than they are. Given how the follow-up analyses were performed and the questions they endeavoured to answer this was not of primary concern.

PCA returns the eigenvalues of the components. Components with eigenvalues over 1 were retained as per convention. Six components/sets of reasons were retained because they had eigenvalues > 1 . Together, these six components explained around half the variation in the reasons given for intending to leave the profession ($\rho = .496$).

A semi-quantitative approach was adopted. A reason was deemed to fall into a component if it was the component the reason was most strongly related to, and the component loading exceeded 0.3. In addition to specifying thresholds, all components needed to create a qualitatively interpretable grouping. Only the component an item loaded on most strongly was retained. One reason – ‘the demands of professional regulation (e.g. professional learning, practice, etc.) are too heavy’ – was related to two sets, but statistically did not clearly fall within either set so was considered not to be part of any set of reasons for the purposes of interpretation.

As early childhood educators were not presented with class sizes as a reason, this item was imputed by using the probability of the reason being selected among all other respondents. This imputation process enables early childhood teachers’ responses to Set 3 to be calculated.

The sets of reasons identified in Chapter 7 of the report were then applied to other sections where intentions for leaving are described.

Reasons and planned years remaining

Types of reasons by planned years remaining

A set of simple logistic regression analyses were performed where the outcome was whether the teacher had selected any reason from the category, with years intending to remaining (1 year versus other durations; 10+ years versus other durations) fitted as a single predictor.

Number of reasons by planned years remaining

As the number of reasons is count data, and there was insufficient evidence of over-dispersion to justify use of a negative binomial regression, a Poisson regression was used. The number of reasons selected was the outcome, and this was predicted by the number of years a person planned to remain. For simplicity, this analysis was only run for 10+ years versus other durations, however, the relationship is fairly linear. On average those intending to remain for 1 year provide 6.8 reasons, 2–4 years provide 6.1 reasons, 5 years provide 5.8 reasons, 6–9 years provide 5.4 reasons, and 10+ years provide 5.0 reasons.

Differences in selection of different groups of reasons for leaving

Logistic regression with reason (within-person) and teacher characteristic (between-person) as predictors. Robust standard errors were calculated to account for the fact that people can give multiple reasons for leaving.

The data was structured in long-format, and then the model constructed in STATA using the following syntax:

```
logistic reason_is_selected i.reason_number##i.teacher_characteristic, vce(cluster ppn)
```

The individual items were modelled, but not statistically analysed, as doing so would drastically inflate the chance of false positives. The model was then analysed using margins with specified contrast patterns separately for each set of variables. Due to the multiple comparisons being performed in each analysis (number of sets by number of non-orthogonal patterns), a Bonferroni correction for multiple comparisons was applied. Rather than report the corrected α level for each analysis:

margins {contrast_patterns}, over(reason_category) mcompare(bonferroni)

Where contrast_patterns are noted in **Table 11** below for each analysis:

Table 11: Contrast patterns for margin calculation following logistic regression

Teacher Characteristic	Contrast Pattern
Gender	<i>r.Gender</i>
Classroom teachers	Versus teachers with leadership responsibilities: <i>{role 1 -1 0}</i> Versus leaders: <i>{role 1 0 -1}</i>
Learning level taught	<i>g1.EC g1.Primary g1.Secondary</i>
Learning level taught – Primary Teacher Supplement	Where in one of Primary and Secondary: <i>r.Primary if reason_category == 1 reason_category == 3</i> Where in one of Primary and EC: <i>r.Primary if reason_category == 1 reason_category == 3</i>
Age group	Where there are 5 age groups, from youngest to oldest: <i>{age_group -2 -1 0 1 2} {age_group 1 -0.25 -0.25 -0.25 -0.25} age_group {-0.25 -0.25 -0.25 -0.25 1}</i>
School regionality	Where regionality is: metropolitan, inner regional, outer regional, remote/very remote: <i>{regionality -2 -1 1 2} {regionality -3 1 1 1} {regionality -1 -1 -1 3}</i>
School sector	Where sector is: government, Catholic, independent <i>{sector 2 -1 -1} {sector 0 1 -1}</i>

Appendix A

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Appendix B

Comparisons between ATWD Teacher Survey respondents and teacher populations

Methodological notes

Relative standard error was calculated by taking the observed standard error of the response category and dividing this by the proportion of respondents who were in this category.

Accredited teachers in New South Wales

Table 12: Comparison of age distribution between respondents and all accredited teachers in NSW

Age group	NESA Accredited Teacher Population % (n= 169,367)	NSW Respondents % (n= 8,787)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
<30 years	15.41%	11.79%	0.34%	2.92%	-3.62	-23.50	0.233
30–34 years	14.57%	11.82%	0.34%	2.91%	-2.75	-18.87	
35–39 years	12.91%	23.38%	0.45%	1.93%	10.46	81.01	
40–49 years	23.07%	15.52%	0.39%	2.49%	-7.55	-32.72	
50–59 years	18.33%	24.74%	0.46%	1.86%	6.41	34.95	
60+ years	15.69%	12.75%	0.36%	2.79%	-2.95	-18.79	

Table 13: Comparison of gender distribution between respondents and all accredited teachers in NSW

Gender	NESA Accredited Teacher Population % (n= 169,284)	NSW Respondents % (n= 8,787)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Women	76.30%	77.60%	0.44%	0.57%	1.30	1.70	0.954
Men	23.70%	22.40%	0.44%	1.99%	-1.30	-5.48	

Table 14: Comparison of location distribution between respondents and all accredited teachers in NSW

Remoteness (based on residential location)	NESA Accredited Teacher Population % (n= 159,836)	NSW Respondents % (n= 8,411)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Major Cities	72.17%	68.86%	0.51%	0.74%	-3.30	-4.58	0.895
Inner Regional	20.82%	23.08%	0.46%	2.00%	2.26	10.84	
Outer Regional	6.41%	7.48%	0.29%	3.85%	1.07	16.73	

Table 15: Comparison of Aboriginal and Torres Strait Islander Status distribution between respondents and all accredited teachers in NSW

Status	NESA Accredited Teacher Population % (n= 60,491)	NSW Respondents % (n=4,202)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Aboriginal or Torres Strait Islander	3.30%	2.47%	0.18%	7.22%	-0.83	-25.08	0.695
Non-Aboriginal or Torres Strait Islander	96.70%	97.53%	0.18%	0.18%	0.83	0.86	

Table 16: Comparison of country of birth profile for respondents and all accredited teachers in NSW

Country of Birth	NESA Accredited Teacher Population % (n= 60,605)	NSW Respondents % (n=4,202)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Australia	85.27%	85.47%	0.55%	0.64%	0.20	0.23	0.998
Overseas	14.73%	14.53%	0.55%	3.76%	-0.20	-1.35	

Table 17: Comparison of registration type distribution between respondents and all accredited teachers in NSW

Registration type	NESA Accredited Teacher Population % (n= 169,307)	NSW Respondents % (n=8,788)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Full registration	77.39%	84.29%	0.39%	0.46%	6.90	8.91	0.213
Provisional registration	22.61%	15.71%	0.39%	2.47%	-6.90	-30.50	

Table 18: Comparison of school type profile of respondents teaching in schools and all teachers in NSW

School type	Teachers in NSW Schools % (n= 86,262)	NSW respondents teaching in NSW schools %	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Primary	40.29%	40.40%	0.63%	1.55%	0.11	0.27	0.820
Secondary	35.84%	38.68%	0.62%	1.61%	2.84	7.93	
Combined	21.22%	18.16%	0.49%	2.72%	-3.06	-14.42	
Special	2.64%	2.75%	0.21%	7.61%	0.11	4.06	

Table 19: Comparison of school location profile of respondents teaching in schools and all teachers in NSW

Location of school	Teachers in NSW Schools % (n= 86,262)	NSW respondents teaching in NSW schools %	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Major Cities	75.15%	70.00%	0.59%	0.84%	-5.15	-6.86	0.624
Inner Regional	19.12%	22.19%	0.53%	2.41%	3.07	16.04	
Outer Regional	5.12%	7.03%	0.33%	4.67%	1.90	37.12	

Table 20: Comparison of school sector profile between respondents teaching in schools and all teachers in NSW

School sector	Teachers in NSW Schools % (n= 86,262)	NSW respondents teaching in NSW schools %	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Government	57.44%	60.84%	0.63%	1.04%	3.40	5.92	0.937
Catholic	19.45%	17.77%	0.49%	2.78%	-1.68	-8.61	
Independent	23.11%	21.38%	0.53%	2.48%	-1.72	-7.46	

Teachers registered in the Northern Territory

Table 21: Comparison of age distribution between respondents and all registered teachers in the NT

Age group	TRB NT Registered Teacher Population % (n= 5,737)	NT Respondents % (n=860)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
<30 years	9.33%	4.19%	0.68%	16.31%	-5.14	-55.12	0.223
30–34 years	13.15%	9.07%	0.98%	10.80%	-4.08	-31.00	
35–39 years	13.18%	14.53%	1.20%	8.27%	1.35	10.28	
40–49 years	22.32%	18.72%	1.33%	7.11%	-3.59	-16.11	
50–59 years	21.90%	32.33%	1.59%	4.93%	10.43	47.63	
60+ years	20.14%	21.16%	1.39%	6.58%	1.03	5.10	

Table 22: Comparison of gender distribution between respondents and all registered teachers in the NT

Gender	TRB NT Registered Teacher Population % (n= 5,737)	NT Respondents % (n=860)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Women	75.04%	78.37%	1.40%	1.79%	3.33	4.44	0.732
Men	24.96%	21.63%	1.40%	6.49%	-3.33	-13.35	

Table 23: Comparison of location distribution between respondents and all registered teachers in the NT

Remoteness (based on residential location)	TRB NT Registered Teacher Population % (n= 4,831)	NT Respondents % (n=676)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Major Cities	13.39%	9.17%	1.11%	12.10%	-4.22	-31.52	0.877
Inner Regional	8.82%	7.10%	0.99%	13.91%	-1.72	-19.48	
Outer Regional	53.41%	56.95%	1.90%	3.34%	3.55	6.64	
Remote	16.19%	19.08%	1.51%	7.92%	2.90	17.89	
Very Remote	8.20%	7.69%	1.02%	13.32%	-0.50	-6.16	

Table 24: Comparison of country of birth for respondents and all registered teachers in the NT

Country of birth	TRB NT Registered Teacher Population % (n= 4,831)	NT Respondents % (n=855)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Australia	77.90%	75.44%	1.47%	1.95%	-2.46	-3.16	0.844
Overseas	22.10%	24.56%	1.47%	5.99%	2.46	11.14	

Table 25: Comparison of registration type between respondents and all registered teachers in the NT

Registration type	TRB NT Registered Teacher Population % (n= 5,735)	NT Respondents % (n=860)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Full registration	80.51%	87.91%	1.11%	1.26%	7.40	9.19	0.125
Provisional registration	19.49%	12.09%	1.11%	9.19%	-7.40	-37.97	

Table 26: Comparison of period of registration between respondents and all registered teachers in the NT

Period of registration	TRB NT Registered Teacher Population % (n= 5,710)	NT Respondents % (n=856)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
<5 years	30.49%	21.61%	1.41%	6.51%	-8.88	-29.12	0.127
5 years and above	69.51%	78.39%	1.41%	1.79%	8.88	12.77	

Table 27: Comparison of school type profile for respondents teaching in schools and all teachers in the NT

School type	Teachers in NT Schools % (n= 3,531)	NT respondents teaching in NT schools %	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Primary	35.15%	40.96%	2.04%	4.98%	5.82	16.55	0.522
Secondary	28.21%	24.96%	1.80%	7.19%	-3.25	-11.52	
Combined	32.99%	28.92%	1.88%	6.50%	-4.08	-12.36	
Special	3.65%	5.16%	0.92%	17.78%	1.51	41.34	

Table 28: Comparison of school location profile for respondents teaching in schools and all teachers in the NT

School type	Teachers in NT Schools % (n= 3,531)	NT respondents teaching in NT schools %	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Outer Regional	55.59%	56.81%	2.10%	3.69%	1.22	2.19	0.964
Remote	22.15%	23.48%	1.79%	7.64%	1.33	6.01	
Very Remote	22.26%	19.71%	1.68%	8.54%	-2.55	-11.44	

Table 29: Comparison of school sector profile for respondents teaching in schools and all teachers in the NT

School type	Teachers in NT Schools % (n= 3,531)	NT respondents teaching in NT schools %	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Government	71.14%	77.14%	1.77%	2.30%	6.00	8.44	0.626
Catholic	12.46%	10.00%	1.27%	12.68%	-2.46	-19.75	
Independent	16.40%	12.86%	1.41%	11.00%	-3.54	-21.59	

Teachers registered in South Australia

Table 30: Comparison of age distribution between respondents and all registered teachers in SA

Age group	TRB SA Registered Teacher Population % (n= 36,318)	SA Respondents % (n=8,322)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
<30 years	14.05%	8.82%	0.31%	3.52%	-5.23	-37.20	0.330
30-34 years	12.67%	10.24%	0.33%	3.25%	-2.43	-19.20	
35-39 years	12.14%	20.26%	0.44%	2.17%	8.12	66.88	
40-49 years	21.53%	13.89%	0.38%	2.73%	-7.64	-35.48	
50-59 years	19.02%	22.95%	0.46%	2.01%	3.93	20.68	
60+ years	20.60%	23.84%	0.47%	1.96%	3.24	15.75	

Table 31: Comparison of gender distribution between respondents and all registered teachers in SA

Gender	TRB SA Registered Teacher Population % (n= 36,318)	SA Respondents % (n=8,322)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Women	74.00%	77.83%	0.46%	0.59%	3.83	5.18	0.669
Men	26.00%	22.17%	0.46%	2.05%	-3.83	-14.73	

Table 32: Comparison of location distribution between respondents and all registered teachers in SA

Remoteness (based on residential location)	TRB SA Registered Teacher Population % (n= 36,067)	SA Respondents % (n=8,296)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Major Cities	73.87%	72.53%	0.49%	0.68%	-1.34	-1.81	0.938
Inner Regional	12.92%	13.89%	0.38%	2.73%	0.97	7.48	
Outer Regional	9.55%	10.09%	0.33%	3.28%	0.54	5.66	
Remote	2.83%	2.77%	0.18%	6.50%	-0.06	-2.06	
Very Remote	0.83%	0.72%	0.09%	12.86%	-0.11	-13.05	

Table 33: Comparison of country of birth between respondents and all registered teachers in SA

Country of birth	TRB SA Registered Teacher Population % (n= 36,318)	SA Respondents % (n=8,322)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Australia	83.57%	82.28%	0.42%	0.51%	-1.29	-1.55	0.943
Overseas	16.43%	17.72%	0.42%	2.36%	1.29	7.86	

Table 34: Comparison of registration type between respondents and all registered teachers in SA

Registration type	TRB SA Registered Teacher Population % (n= 36,318)	SA Respondents % (n=8,322)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Full registration	78.40%	86.28%	0.38%	0.44%	7.87	10.04	0.116
Provisional registration	21.60%	13.72%	0.38%	2.75%	-7.87	-36.46	

Table 35: Comparison of period of registration between respondents and all registered teachers in SA

Period of registration	TRB SA Registered Teacher Population % (n= 36,318)	SA Respondents % (n=8,322)	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
<5 years	17.53%	12.02%	0.36%	2.97%	-5.51	-31.46	0.297
5 years and above	82.47%	87.98%	0.36%	0.41%	5.51	6.69	

Table 36: Comparison of school type profile for respondents teaching in schools and all teachers in SA

School type	Teachers in SA Schools % (n= 22,108)	SA respondents teaching in SA schools %	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Primary	41.83%	42.82%	0.67%	1.56%	0.99	2.37	0.686
Secondary	21.51%	23.96%	0.58%	2.41%	2.45	11.39	
Combined	34.87%	31.41%	0.63%	2.00%	-3.46	-9.93	
Special	1.79%	1.81%	0.18%	9.96%	0.02	1.32	

Table 37: Comparison of school location profile for respondents teaching in schools and all teachers in SA

School type	Teachers in SA Schools % (n= 22,108)	SA respondents teaching in SA schools %	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Major Cities	73.23%	69.78%	0.62%	0.89%	-3.45	-4.71	0.801
Inner Regional	12.31%	14.43%	0.48%	3.31%	2.13	17.28	
Outer Regional	10.36%	11.45%	0.43%	3.78%	1.08	10.47	
Remote	2.87%	3.37%	0.25%	7.28%	0.50	17.25	

Table 38: Comparison of school sector profile for respondents teaching in schools and all teachers in SA

School type	Teachers in SA Schools % (n= 22,108)	SA respondents teaching in SA schools %	Standard Error	Relative Standard Error	Bias	Relative Bias	Chi-squared group test p-value
Government	62.73%	69.00%	0.63%	0.91%	6.27	10.00	0.562
Catholic	16.88%	11.62%	0.43%	3.74%	-5.26	-31.18	
Independent	20.39%	19.38%	0.54%	2.77%	-1.01	-4.94	

Appendix C

Glossary

Term	Definition
Australian Tertiary Admission Rank	A percentile score that summarises the overall achievement of final year secondary students relative to all students in their age group within a given state or territory. Its values range from 0.00 to 99.95, though ranks under 30.00 are reported as 'less than 30'.
Basis of admission	The main criterion on which an applicant was granted an offer to enrol in a higher education program. Bases of admission are secondary education qualification, higher education qualification, VET qualification, professional qualification, mature age, or 'other basis'.
Commencement	Enrolment in a program for the first time at a higher education provider between 1 January and 31 December of the collection year. The students are identified as commencing students by the commencing student indicator flag (variable e922) in the data. If the flag value is 1 then the student is a commencing student in that year.
Completion	The successful completion of all the academic requirements of a program which includes any required attendance, assignments, examinations, assessments, dissertations, practical experience and work experience in industry.
Completion rate	All students who completed an ITE program between the year they commenced until the end of 2017 and presented as a percentage of the total number of students in their commencement year.
Continuing student	A student who is not a commencing student and is enrolled in an ITE program.
Cumulative completion rate	Cumulative completion rate refers to the total number of students who have completed a program each year after their commencement year as a proportion of the total number of students who commenced in that particular cohort.
Early childhood education	Educational programs for students between birth and the age of eight years, prior to and in the early years of primary school. In the context of ITE programs, it refers to programs that qualify students to teach this age group.
Detailed field of education	Refers to the categorisation of higher education programs based on specialisations and units of study. In this report it refers to early childhood, primary, secondary, mixed and 'education other' ITE programs.
Education other	'Education other' programs refer to ITE programs where the detailed field of education is not specified (e.g. general education) or that could not be identified as early childhood, primary, secondary or mixed programs.
Enrolment	When a person has been admitted to a program at the HEP at the census date, is still entitled to continue with their studies before the census date, and has not formally indicated before the census date that they have withdrawn from or deferred their studies.
Higher education	Refers to study in undergraduate and postgraduate programs.
Higher education provider	An organisation that is registered by the Tertiary Education Quality and Standards Agency to offer higher education qualifications in or from Australia.
Higher Education Student Data Collection	Census of all higher education students in Australia. Provides information about units a student is enrolled in, including a classification based on the field of education for each unit using the Australian Standard Classification of Education.
Initial teacher education	Accredited teacher preparation programs offered by certain higher education providers in Australia.
International student	Student who does not have Australian or New Zealand citizenship or Permanent Residency status.

Term	Definition
Mature age	Refers to special entry provisions in higher education which apply to adults who return to study or where age and experience are considered as part of the application, as determined by the higher education provider.
Mixed program	An ITE program in which more than one detailed field of education is studied, e.g. both primary and secondary education. These programs have been identified either by the program name or the nature of the units undertaken by students enrolled in the program.
Number of enrolments	The overall number of ITE program enrolments (collected each semester). A student may enrol in more than one program in an academic year e.g. if they choose to transfer to a different program. For the purpose of this report, enrolments are calculated on the last enrolment in the academic year. This may result in the number of enrolments being higher than the actual number of students enrolled in a given year.
Number of students enrolled	Total number of students enrolled in any ITE program during an academic year.
Other basis	Any basis of admission that cannot be classified as secondary qualifications, higher education qualifications, VET qualifications or mature age.
Postgraduate	A program of study that leads to the award of a Graduate Certificate (higher education), Graduate Diploma (higher education), Masters degree or Doctoral degree. Postgraduate programs usually involve a prerequisite Bachelor degree for entry.
Primary education	Educational programs for students between the ages of 5–12 years in primary schools. In the context of ITE programs, it refers to programs that qualify students to teach this age group.
Professional studies in education	Discipline-specific curriculum and pedagogical studies, general education studies and professional experience.
Program level	Refers to whether an ITE program leads to the award of an undergraduate or postgraduate qualification.
Program pipeline	The total number of students enrolled in an ITE program delivered by higher education providers located in a given jurisdiction, regardless of where they reside.
Qualification type	Refers to the broad discipline-free nomenclature used in the Australian Qualifications Framework to describe each category of qualification. Qualification types referred to in this report include Bachelor degree, Bachelor Honours degree, Graduate Certificate, Graduate Diploma and Masters degree.
Reportable levels	A cell size of less than five is not considered reportable for privacy reasons.
Resident pipeline	The total number of students residing in a given jurisdiction and enrolled in an ITE program, regardless of where the higher education provider is located.
Secondary education	Educational programs for students between the ages of 13–18 years in secondary schools. In the context of ITE programs, it refers to programs that qualify students to teach this age group.
Undergraduate	A program of study that leads to the award of a Diploma (higher education), Advanced Diploma (higher education), Associate Degree, Bachelor degree, or Bachelor Honours degree.
Unit record data	Refers to information relating to an individual in a disaggregated format, including ITE programs and units enrolled in, year of enrolment, jurisdiction of home residence, gender, etc. All unit record data in the ATWD is de-identified.
Vocational education and training	A training program that leads to the award of a Certificate I-IV, Diploma (VET), Advanced Diploma (VET), Graduate Certificate (VET) or Graduate Diploma (VET).

Appendix D

Acronyms

Acronym	Term
ABS	Australian Bureau of Statistics
AESOC	Australian Education Senior Officials Committee
AIHW	Australian Institute of Health and Welfare
AITSL	Australian Institute for Teaching and School Leadership
ATAR	Australian Tertiary Admissions Rank
ATWD	Australian Teacher Workforce Data
AQF	Australian Qualifications Framework
ESS	Employer Satisfaction Survey
GOS	Graduate Outcomes Survey
HEIMS	Higher Education Information Management System
HEP	Higher Education Provider
HESDC	Higher Education Student Data Collection
ITE	Initial Teacher Education
LOTE	Language Other Than English
NQF	National Quality Framework
QILT	Quality Indicators for Learning and Teaching
SES	Socio-Economic Status
SES	Student Experience Survey
SOSE	Studies of Society and Environment
STEM	Science, Technology, Engineering, Mathematics
TEMAG	Teacher Education Ministerial Advisory Group
TRA	Teacher Regulatory Authority
TWG	Technical Working Group
VET	Vocational Education and Training

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