

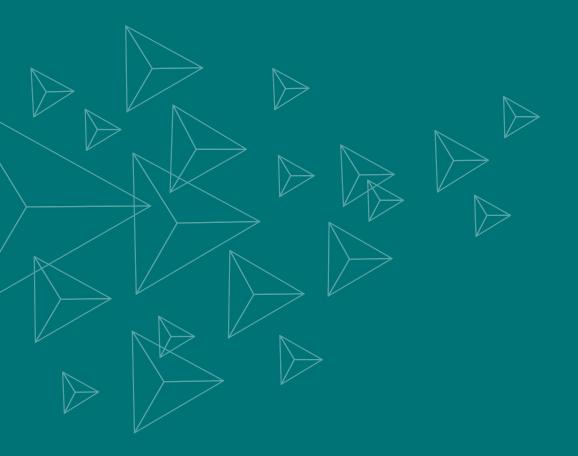
# **Teaching Futures**

Background Paper



AITSL 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 emerging.



Published June 2021

© Education Services Australia 2021, as the legal entity for the Education Council.

Education Council owns the copyright for this publication. This publication, or any part of it, may be used freely for non-profit education purposes only, provided the source is clearly acknowledged. The publication may not be sold or used for any other commercial purpose. Other than permitted above or by the *Copyright Act 1968* (Cwlth), no part of this publication may be reproduced, stored, published, performed, communicated or adapted, regardless of the form or means (electronic or otherwise), without prior written permission of the copyright owner.

Enquiries regarding copyright should be directed to: AITSL, PO Box 299, Collins Street West, VIC 8007, Australia. This project was funded by Education Council.

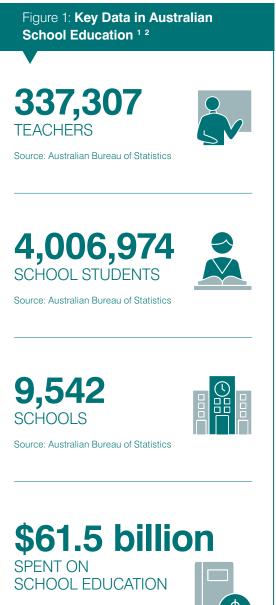
TEACHING FUTURES | Background Paper | 1

# Contents

Executive summary	2
Introduction	5
The Australian education policy landscape	6
Policy background	7
Conceptual framework of national teacher supply and demand	11
Workforce supply and demand	11
National modelling of the teacher labour market	11
A conceptual framework	12
Factors driving teacher demand	13
Factors driving teacher supply	14
Macro-level influences shaping the market for teachers	15
Factors across the teaching career lifecycle	16
Key focus areas	17
Improved understanding of supply and demand	18
Addressing priority needs	23
Supporting teachers and the teaching profession	27
Identifying and developing educators of the future	30
Building data and evidence	33
Conclusion	38

# **Executive summary**

A skilled and capable workforce is the key to a high quality education system



Source: Productivity Commission

### Introduction

Education is central to Australia's success as a nation – and teachers are the number one in-school influence on student outcomes.

In December 2020, Australia's Education Ministers agreed to publish a narrative, *National Initiatives to Support Teaching and School Leadership*, that will guide decision-making and commissioning of work at a national level to strengthen the teacher workforce and support quality teaching and school leadership.<sup>3</sup>

In support of this narrative, *Teaching Futures* highlights opportunities for future efforts to build an effective, sustainable, supported, and high-status teacher workforce that can deliver a world class education system – one that encourages and supports every student to be the very best they can be, no matter where they live or what kind of learning challenges they may face.

### **Policy context**

As one of eight national policy priorities under the 2018 National School Reform Agreement, the Commonwealth, state and territory governments agreed to review teacher workforce needs, to "attract and retain the best and brightest to the teaching profession and attract teachers to areas of need". This work would support better workforce planning by analysing future workforce needs in areas that would benefit from a nationally coordinated response.

In June 2019, the Australian Institute for Teaching and School Leadership (AITSL) was tasked by Education Council with undertaking this work. Recognising workforce initiatives currently undertaken by states, territories and sectors, *Teaching Futures* is the culmination of national consultation and collaboration, as well as insights from data and evidence. Together with the narrative on *National Initiatives to Support Teaching and School Leadership*, it fulfils all governments' commitment under the National School Reform Agreement.

*Teaching Futures* builds on the foundations provided by earlier work in this area and is developed in the context of an ongoing program of reform, including actions arising from the report of the Teacher Education Ministerial Advisory Group (TEMAG) in 2014, and the *Review to Achieve Educational Excellence in Australian Schools* (the second Gonski Review) in 2018.

It is informed by and supports the *Alice Springs* (*Mparntwe*) *Education Declaration*, which reiterated national agreement to "working with the education community to attract, develop, support and retain high quality teachers, educators and leaders in Australia's education system" and confirmed that "excellence in teaching, educating and leadership will be recognised, celebrated and valued."

# A framework for teacher supply and demand

Complex and interdependent factors contribute to teacher workforce supply and demand. Identifying and quantifying these are critical to understanding the national teacher workforce.

*Teaching Futures* presents a conceptual framework of national teacher supply and demand, developed in partnership with Deloitte Access Economics, which identifies the various elements and critical influences in the teacher labour market.

This framework could inform labour market modelling to ensure the best fit of teachers to schools, such as by attracting and placing teachers in response to needs in certain geographic areas, and by encouraging initial teacher education (ITE) students to pursue specialisations in subject areas that are in demand.

### Key focus areas

*Teaching Futures* explores issues across five key focus areas endorsed by Education Council, and affirmed through research and consultation.

### Improved understanding of supply and demand

Our current understanding of national teacher supply and demand lacks the level of granular data and consistency necessary for detailed modelling. Workforce data is currently widely dispersed across a range of teacher employers and regulators, and is not well linked. The Australian Teacher Workforce Data initiative is addressing this, and will significantly improve Australia's understanding of the national teacher workforce.

An improved understanding of teacher supply and demand requires better, more comprehensive and timely data about teacher demand, such as by drawing on student and population trends, and incorporating recognition of diverse needs and specialisation demands. This should be met with better, more comprehensive and timely data about teacher supply, including trends in ITE commencement and completion, career movement, progression and attrition.

### Addressing priority needs

The National School Reform Agreement acknowledges that priority cohorts include Aboriginal and Torres Strait Islander students, students living in regional, rural and remote locations, students with a disability, and students from educationally disadvantaged backgrounds. *Teaching Futures* identifies several issues for these cohorts that merit response across jurisdictions and sectors.

There is a need for greater attention on attracting and retaining, supporting the wellbeing, and recognising the contributions and strengths of our Aboriginal and Torres Strait Islander teacher workforce. All teachers should demonstrate culturally responsive practices and create culturally safe environments for their Aboriginal and Torres Strait Islander students and colleagues.



'Hard to staff' schools across the country face common issues in recruitment and retention, and consistency and quality of staffing. Efforts to address these issues are necessary, especially for the benefit of regional, rural and remote schools, schools with high levels of educational disadvantage, and schools that offer specialist settings for students with disability.

Finally, there is a clear need for better understanding of teacher specialisation demand, a clearer indication of supply at the granular level of teacher specialisations, and efforts to address areas of shortage.

## Supporting teachers and the teaching profession

Support for our educators could include strategies to support both individual teachers and cohorts of like teachers, as well as larger-scale, collective approaches for the entire profession. Supporting teachers in a range of ways and as appropriate to their strengths and needs is critical to maintaining the profession as one that is valued and recognised.

Approaches to support teachers and the overall teaching profession include consistent and high quality induction, mentoring, professional learning and leadership opportunities; early and mid-career supports; and attention towards wellbeing and school culture, recognition of professional expertise and excellence, career retention, and improving the status of the profession.

### Identifying and developing educators of the future

Planning for and preparing our future workforce is an ambitious task. National effort to understand future opportunities, challenges and implications for the teacher workforce requires focus on pedagogical, technological, economic, and social change, development of an increasingly diverse teaching population, pursuit of consistently high professional status for teachers and school leaders, and ongoing strengthening of teacher preparation. This task requires consideration of who will – and who we need to – be teaching in the future, and what will be expected of this future workforce. It also requires consideration of attributes and characteristics, skills, and knowledge needed for an education workforce that will be equipped and supported to prepare students in and for the future.

#### **Building data and evidence**

A review of available teacher workforce data and evidence shows that there is a range of sources across sectors, jurisdictions and agencies. A major initiative already underway, the Australian Teacher Workforce Data, has begun the complex task of collating and linking workforce data held by state and territory teacher regulatory authorities. Despite this, there are significant gaps, inconsistencies and a need for improvements in data.

Gaps and limitations in available teacher supply and demand data affect our capacity to accurately model our teacher workforce. Building consistent, detailed and comparable data and evidence would provide a more thorough and usable national picture of the Australian teacher workforce, and support comprehensive labour market modelling.

### Next steps

The narrative on *National Initiatives to Support Teaching and School Leadership* highlights what has been achieved by governments working collaboratively and sets out the case for continued national collaboration. It also establishes principles for national collaboration, which will be used to guide future decisions on pursuing national actions.

*Teaching Futures* should be read in the context of this narrative, and highlights opportunities for potential future efforts in this area.



# Introduction

### Education is central to Australia's success as a nation.

There is clear evidence that teaching and school leadership are the most influential in-school factors affecting student outcomes. The collective efforts of the teacher workforce change students' lives, help build communities, and strengthen our nation. Our teachers deserve high professional esteem. Enhancing and supporting the teaching profession is therefore of vital importance to Australian children and young people. In short, teachers and principals matter – to their students, to the economy, and to the wider community.

Projections over the next decade predict a potential shortfall in the number of teaching graduates in the face of growing demand.<sup>4 5 6</sup> Meanwhile, the future of teaching will continue to be affected by evolving in-school and external environments, and ways of working. Changing economic, social, technological and environmental pressures will increasingly shape students' learning needs. There will be shifts in the way we all work, and the way that learning and teaching happen. Teachers and school leaders must be supported to respond to these needs – enhancing the profession's ability to be adaptable, flexible and to react, sometimes quickly, to radical change.

The ongoing impacts of the COVID-19 pandemic may well be paradigm-shifting for teaching and learning in Australia. The work that teachers are required to do and the ways that they teach may alter rapidly in the face of broader change.

Developing a skilled and capable workforce involves significant commitment and investment. Australia has over 4 million school students enrolled in over 9,500 schools, over 335,000 teachers,<sup>7</sup> and collectively spends \$61.5 billion on school education per annum.<sup>8</sup> In Australia, teacher employers are spread across government, independent and Catholic education authorities and schools in each state and territory. States and territories are responsible for the delivery of school education within their jurisdictions, and each system and sector have their own unique context. However, reviews and reforms across the Australian education landscape have highlighted the advantages of addressing challenges and opportunities at a national level. Consultation undertaken for this and other initiatives has indicated widespread agreement on the potential benefits of a collaborative approach to developing a teacher workforce for the future.

We have an important opportunity to work together, building on achievements across systems and sectors, to elevate the professional status of teachers and equip them for the future, and unite us nationally so that a collaborative effort can deliver ongoing and lasting improvements to educational outcomes.

Working collaboratively will help Australia's unique education system to respond to an increasingly diverse population, and build on the existing strengths of the workforce. Acknowledging the local roles, existing reforms and achievements of jurisdictions and sectors, national collaboration can deliver improvements that are measured and shared, so that everyone stands to gain – students most of all.

An effective, sustainable, supported and highstatus teacher workforce is vital for ensuring a world class education system, that encourages and supports every student to be the very best they can be. By investing in teachers, we are directly investing in our most valuable asset – the next generation of Australians.

# The Australian education policy landscape

As one of eight national policy priorities under the 2018 *National School Reform Agreement*,<sup>9</sup> the Commonwealth, state and territory governments, through the former Council of Australian Governments (COAG) Education Council, agreed to review teacher workforce needs, to "attract and retain the best and brightest to the teaching profession and attract teachers to areas of need".<sup>10</sup>



This collective commitment to an equitable and well-supported national education system was reaffirmed through the *Alice Springs (Mparntwe) Education Declaration*<sup>11</sup> in 2019, articulating national agreement to "working with the education community to attract, develop, support and retain high quality teachers, educators and leaders in Australia's education system" and confirming that "excellence in teaching, educating and leadership will be recognised, celebrated and valued."<sup>12</sup>

In June 2019, the Australian Institute for Teaching and School Leadership (AITSL) was tasked by Education Council with progressing thinking around teacher workforce needs that would benefit from a nationally coordinated response. Recognising workforce initiatives currently undertaken by states, territories and sectors, *Teaching Futures* is the culmination of national consultation and collaboration, as well as insights from data and evidence. *Teaching Futures* builds on the foundations provided by earlier strategies, reforms and recommendations, and is developed in the context of an ongoing program of reform.

Policy work already undertaken, as well as that underway and planned, all points to the need for a comprehensive, collaborative, adaptable and nationally cohesive approach to supporting teachers and school leaders. *Teaching Futures* reflects this policy background. It is underpinned by Australian governments' and education stakeholders' recognition of, and commitment to, collective efforts in strengthening our teacher workforce.

Teaching Futures highlights research relating to challenges and opportunities for the teacher workforce, in an education context that recognises national collaboration as integral for successful implementation and sustainable impact.

### **Policy background**

## Teacher preparation and workforce development

Over the last ten years, considerable collaborative effort across the jurisdictions has progressed the embedding of the *Australian Professional Standards for Teachers*<sup>13</sup> (Teacher Standards) and *Australian Professional Standard for Principals*<sup>14</sup> (Principal Standard) nationally, through combined and collective work between higher education providers, teacher regulatory authorities (TRAs), employers, and governments.

The Teacher Standards, approved by Education Council in 2010, and the Principal Standard, approved in 2011, have provided the foundation for further national agreements on accreditation of initial teacher education,<sup>15</sup> national consistency in teacher registration,<sup>16</sup> and certification of Highly Accomplished and Lead Teachers.<sup>17</sup> These agreements have given Australia a nationally agreed and comprehensive framework for developing and supporting a high quality teacher workforce.

Some major policy reviews have built on and reinforced this framework. Following the 2014 review of initial teacher education (ITE) in Australia, *Action Now: Classroom Ready Teachers*,<sup>18</sup> national collaboration and leadership has brought together higher education providers, the government and non-government schooling sectors and schools to transform ITE, with the aim of ensuring the classroom readiness of every Australian beginning teacher.

The need for collective national action was again emphasised in the 2018 report *Through Growth to Achievement: Report of the Review to Achieve Educational Excellence in Australian Schools* (the second Gonski Review), which recommended "a comprehensive national teacher workforce strategy to better match supply with workforce demands, including skill and capability requirements";<sup>19</sup> and noted the necessity of reliable and detailed data for teacher supply and demand calculations; improved recognition of the role of ITE in preparing teachers for the profession; and the importance of attracting and retaining high quality teachers into the profession. The 2018 review One Teaching Profession: Teacher Registration in Australia aspired to a strengthened teacher registration framework based on higher standards of consistency, by improving and reinforcing teaching quality, strengthening children's safety, and streamlining registration processes.<sup>20</sup>

### National evidence and data

Policy directions have not only addressed the need for national, collaborative teacher workforce planning, but have also called for an evidence base to provide a foundation for such initiatives.

In 2016, the Productivity Commission<sup>21</sup> set out a national framework for improving Australia's evidence-based education policy capability and embed evidence-based decision making in education policies, programs and teaching practices. The Productivity Commission followed this in 2017<sup>22</sup> by stressing the critical role of a shared education evidence base in the development of a comprehensive approach to workforce development and improved teacher effectiveness.

Following the Action Now: Classroom Ready Teachers report, the need for a national ITE and teacher workforce database underpinned the introduction of the Australian Teacher Workforce Data (ATWD), a longitudinal data linkage project jointly funded by Commonwealth, state and territory governments and supported by all TRAs. This initiative commenced in 2017 with the aim of providing nationally consistent longitudinal data on ITE and the teacher workforce from 2021.

The establishment of a national evidence institute – the Australian Education Research Organisation – is a current key element of national education architecture reform in Australia, grounding practice in an accessible and relevant research base, and intended to also work for the benefit of policy and system-wide reform.<sup>23</sup>



#### **Diversity and priority cohorts**

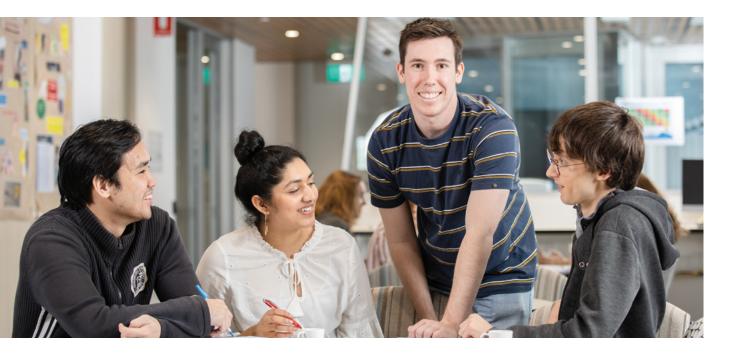
Policy focus on priority population groups – and on teachers' capacity to consistently support their needs – has highlighted that while these challenges are often experienced differently across jurisdictions, there is considerable benefit from collaborative efforts that enable improved sharing of data, evidence, strategies, and effective practice at the national level.

Ongoing policy initiatives and reports have underscored the need for action on the particular challenges facing Aboriginal and Torres Strait Islander teachers and students, as well as schools in remote communities. Since 2009, performance reporting on the *National Indigenous Reform Agreement* goals of life expectancy, children's mortality, education and employment has continued to drive collective efforts in closing the gap for Australia's Aboriginal and Torres Strait Islander people.<sup>24</sup>

The National Aboriginal and Torres Strait Islander Education Strategy (2015)<sup>25</sup> has guided efforts at a national level, and complemented the efforts of individual jurisdictions, to accelerate the rate of improvement for Aboriginal and Torres Strait Islander student outcomes – including by ensuring that students are taught by skilled educators who are culturally responsive in the local context, and by building the Aboriginal and Torres Strait Islander education workforce. The *Closing the Gap Report 2020*<sup>26</sup> showed mixed progress towards closing the gap across the range of measures, and presented a call for strengthened and collective action. The report emphasised the need for a strong, national focus, and national strategies in order to achieve crucial improvements in educational experiences and outcomes for Aboriginal and Torres Strait Islander people.

The new National Agreement on Closing the Gap (2020), developed in partnership between Australian governments and the Coalition of Aboriginal and Torres Strait Islander Peak Organisations, sets out five education-related targets.<sup>27</sup> National collaboration with Aboriginal and Torres Strait Islander communities to increase the number of, support for, and retention of Aboriginal and Torres Strait Islander teachers, as well as increasing cultural safety in Australian schools, will be critical to achieving these targets.

In addition, the 2018 *Independent Review into Regional, Rural and Remote Education*<sup>28</sup> noted that first priority should be placed on establishing a national focus for regional, rural and remote education, training and research to enhance access, outcomes and opportunities.



#### **Current policy and reform initiatives**

Teaching Futures also complements critical national strategies and ongoing policy reform in the Australian context being implemented by Education Ministers and as part of the National School Reform Agreement.

In response to the 2019 *Review of the National Architecture for Schooling in Australia*<sup>29</sup>, Education Council agreed to improve the performance of the national architecture for schooling in Australia to better support high quality teaching and learning across Australian schools. Additionally, in response to the 2020 *Review of COAG Councils and Ministerial Forums*<sup>30</sup> conducted by Peter Conran AM, Education Ministers will continue to meet in 2021 as the Education Ministers Meeting, with a revised focus on key strategic priorities and an emphasis on delivering effective outcomes.

The National STEM School Education Strategy 2016-2026<sup>31</sup> identifies the need to "better coordinate, target effort and sharpen the focus on the key areas where collaborative action will deliver improvements to STEM education" including collaboration and sharing of data and evidence to review and improve programs and practice.<sup>32</sup>

The Review of Senior Secondary Pathways (August 2019–June 2020) is the enactment of a key recommendation of the second Gonski Review. A National School Reform Agreement national policy initiative, the Review considers the role of education and teaching in preparing students for future work complexities, acknowledging that "students are increasingly requiring a broader and different mix of skills... to navigate an increasingly complex range of options and pathways into further education and training".<sup>33</sup>

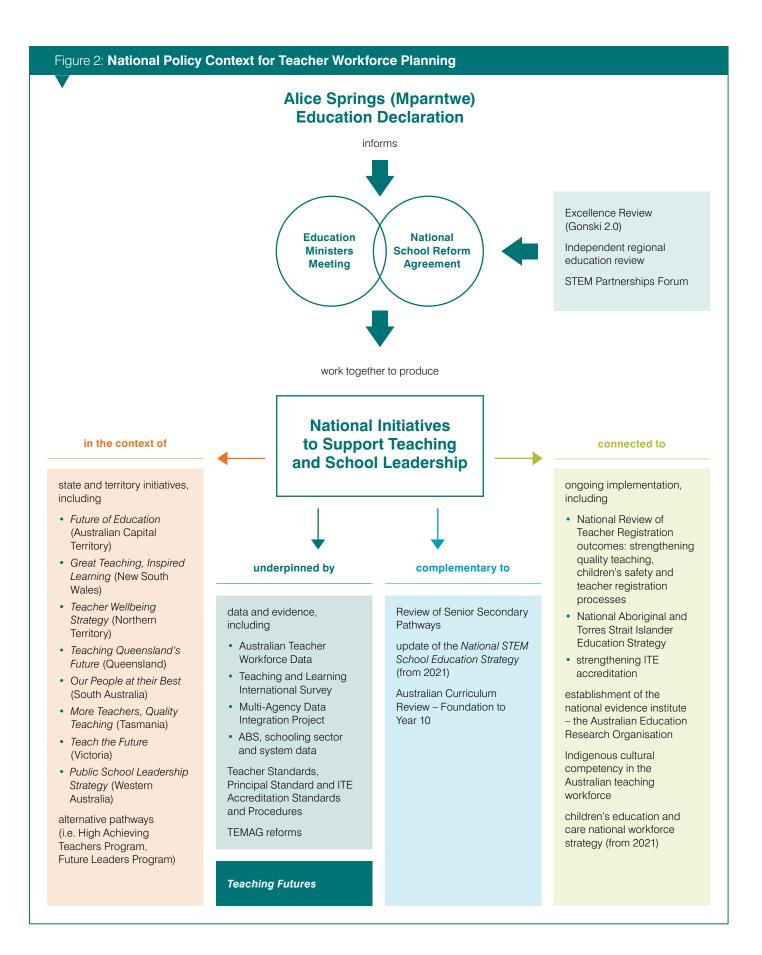
The Review of the Australian Curriculum for Foundation to Year 10 that is currently underway aims to promote a national response to Australian school students' declining international achievement rankings as well as to identified priorities of curriculum clarity and ease of use, teaching focus on literacy and numeracy learning progressions, and building numbers of students undertaking further study into maths and sciences, again within a broader context of schools reform. In light of the final report of the *Royal Commission into Institutional Responses to Child Sexual Abuse*,<sup>34</sup> children's safety has been a significant focus of Education Ministers in recent years, and a number of reforms are underway to ensure that all learning environments are safe and allow children to thrive.

## Strategic alignment across the early childhood and F-12 learning years

In December 2019, Education Council endorsed the development of a children's education and care national workforce strategy.

This strategy, currently under development by the Australian Children's Education & Care Quality Authority, will recommend an approach to establish a national early childhood workforce evidence base; increase professional standing for early childhood professionals; and ensure future-fit qualifications and career pathways for educators and teachers. It will be informed by market economic analysis and modelling of future workforce demand and supply, and include an action plan outlining implementation over the short, medium and long-term.

There is clear support for alignment of national school teacher workforce initiatives and the children's education and care workforce strategy. Given many teachers hold dual qualifications allowing them to work in both early childhood and primary school settings, it is important to recognise that workforce initiatives arising in one sector have the potential to affect supply in the other.



# Conceptual framework of national teacher supply and demand

Complex and interdependent factors contribute to teacher workforce supply and demand. Identifying and quantifying these are critical to understanding and planning for the future teacher workforce.

In the future, more comprehensive data, evidence and collaboration could enable a labour market model to be designed and applied. The conceptual framework below, which AITSL developed in collaboration with Deloitte Access Economics, illustrates the complexity of labour market modelling.

A collective and data-informed understanding of the characteristics of supply and demand could enable consideration of the extent, aspects and particularities of schools' contexts - such as remoteness, and cultural or community demographics. Matching the various considerations of supply and demand means the best fit of teachers to schools and jurisdictions, such as in responding to needs for cultural responsiveness or pockets of specialisation demand. Further, data regarding subject specialisation supply and demand at the jurisdictional level could be strengthened through comparison with similar data across other jurisdictions, to identify potential strategies to better match supply and demand.

### Workforce supply and demand

The Australian education system is highly diverse, devolved and complex. The regulation, operation, and implementation of reforms in schooling is primarily the responsibility of the six states and two territories. The Australian Government plays an active role in education through coordination, priority setting, and funding for schools and universities. On the ground, government schools can have a significant level of autonomy and influence over teacher hiring processes. Nongovernment schools are also significant actors in the sector, accounting for 1 of every 3 students in Australia.<sup>35</sup> In addition, the university sector responsible for initial teacher education (ITE) and upgrading teachers' qualifications is diverse and decentralised, adding another layer of complexity to forecasting the future teacher workforce.

Teacher workforce management and planning in Australia therefore involves multiple interdependent stakeholders who make decisions with respect to various subgroups of the teacher workforce, usually defined by dimensions including (but not limited to):

- School level (e.g. primary, secondary)
- School sector (e.g. government, Catholic, independent)
- Subject specialisation
- Level of role seniority
- Diversity (e.g. cultural background, gender)
- Geographical location (e.g. metropolitan, regional or remote)

While each state and territory has developed workforce planning models, these do not give a national picture of supply or demand. Contextual differences in the delivery and oversight of school education shape teacher workforce needs, making comparisons between jurisdictions challenging. A more coordinated and nuanced approach across state and territory boundaries could assist in capturing the broader national landscape of the teacher workforce and factors that can affect it.

Consultation with jurisdictions on the availability of current data, as well as consideration of local factors and employer-level structural changes affecting supply and demand, would be an important first step in building a national supply and demand model.

# National modelling of the teacher labour market

Teacher supply and demand modelling at a national level has the potential to provide a comprehensive cross-jurisdictional picture of the national teacher workforce and to forecast if the country is on track to have a teacher shortage or surplus in coming years.

Such a model has the potential to consider the future effects of national policies, facilitate coordination across jurisdictions and establish shared language and understanding among key stakeholders.

A comprehensive labour market model could fulfil a number of objectives:

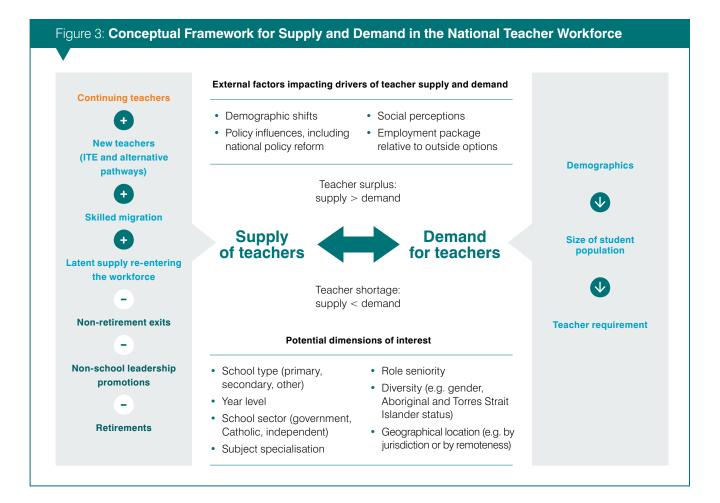
- Provide a comprehensive and adaptive picture of the national teacher workforce;
- Establish a shared language and understanding among key stakeholders;
- Forecast demand for teachers nationally, locally and by specialisation, to inform workforce planning;
- Evaluate and model the impacts of national and jurisdictional policies on the workforce; and
- Facilitate coordination across jurisdictions.

### A conceptual framework

Building an effective labour market model would require collaborative design across jurisdictions, data sharing, and complex analysis.

Figure 3 provides a high-level conceptual framework that could form the basis of further discussion, and on which to develop a model of teacher supply and demand in Australia. The framework consists of three major components:

- Factors driving teacher demand demographic trends, school enrolments, policy decisions about the number of required teachers to serve students
- Factors driving teacher supply the pipeline of new teachers from ITE and alternative pathways into teaching, skilled teacher migration from overseas, ITE graduates who have not gained registration, and the latent supply of registered teachers
- Macro-level influences shaping the teacher workforce sector.

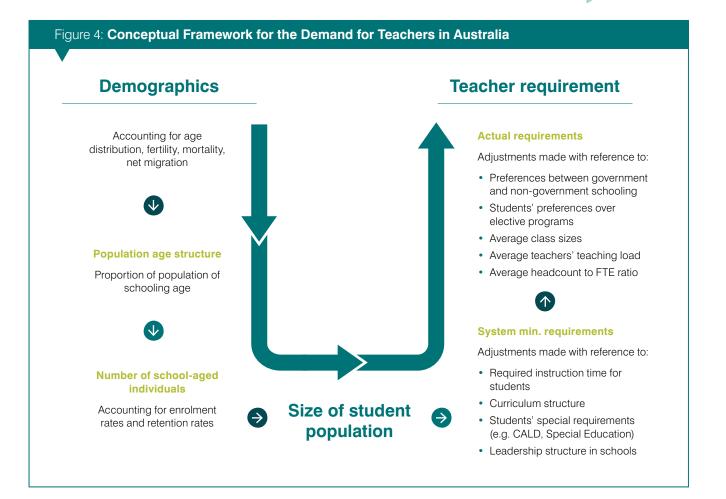


### Factors driving teacher demand

The demand for teachers is defined in the aggregate as the total number of teaching positions (filled and unfilled) in the system at a given time.

For the purposes of the conceptual framework, the demand can be thought of as a total teacher requirement which is a function of demographic trends, size of the student population, system requirements and actual preferences with regards to schooling. Figure 4 outlines the proposed conceptual framework for the demand for teachers in Australia. Demand factors that might be considered include:

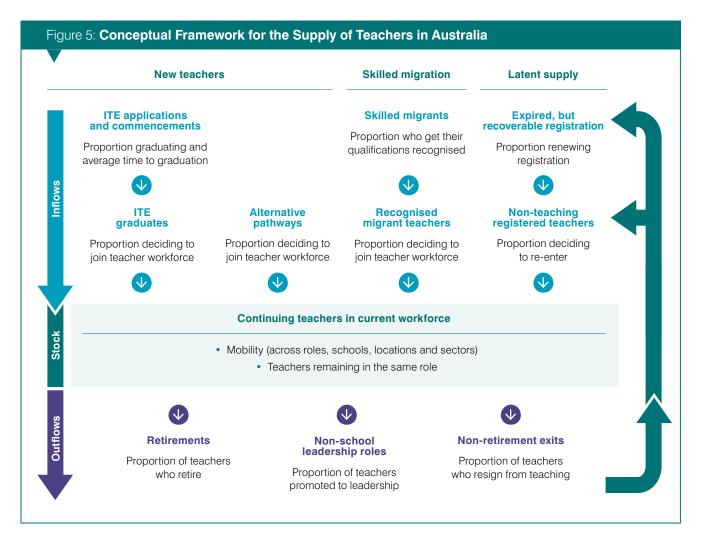
- the demographic structure of the Australian population
- compulsory schooling age across states and territories as well as school attendance beyond that age bracket
- student attrition and retention
- the teacher requirement (taking into account student to teacher ratios, average class sizes, teaching loads, curriculum structure, leadership structures, deployment of teachers within and across schools, and students' special requirements).



### Factors driving teacher supply

Describing the supply of teachers requires considerations of both the stock of continuing teachers and the flows in and out of the teacher workforce. Figure 5 illustrates a more detailed conceptual framework for the supply of teachers in Australia. Supply factors that might be considered include:

- current teachers
- pipeline of new teachers
- migration
- latent supply
- attrition
- full time equivalent (FTE).



Ongoing efforts to build out a conceptual framework for the teacher workforce would require recognition and consideration of the influence of geographic and demographic factors on both teacher supply and demand. Continued work in adapting and updating any labour market model for teacher workforce planning would necessitate inclusion of a range of supply factors in addition to those noted in this framework.





# Macro-level influences shaping the market for teachers

Beyond the drivers of supply and demand, the market for teachers is heavily influenced by a number of macro-level factors which relate to the broader economy, public perceptions and the role of the government in shaping the profession.

For instance, with a general population increase comes a richer mix of students from diverse backgrounds and with a broader range of needs. This includes more neuro-diversity and complex behavioural and emotional needs. Anecdotally, a high and increasing workload is one of the most important factors influencing teachers' decision to leave the profession. Management of health and social issues (e.g. children at risk, childhood obesity) add to already high expectations of teachers and schools. The impact of the COVID-19 pandemic on the economy and the broader labour market may result in shifting public perceptions, seeing teaching as a relatively secure and stable profession. On the other hand, the use of virtual classrooms, online modules, exams and automated grading might have an adverse impact on those teachers who prefer face-to-face contact with students and traditional teaching methods.

Figure 6 provides examples of other factors which may influence the teacher workforce and which could be accounted for in a supply and demand model, through consideration of how the impact of these factors can be quantified or translated to parameters which influence the underlying assumptions in the model.

with schooling workforce (e.g. impact of universal

3YO kinder)

#### Figure 6: Example Factors Influencing Teacher Supply and Demand

Employment package relative to outside options	Macro-level factors	
Employment/contractual arrangements	<ul> <li>Population increase</li> </ul>	
(e.g. hours, superannuation) Teacher remuneration	<ul> <li>Richer mix of students from diverse backgrounds and with broader range of needs</li> </ul>	
Prospect of salary increases and promotions over time	<ul> <li>Changing role of schools (e.g. more health and wellbeing responsibilities)</li> </ul>	
Workplace conditions	<ul> <li>Rapid technological advances requiring different skills (use of virtual classrooms, online modules, exams)</li> </ul>	
Teacher workloads	<ul> <li>Future of work for teachers</li> </ul>	
Perceptions	Policy influences	
Perception of relative stability (e.g. in the context	<ul> <li>Industrial relations factors (e.g. EBA negotiations)</li> </ul>	
of economic downturn) Occupational status	<ul> <li>Teacher registration processes</li> </ul>	
	Changes in education standards	
Sense of personal contribution	• 0	
Sense of personal contribution Community regard for teachers	<ul> <li>Changes in ITE landscape (e.g. tests, training, role of micro-credentials in keeping the qualification up to date)</li> </ul>	
•	<ul> <li>Changes in ITE landscape (e.g. tests, training, role of micro-credentials in keeping the qualification</li> </ul>	
	<ul> <li>Changes in ITE landscape (e.g. tests, training, role of micro-credentials in keeping the qualification up to date)</li> </ul>	

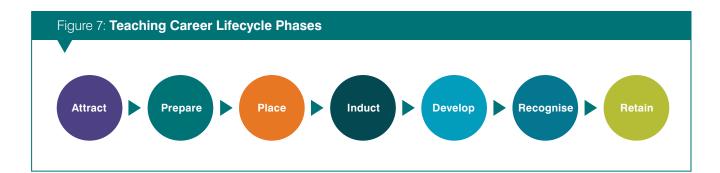
# Factors across the teaching career lifecycle

Various factors influence decisions to join and remain in the teacher workforce. Such factors are both personal and intrinsic, and are environmental, economic and somewhat predictable.

At each phase in the lifecycle of a teaching career, actions by governments and employers can influence the likelihood of teachers progressing to the next phase. An effective labour market model would consider the range of career phaseinfluencing factors, and can be used to project likely outcomes based on changes at any given career phase. Figure 7 shows a useful conceptual model for the teaching career lifecycle adapted from the Organisation for Economic Co-operation and Development (OECD).<sup>36</sup>

Each of these career phases provides opportunities for specific and targeted support. What is offered for teachers within one lifecycle phase potentially impacts on the profession more broadly, with interacting effects. A teacher workforce labour market model could measure factors across the teacher lifecycle and enable more targeted supports. Examples of lifecycletargeted supports are listed in Figure 8 below.

These phases are separate, but related, to the seven pillars set out in the *National Initiatives to Support Teaching and School Leadership* framework for national collaboration.



	ing Career Lifecycle Phases and Supports	
Attract	Incentives, perceptions, career pathways and motivators, initial teacher education program quality.	
Prepare	Initial teacher education program quality, leadership mentoring and preparation, industry partnerships, teacher registration.	
Place	Placement according to vacancies or skills needs, progression across or between schools.	
Induct	Early career teaching load, support, induction processes, mentoring, collaboration, professional identiand wellbeing.	
Develop	Professional learning, instructional coaching, reflection, career and leadership pathways, feedback and review.	
Recognise	Status of the profession, career pathways, recognition of expertise.	
Retain	Incentives, workplace experience, teacher and school leaderwellbeing.	

# Key focus areas

The key focus areas were developed through research and consultation, and agreed by Education Council. In the next sections, the benefits, challenges and issues of each key focus area are discussed in detail.

### Figure 9: Summary of Key Focus Areas

	Improved understanding of supply and demand	<ul> <li>Characteristics of supply through ITE</li> <li>Unmet demand in specialisations including maths, science, languages, and Special Education</li> <li>Diversity of the teaching workforce</li> </ul>	<ul> <li>Attrition rates at various career stages</li> <li>Impact of employment arrangements (including casualisation) on teacher retention</li> </ul>
	Addressing priority needs	<ul> <li>A need for more Aboriginal and Torres Strait Islander teachers</li> <li>All teachers' role in creating cultural safety and delivering culturally responsive practices for Aboriginal and Torres Strait Islander teachers and students</li> </ul>	<ul> <li>Attraction and retention in hard to staff schools, including in rural and remote areas</li> <li>Teacher specialisation and skills needs in maths, science, languages and Special Education</li> </ul>
ij	Supporting teachers and the teaching profession	<ul> <li>Effective induction and mentoring for all early career teachers</li> <li>Opportunities to support and recognise teaching leadership, expertise and excellence</li> </ul>	<ul> <li>Wellbeing, school culture, and impacts on teacher retention and attrition</li> <li>Equitable access to professional learning</li> <li>Elevating the status of the teaching profession</li> </ul>
	Identifying and developing educators of the future	<ul> <li>Understanding motivations to pursue a teaching career, including among students of school age</li> <li>Considering the impacts and opportunities of emerging technologies on teaching practice</li> </ul>	<ul> <li>Increasing cultural, social and linguistic diversity in the teaching workforce</li> <li>Building on ITE reform to strengthen the effectiveness of teacher preparation</li> </ul>
2	Building data and evidence	<ul> <li>A more sophisticated and 'joined-up' use of national and jurisdictional data</li> <li>Exploring the value of existing data projects and sources to understand teacher supply and demand</li> </ul>	<ul> <li>Continuing to build out the Australian Teacher Workforce Data (ATWD) to realise its full value</li> <li>Leveraging sources such as the Multi-Agency Data Integration Project (MADIP)</li> </ul>

TEACHING FUTURES | Background Paper | 18



# Improved understanding of supply and demand

By working together, we can better understand and address challenges in supply and demand across Australian schools.

There is broad agreement throughout the education sector that more – and better – information about supply and demand, as applied to the teacher workforce, would be valuable.

Teacher supply and demand trends are not nationally uniform in impact, extent or response. Workforce planning priorities vary greatly across jurisdictions, systems and sectors, geographic area, specialisation and learning level, and are affected by local and national workforce trends beyond teaching.

Our current understanding of national supply and demand trends for the teacher workforce in Australia is immature and needs to be supported by the analysis of more comprehensive and linked-up national data and evidence. Data currently available for labour market modelling is insufficient for the more sophisticated modelling that could identify and respond to specific priorities for action. Workforce data is currently widely dispersed across the various systems and sectors responsible for the employment of teachers. Historically, data regarding teacher supply and demand are collected and used at a jurisdictional level, or within the systems and sectors themselves, drawing on unlinked Australian Bureau of Statistics population census information, government employment figures, higher education graduate surveys, and data collected by teacher regulatory authorities (TRAs), employers and ITE providers.

Further work is merited to explore and address the many factors influencing the attraction and retention of teachers in the profession. This would require a focus on understanding changing community perceptions of the profession, further building the status and esteem of teachers, and understanding the factors influencing the popularity of particular specialisations, in order to strengthen workforce planning efforts.

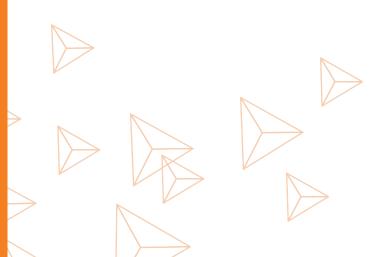
# Supply through initial teacher education

Available evidence suggests that ITE completion rates are in decline. Despite increasing commencements in recent years, the numbers of graduates available to teach in any year has largely plateaued.<sup>37</sup> Between the 2007 and 2012 commencing cohorts, the six-year completion rate declined by 10 percentage points for ITE undergraduates and 3 percentage points for ITE postgraduates. This decline is steeper for ITE than for other higher education programs.<sup>38</sup>

However, the population of children aged between 3 and 18 years continues to grow. From 2019 to 2024, ABS population projections indicate the population of primary school aged children is projected to grow nationally by 5 per cent, while the population of secondary school aged children is projected to grow by 12 per cent. From 2024 to 2029, ABS projections indicate growth of 7 per cent in primary school aged children and 4 per cent growth in secondary school aged children.<sup>39 40</sup> As a result, ITE supply may not be sufficient to meet increasing demand.<sup>41 42</sup>

There is a critical need for more accurate, thorough and detailed national data to explore the complexities of ITE commencements, completion rates and predicted completions, including national data on registration rates of ITE graduates and rate of transition to teaching.

Ongoing improvements in collaboration of ITE providers with jurisdictions and employers could enable more accurate alignment of teacher supply and demand, such as through promotion of in-demand specialisations or placements in remote locations.



### **Unmet demand**

National skills shortage data indicate that many regional, rural, remote and low socio-economic status schools report that they often have difficulty recruiting teachers with specialisations in subject areas including Science, Technology, Engineering and Mathematics (STEM), Languages Other Than English (LOTE), English as an Additional Language or Dialect (EALD), as well as delivery of education in specialist settings. This trend is noted across jurisdictions, and at both primary and secondary levels.<sup>43</sup> <sup>44</sup> However, the magnitude and implications of the problem varies widely across systems and sectors, and current reporting on the issue is inconsistent, and relies on small samples.<sup>45</sup>

Data from the OECD's Teaching and Learning International Survey (TALIS) highlighted that unmet teacher demand more heavily affects schools in non-metropolitan and disadvantaged areas, and employers across the country report greater challenges filling teaching vacancies in regional areas and particular specialist teaching areas that already draw fewer ITE enrolments and completions.<sup>46</sup>

Reported supply and demand vary substantially across the country, even within specialisations. The Australian Teacher Workforce Data (ATWD) initiative will provide data on the rates at which ITE graduates transition into the teacher workforce by location and subject area or specialisation, enriching assessments of the supply of teachers through ITE, and aiding the planning of future supply of specialist teachers.

### **Diversity deficits**

There is a growing recognition of the benefits of a teacher population that more proportionately reflects the Australian population. However, nationally, longitudinal trends in the characteristics of the teacher workforce are unclear; there is no clear data on the number of teachers in each sector and their demographic and teaching characteristics.

Most recent ITE data indicates that in 2017, 2 per cent of all commencing and 2 per cent of all completing ITE students identified as Aboriginal or Torres Strait Islander.<sup>47</sup> However, in that same year 3.3 per cent of the Australian population and 5.7 per cent of Australian school children identified as Aboriginal or Torres Strait Islander.<sup>48</sup>

Similarly, a considerably lower proportion of teachers, at both the primary and secondary level, are culturally and linguistically diverse in comparison with the broader Australian population. Only 8.9 per cent of primary school teachers and 10.8 per cent of secondary school teachers speak a language other than English at home, compared with 24.8 per cent of school children and 21 per cent of the broader Australian population.<sup>49</sup>

The More Aboriginal and Torres Strait Islanders Teaching Initiative (MATSITI) identified a requirement for a longitudinal picture of the deployment, skills, employment characteristics and attrition rates of Aboriginal and Torres Strait Islander teachers in the national teacher workforce.

National data on teacher workforce characteristics would assist to understand and address supply need by diversity.

### **Attrition rates**

Factors driving career attrition appear to be multiple and interrelated. Current estimates of attrition of teachers in Australia vary widely, there is no national or consistent data currently available,<sup>50 51</sup> and education systems and sectors therefore differ in their capacity to model and predict attrition rates across the lifecycle of the teaching profession. However, stakeholder consultation indicated persistent concerns regarding teacher attrition, and early career attrition in particular.

If supply is to be fully understood, complete national data is required to confirm actual Australian teacher attrition rates across the teaching lifecycle. Attrition rates and trends should be better factored into future supply and demand analysis. Modelling of attrition is anticipated through the ATWD in the future.

### **Transition to registration**

One data source that is currently available for labour market calculations is the Graduate Outcomes Survey (GOS), which records a relatively small sample of higher education graduates' employment four months after graduation. In 2016, an analysis of GOS data revealed a lack of clarity in employment outcomes for ITE graduates and the relevance of their skills for workforce demand, as well as potentially indicating a skills surplus in some specialisations: For primary and secondary [ITE] graduates, just under half had found full-time employment in schools in 2014 (45% primary, 46% secondary).
 ... In addition to those in full-time employment, around a quarter of primary and secondary graduates were working part-time in schools. Of those working full time in schools, only around a third had permanent employment.
 It is not clear how many graduates end up finding some form of teaching employment, or how effective part-time and casual work is as a pathway to full-time employment." <sup>52</sup>

Better data about the registration rates of ITE graduates and rate of transition to teaching will lead to a clearer understanding of rates of attrition following ITE completion. By linking graduate employment data, teacher registration data and ITE data, the ATWD will provide critical insight into ITE completions, transition to employment, and early career attrition.

### **Early career attrition**

There is a trend in existing bodies of literature suggesting that attrition rates in the teaching profession are highest for early career teachers, broadly defined as those within the first three to five years of their career.<sup>53</sup> Anecdotal evidence also indicates that attrition rates for early career teachers are high, however jurisdictions differ in their capacity to model and predict attrition rates, and there is a lack of national data to determine the veracity of these claims.

Previous research by AITSL indicates that estimates of early career attrition described in Australian literature range from 8 per cent to 50 per cent, which is consistent with other claims that "there is no robust Australian evidence, and figures do not agree".<sup>54</sup>

#### **Mid-career and retirement attrition**

Mid-career attrition describes career departure after the early career stage but prior to retirement. There is a lack of detailed data about teachers who leave the workforce, including by location, subject area and specialisation, employment contract and hours worked.

Currently available data predict replacement demand through calculation of the net separation rate, which provides an estimate of the number of new teachers required due to teachers retiring or leaving the profession. Future retirement attrition projections will need to account for an ageing teacher workforce.

### **Clarity and consistency in definitions**

Clarity and consistency in attrition definitions will be necessary for accurate calculations of the extent of workforce attrition and retention, to address or avoid supply shortages or surpluses. 'Attrition' is differently understood, and this variation in use contributes to an inconsistency of data and reporting.<sup>55</sup>

During the early career teaching stage, attrition has been variously defined as:

- enrolling in, but not completing, an ITE program;
- completing an ITE program but not taking up employment as a teacher; or
- joining the teacher workforce and departing within the first five years of employment as a teacher.

During the broader teaching career, attrition might mean retirement, a career change out of teaching, or include relocation to a different jurisdiction or sector.

Varying definitions mean potential omission of critical data and varying and unreliable calculations for workforce modelling and planning. A national approach to defining and collecting data is crucial.

#### Unknown latent supply of teachers

The latent supply of teachers refers to the pool of inactive teachers who are registered with a teacher regulatory authority (TRA) but are not presently teaching, as well as those individuals with an expired registration which might be recoverable. The latent supply could also include ITE graduates without registration.

The latent teacher workforce is typically not captured by data collections but could be included in labour market modelling through jurisdictional collaboration. While the ATWD will provide insights into the latent workforce in the future, existing data do not show the number of qualified teachers who are not currently in the workforce, making it difficult to determine the ease with which any demand for teachers can be filled. While estimates of net replacement demand attempt to account for teachers re-entering the profession, the time-period on which these estimates are derived predates significant growth in demand for primary and secondary teachers.

Accurate data on latent demand could support stronger efforts by schools to attract teachers to fill vacancies, through increasing the rate of re-entry of teachers into the profession. The latent workforce could also potentially be drawn on in response to a sudden, unexpected increase in demand. Recent initiatives to support students to catch up on learning they may have missed due to the COVID-19 pandemic have demonstrated there is a potential 'surge' workforce of teachers who are registered but not currently teaching, in addition to casual relief and pre-service teachers.<sup>56 57</sup>

### **Employment conditions**

Factors driving teacher satisfaction are multiple and interrelated, and include community regard for the profession, personal fulfilment, professional development and promotional opportunities, salary and working conditions. Casualisation, short-term employment arrangements, and casual relief teaching as a form of entry into the profession for early career teachers are becoming more prevalent.<sup>58</sup> However, the extent of these employment arrangements varies across jurisdictions and sectors, highlighting contextual differences that necessitate further consideration.

In an AITSL study with 98 teachers in their first year of teaching, only one quarter "were employed on a permanent contract", and two thirds of early career teachers identified as having "begun their teaching career on short-term and casual contracts." <sup>59</sup>

It may be that in the reality of a more fluid and mobile 21st century workforce that the nature of work has changed and it should no longer be assumed that teachers will remain for a lifetime in one field ... Teaching graduates working in other fields may simply reflect the reality of the contemporary workforce ... The education sector may be no more immune from this mobility than other professions and may need to develop new ways to attract and retain teachers." 60 Workforce casualisation and short-term contracts can shape teachers' career planning, such as their intention to remain in the profession or to relocate for employment. While some teachers may prefer flexibility, these arrangements can result in difficulties in ensuring consistent access to professional learning opportunities. School leaders report that "the provision of formal induction practices to beginning teachers drops to 77% of early career teachers on short-term contracts and 45% of casual relief teachers." <sup>61 62</sup> This in turn has flow-on effects for long-term workforce security and for student outcomes.

We need to better understand the impacts, challenges and opportunities associated with evolving employment arrangements and practices and factor these into supply and demand modelling. Casualisation rates and trends merit more detailed and longitudinal factoring into labour modelling, ITE planning, teacher recruitment and induction, and studies on teacher career intentions and wellbeing.

# **Addressing priority needs**

A collaborative approach provides an opportunity to identify, respond and adapt to immediate priorities for the teacher workforce.

The National School Reform Agreement recognises that the wellbeing of all students is fundamental to successful education outcomes. It also acknowledges that priority cohorts include Aboriginal and Torres Strait Islander students, students living in regional, rural and remote locations, students with a disability, and students from educationally disadvantaged backgrounds.

The *Closing the Gap Report 2020* is a timely reminder of the particular need for continuing focus on the needs and aspirations of Aboriginal and Torres Strait Islander students, with targets for school attendance and performance in literacy and numeracy not met.<sup>63</sup> Additionally, the More Aboriginal and Torres Strait Islander Teachers Initiative (MATSITI) was fundamental in shaping recent understanding of Aboriginal and Torres Strait Islander workforce needs in the teaching profession.

National, jurisdictional and system-specific efforts to meet the needs and aspirations of Aboriginal and Torres Strait Islander teachers, students and communities reflect a collective commitment to ensuring cultural safety and culturally responsive practice across the entirety of the national teacher workforce, and attention to the needs and aspirations of educationally disadvantaged students and cohorts. Throughout such efforts it is essential that diversity within population groups is recognised and respected, through responsive and local co-design. Cultural safety and culturally responsive practice are particularly important in strengthening educational outcomes for Aboriginal and Torres Strait Islander students.

Teacher workforce planning holds the potential to address the needs of educationally disadvantaged students and cohorts by prioritising the needs of hard to staff schools and ensuring sufficient teacher supply to meet in-demand teaching specialisations and learning areas. Collaborative national effort to address Australia's priority needs would enhance the ability of systems, sectors, jurisdictions and stakeholders to continue to make progress towards these goals.



# Aboriginal and Torres Strait Islander teachers

Governments, education stakeholders and teacher employers have recognised the critical role that Aboriginal and Torres Strait Islander teachers play in our schools, and have committed to attracting and retaining them in the teaching profession, and supporting and recognising their work and wellbeing.

## Attracting and retaining Aboriginal and Torres Strait Islander teachers

Recent analysis undertaken by Ernst and Young identified that in 2015 the proportion of Aboriginal and Torres Strait Islander people employed in the teacher workforce was well below the proportion of Aboriginal and Torres Strait Islander people in the overall student population.<sup>64</sup> Data in that same analysis indicated that between 29.4 per cent and 37.6 per cent of Aboriginal and Torres Strait Islander teachers left the profession between 2012 and 2015 – a significantly higher rate of attrition than in the broader teacher workforce.

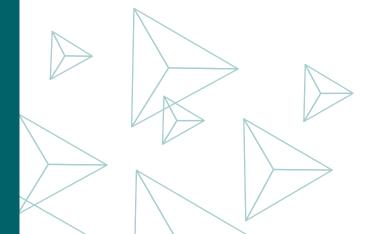
This discrepancy in representation is notable as both research and stakeholder feedback has highlighted the importance of a diverse Aboriginal and Torres Strait Islander teacher workforce. Stakeholders have widely acknowledged the importance of ensuring that the teacher workforce is more representative of Australia's population, and research has emphasised the role of Aboriginal and Torres Strait Islander teachers and school leaders in securing better educational outcomes for their student cohorts.<sup>65</sup> A persistent school completion and achievement gap is evident between Aboriginal and Torres Strait Islander students and their non-Indigenous peers. An evaluation of MATSITI found that "successful engagement of Aboriginal and Torres Strait Islander people in the teaching profession is an essential contributor to great educational success for children and young people, their families and communities".<sup>66</sup> Other research has found that "teachers who have grown up and completed their schooling as Indigenous learners have a wealth of experience and knowledge about the pedagogies that are likely to be successful for Indigenous students".<sup>67</sup>

There is a clear need to better understand and act upon the factors that contribute to attracting and retaining Aboriginal and Torres Strait Islander teachers.

## Supporting and recognising Aboriginal and Torres Strait Islander teachers

MATSITI and projects funded under that initiative have provided a valuable starting point from which to consider how best to continue supporting the Aboriginal and Torres Strait Islander teacher workforce. The challenges include attracting and retaining more Aboriginal and Torres Strait Islander students in ITE, better workforce engagement of Aboriginal and Torres Strait Islander ITE graduates, and better meeting the needs of the Aboriginal and Torres Strait Islander teacher workforce.

There is a clear opportunity to further develop this work, led by and in partnership with Aboriginal and Torres Strait Islander people. This work should recognise the diversity of Aboriginal and Torres Strait Islander teachers and acknowledge that multiple approaches may be required. It should be culturally responsive and sensitive to the diversity of needs, backgrounds, experiences and knowledges within the Aboriginal and Torres Strait Islander teacher workforce, and co-designed with Aboriginal and Torres Strait Islander educators and communities.



### Cultural safety and responsiveness

The Australian Professional Standards for Teachers set out the expectation that Australian teachers understand and enact principles of inclusion and demonstrate strategies for differentiating their teaching practice to meet the needs of Aboriginal and Torres Strait Islander students.<sup>68</sup> Further, teachers are expected to ensure their students' learning environment is culturally safe and that their practices are culturally responsive, to strengthen the educational experiences and outcomes of Aboriginal and Torres Strait Islander students. Cultural safety and enacting cultural responsiveness are crucial priorities for supporting Aboriginal and Torres Strait Islander students.

Embedding cultural safety and cultural responsiveness in schools has often been delegated to Aboriginal and Torres Strait Islander educators, who are frequently expected to design and champion inclusive and appropriate school practices and programs. A failing of this approach is it places the responsibility to lead this work on a small proportion of the workforce, and their efforts are often not properly recognised.<sup>69</sup> Instead, the entire teacher workforce should be supported to engage in this work, and cultural responsiveness must be modelled throughout the profession.

The gap in teachers' confidence regarding how to teach Aboriginal and Torres Strait Islander students, as well as Aboriginal and Torres Strait Islander knowledges, histories, cultures and languages, has been recognised by Aboriginal and Torres Strait Islander academics, educators and communities.<sup>70</sup> Improving teachers' knowledge and confidence by building their capacity and capability for cultural safety and culturally responsive practice represents a move towards meaningful co-design and co-delivery of resources and professional learning opportunities, which will support the development of culturally safe environments for Aboriginal and Torres Strait Islander teachers and students at the local level.

At a national level, AITSL is working with Aboriginal and Torres Strait Islander communities and the profession to co-design and develop a suite of professional learning resources to enhance the cultural competency of the existing teaching workforce and increase cultural safety in schools.<sup>71</sup> In addition to targeting action at the entire teacher workforce and broader strategic planning, research has also shown ITE is a suitable stage in teacher training and preparation for building capacity and capability and strengthening our teacher workforce with a richer knowledge base and understanding of Aboriginal and Torres Strait Islander needs and aspirations.<sup>72</sup>

### Hard to staff schools

The category of 'hard to staff' refers to schools that have difficulties in teacher recruitment and retention.

Across the country, two main types of schools are typically noted as hard to staff: those that are remote or regional; and those that have student cohorts experiencing educational disadvantage. While the need for high quality teaching should be a priority given the equity challenges and range of disadvantage to be addressed, research has shown that there are even greater complexities and challenges in teacher recruitment and retention in such schools.<sup>73</sup>

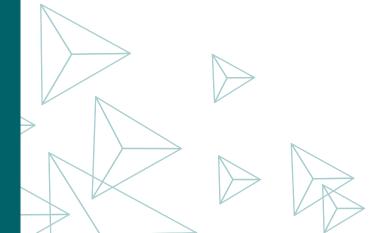
The labels of rural, regional and remote are applied based on official categorisations, but variations in geography and population across the nation mean that local staffing issues are not and cannot be experienced or dealt with in the same way, and that even the underlying factors are not uniform. Many hard to staff schools have high numbers of students with English as an additional language or dialect (EALD), poor digital technology connectivity, and/or lower accessibility to the range of subject specialisations available in other schools. Further, the additional challenges for schools that support students with disability merit greater consideration.<sup>74 75 76</sup> This represents a significant challenge for policy targeted towards hard to staff schools, and highlights the importance of clear data and shared evidence to support effective local workforce planning and strategies.

Surveys conducted with exiting teachers in hard to staff schools generally record isolation, lack of support networks (both personal and professional) and limited access to infrastructure (such as internet, groceries and lifestyle) as key reasons for workforce attrition in hard to staff areas, particularly for teachers working in very remote schools.<sup>77</sup> In turn, hard to staff schools consistently record their concerns about the lack of community engagement of teachers and school leaders sourced from metropolitan areas, and the impact of high teacher attrition rates on students' learning and engagement.<sup>78</sup>

Consultation and research highlight that previous attempts to address recruitment and retention issues in hard to staff schools have primarily focused on two avenues:<sup>80 81</sup>

- Targeted financial incentive programs aimed at making hard to staff schools more attractive employment prospects for teachers and school leaders; and
- Programs, such as Teach for Australia and Grow Our Own, that are aimed at diversifying pathways into the profession for hard to staff schools and hard to recruit curriculum areas.

Research has indicated that these programs have been somewhat successful in increasing recruitment and short-term retention into hard to staff schools,<sup>82</sup> but further longitudinal data collection is necessary to develop a more thorough understanding of what might be effective. Again, there is an opportunity to use labour market modelling and workforce planning to identify targeted actions that could align ITE placements with school and community needs.



### **Teacher specialisation**

Anecdotal evidence has consistently indicated increasing difficulties in recruitment of teaching staff in particular subject areas, such as Mathematics, Science, Geography, and Languages Other Than English, as well as teachers in specialist settings - most notably affecting hard to staff schools.83 Government workforce figures support such anecdotal reports, but as such data is largely sourced from principals' advertised vacancy rates and smallscale surveying,<sup>84</sup> it is of insufficient scale and generalisability to serve for national modelling purposes.85 Furthermore, there has historically been no single cohesive data source for numbers in ITE or the workforce at the granular level of teacher specialisation, contributing to difficulties in accurately scoping and addressing this highpriority issue.

The national picture regarding specialisation areas is inconsistent and incomplete. The challenge is exacerbated by the fact that difficulties with specialist recruitment are not uniform across jurisdictions, systems, sectors, and school types, and neither are the methods by which any difficulties are reported. Currently available data do not yet provide needed clarity or resolution.

What is evident is the uncertainty as to the nature, impacts and potential resolution of the issue of teacher specialisation numbers; the emphasis given this issue by those reporting it; and the preliminary labour market modelling that shows impending shortage across the teacher workforce. Collectively, what is known about in-demand teacher specialisations shows that this is a priority need for more detailed and comprehensive national data collection and modelling.

The Australian Teacher Workforce Data (ATWD) is, for the first time nationally, collecting information about the ITE students' specialisations to aid future planning. The ATWD is also collecting data about specialist teachers who are already in the workforce, but who are not necessarily recorded in other data sets. This data will greatly contribute to our collective modelling capacity by giving a clearer indication of supply at the granular level of teacher specialisations.



# Supporting teachers and the teaching profession

Supporting the development and retention of our teacher workforce is one of the most effective means of promoting quality teaching practice.

Across the phases of the teaching career, there are different ways that teachers can best be supported. Requirements differ not only by career phase but also by location (geographical location such as metropolitan and urban compared with remote, and from one jurisdiction to another), school sector or system, and by teaching specialisation. Incorporating teachers' experiences and insights in design, resourcing, delivery and review of effective professional supports will ensure they better meet the needs of the national teacher workforce.

Support for our educators could include strategies to support individual teachers, specific categories of teachers, as well as larger-scale, collective approaches for the entire profession. Supporting the range of teachers in a range of ways and as appropriate to their needs is critical to maintaining the profession as one that is valued and recognised. Including teachers in decision making recognises expertise, encouraging active professional participation and building the classroom relevance of products they contribute to. Recognition of expertise and experience builds goodwill, as well as exploring ways to increase the attractiveness and regard of the teaching profession.

Increasing the status of the profession is necessary for attracting and retaining the highest quality teachers. Ultimately, maintaining, embedding and taking pride in high standards across our workforce will help to progress teaching towards a high-status and effective profession.

### Induction and mentoring

Across the country, there is a need for effective induction and mentoring for early career and graduate teachers to improve teacher retention and support classroom readiness.

Induction and mentoring processes vary widely in their quality, approach, resourcing and embedding in the whole school. Induction and mentoring have been identified as the most important factors necessary for supporting teachers through their early career stages, particularly during the first three to five years in the profession.<sup>86</sup> Induction and mentoring have been shown to be most effective when classroom-focused and responsive to the particular needs of early career teachers.<sup>87</sup> <sup>88</sup> <sup>89</sup> It is during these first years that a career is established, and decisions made about retention and career attitudes.<sup>90</sup>

#### Focus on induction at hard to staff schools

Research has demonstrated that early career teachers are more likely than their experienced colleagues to be employed in hard to staff environments. The combination of their lack of experience, need for greater support and learning opportunities, and the increased challenges of hard to staff schools makes further investment in support strategies even more crucial:

There can be particular challenges for induction in rural schools where there may be limitations of distance, isolation, small staff and fewer resources ... Graduate teachers working in remote and very remote schools perceived that they were less prepared for teaching than those working in cities and larger regional locations".<sup>91</sup>

Effective induction can facilitate a culture of professional support and expectations and translate the pedagogical and the theoretical into practice. Both induction and mentoring must be established well in school practices, follow the needs of the teacher, be supported and valued by the school, and be available to all early career teachers, particularly targeted to new teachers placed in hard to staff schools.

## Supporting and recognising expertise and excellence

All teachers and school leaders should have opportunities to be recognised for their teaching leadership, expertise and excellence.

A growing body of research points to the importance of professional networking in developing expertise, and the benefits for schools and teachers of the 'community of practice' model or 'professional learning networks' across schools.<sup>92</sup> Consultation across jurisdictions and sectors emphasised the benefits of continuing to recognise classroom teaching expertise, and providing opportunities for career enhancement.

National certification of Highly Accomplished and Lead Teachers (HALTs) is offered across the majority of Australia's school jurisdictions,<sup>93</sup> and provides a mechanism for recognising the expertise, leadership capacity and collegiality of teachers. It has, for many teachers, provided a way of demonstrating professional and pedagogic leadership, school community-building, and impact on student learning.<sup>94</sup>

The HALT model promotes teacher collaboration to share and grow expertise, support connections, and improve professional practice. The HALT Network, for instance, provides a forum for collaborative growth and a shared professional identity of excellence. This benefits all teachers – at Graduate, Proficient, Highly Accomplished and Lead career stages – through to school leaders.

This is one example of a framework through which the expertise and excellence of our teacher workforce is recognised and celebrated. Opportunities exist for ongoing development and support of HALTs, and for development of other such mechanisms for recognising expertise and excellence.

# Targeted research and efforts to improve retention

The combination of factors that determine a decision to leave the profession at different phases in the teaching career lifecycle are poorly

understood. Reports vary about the weight of factors and success of interventions.

We need to know more about the 'tipping point' or combination of variables that affect decisions to leave the profession, including the role of workplace culture, casualised or short-term positions (particularly for early career teachers) and the role of professional learning or support, wellbeing and autonomy. Retention research must identify the factors critical for increasing retention across different career stages, including for Graduate, Proficient, Highly Accomplished and Lead teachers.

Consideration should also be given to the best ways to re-engage teachers who have left the profession.

### Wellbeing and school culture

Consistent across research and practice is the recognition of teachers' right to wellbeing and a safe and responsive school culture and context. Preliminary research in this field shows that school culture and perceptions of wellbeing are factors in the attraction, retention and efficacy of quality and engaged teachers and school leaders.

Little is known about the specific factors or decisions that consistently improve or strengthen wellbeing and school culture, and the role played by principals, school leaders, and other stakeholders in sustainably supporting these efforts. Similarly, consultation has suggested that the factors that are understood to affect wellbeing and school culture vary across jurisdictions and sectors. Providing teachers and school leaders with access to health and wellbeing initiatives has reportedly contributed to teacher development and retention, however more data is needed to identify evidence-based practice.

### High quality professional learning

Providing teachers and school leaders with opportunities for high quality professional learning and targeted mentoring initiatives is essential to supporting teacher development, satisfaction and retention. Given the differences across the career stages from Graduate to Lead, high quality professional learning must also reflect and address the variety of professional needs and contexts for the entire teacher workforce. Teachers at all career stages benefit from support such as ongoing professional learning, leadership mentoring, partnerships with professional networks and colleagues, and communities of practice. Inclusion in decision making and evidence informed, teacher-designed, professional and ongoing learning programs reinforce recognition and the importance of professional expertise.

Significant achievements across jurisdictions and at the national level have promoted quality, expertise and leadership across the Australian teacher workforce through enhanced professional learning. Continued support of and ongoing commitment to such initiatives will progress efforts in identification, selection and access to (as well as take up of) high quality professional learning for teachers and school leaders.

### Status of the profession

Evidence provided in *One Teaching Profession* has confirmed that greater national consistency and greater quality in teacher registration will positively influence teachers' professional preparation, development and recognition; teaching quality; child safety and learning; and the professional status of teaching.<sup>95</sup>

A consistently strong status of the profession is necessary for attracting and retaining the highest quality teachers, as well as for recognising teachers' expertise and importance once in the profession, and for improving student outcomes. Public regard for the teaching profession has the potential to improve the popularity of teaching as a career choice, leading to increased ITE commencements and attraction into the workforce. Similarly, esteem of the profession has potential to reduce teacher attrition.

Limited research in other professional contexts has shown that community campaigns have had success in improving public perceptions of professional standing. However, while work to gauge and strengthen community perception of teachers and the teaching profession is noted by stakeholders as potentially valuable, consultation feedback has expressed mixed perceptions of the necessity and benefits of such campaigns.



Ambitious and forward-thinking planning will ensure our education workforce is most suitable and supported to prepare students for the future.

There is an urgent need for national focus on understanding future challenges and implications for identifying, preparing and supporting educators of the future. The future economy, new demands, and emerging fields of work have the potential to shift perceptions and expectations of the teacher workforce, in addition to necessitating shifts in the ways that our future teacher workforce shapes itself and its contributions.

The impact of the COVID-19 pandemic on the work and role of teachers has highlighted the importance of the teacher workforce's adaptability, skill range and readiness. Future-focused planning of the teacher workforce requires consideration of technological, economic, employment, geographic and social trends, channelled into evidence informed strategic building of our future teacher workforce. Identifying and developing educators of the future requires an ambitious focus. Changes to the nature of study and work will necessitate new approaches to teaching and to building our future workforce. Predictions for emerging fields of work and our future economy present an opportunity to drive innovation in education and teacher preparation. We will need to question our expectations, demands, infrastructure and current processes, to identify opportunities and priorities for planning.

### **Exploring future possibilities**

Work to anticipate the 'educator of the future' raises important questions about who will be teaching in future years and decades, and what will be expected, hoped or assumed of this future workforce. This predictive work requires clarity as to who is attracted to the profession, and who we as a country want to be included in our future teacher workforce. Within such conversations, consideration is commonly given to attributes and characteristics, as well as to skill, knowledge and content, and to a drive or passion for teaching – a 'calling'. An elevated status of the teaching profession will impact its attractiveness as a career choice into the future, through stimulating a pipeline of prospective teachers and improving retention once they enter the profession.

There is a need for more data and data-based discussion to understand who the educators of the future might be, and what skills, capabilities and characteristics they will need to succeed as teachers. Further study is needed into the characteristics of those who are motivated to pursue a teaching career, including research with students of current school age, to identify motivations and thoughts about the teaching profession.

# The impacts and opportunities of emerging technologies

With increasing reliance on an ever-proliferating range of digital and learning technologies has come further skills expectations of teachers. There has been little research on the impacts on the teacher workforce of emerging technologies for planning, delivering, assessing, communicating, designing and sourcing resources, and undertaking administration duties. Current trends suggest that skill, knowledge and comfort with digital and learning technologies will continue to be essential for teachers, and further work could assist in better understanding their impact and role in education.

#### Inconsistent access to technologies

The assumption that educators of the future will all be 'digital natives', along with their students, might not always hold, particularly in the short-term. Across the country access to, and reliability and quality of, digital and learning technologies is inconsistent and schools vary greatly in their capacity to leverage technology for learning.<sup>96</sup> This may decelerate the full adoption of such technologies within teachers' work, from ITE preparation and across the career span and through the range of professional teaching duties.

### **Online teaching**

The COVID-19 pandemic has given cause to rethink our collective demands, expectations, and support for teaching and learning that are both enhanced and mediated by digital technology. Educators of the future will be working in an education context possibly unimaginable to many today, and adaptability must become an essential characteristic of the teacher workforce – supported and scaffolded by ITE providers, jurisdictions, teacher regulatory authorities (TRAs) and employers.

Blended or online teaching capacity might in future become as integral as teaching specialisations, and will in turn require recognition and support through the teacher preparation process. Consideration might also be given to whether there are regulatory barriers to innovative approaches in online teaching, and how these might be addressed.

Further, our capacity to respond to unexpected demand for online teaching deserves consideration; for instance, capacity to draw on teachers with the ability to provide online small group learning support for students, or to develop resources for other educators, students or parents at short notice to align with curriculum and learning programs.

# Diversity within the teacher workforce

By working collaboratively to grow the teacher workforce, we have an opportunity to deliver the benefits of a teacher population that more proportionately reflects the Australian population.

Australia's current student cohort is diverse, with a heterogeneous population who, research has shown, will benefit from teachers from a diversity of backgrounds who can practice, model and encourage cultural responsiveness in schools.<sup>97 98</sup> A culturally and linguistically diverse student population benefits from a learning environment and a teaching workforce that values and understands them and that "reflects their cultural contexts." <sup>99</sup> A diverse teacher workforce that embeds culturally responsive practice "develop[s] a knowledge and appreciation of diverse cultures, explore[s] how equitable and inclusive practices can be implemented in schools, and imagine[s] strategies for challenging existing barriers." <sup>100</sup>

An increasingly diverse and culturally responsive teacher workforce is a crucial step towards addressing achievement gaps across Australia's student communities. The *Alice Springs* (*Mparntwe*) Education Declaration has set a clear goal to "ensure that education promotes and contributes to a socially cohesive society that values, respects and appreciates different points of view and cultural, social, linguistic and religious diversity".<sup>101</sup> Workforce planning will need to anticipate and meet the various needs of Australia's future student population in order to fulfil its obligations to them.

Diversity and inclusion strategies should consider the variables that attract individuals into the teacher workforce and employ targeted initiatives to address gaps in the composition of the teacher workforce, including subject specialisations, field of education and cultural and linguistic diversity.

The development of the capacity of future educators, from Graduate to Lead career stages and beyond, to embrace diversity and demonstrate cultural responsiveness will involve higher education providers, employers, TRAs, schools and teachers themselves, and will be an ongoing process.

# Strengthening the effectiveness of teacher preparation

Through Growth to Achievement: Report of the Review to Achieve Educational Excellence in Australian Schools (the second Gonski Review) in 2018 recognised the role of ITE in preparing teachers for the profession, with flow-on effects for attracting and retaining high quality teachers.<sup>102</sup>

Consultation feedback has made clear that ITE must continue to build on its successes and work towards strengthening the effectiveness of teacher preparation. Australia's future teacher workforce will only be prepared and supported to meet the needs of their students if graduate teachers are adaptable and responsive, proficient in delivery of newer styles of teaching and learning, and aware of emerging fields of work and technology. Consultation has agreed that strategic planning, ambition, and a future-focus are necessary in the areas of teacher preparation and transition into the workforce. There has been considerable improvement and impact since *Action Now: Classroom Ready Teachers*<sup>103</sup>; however, recent ITE graduates still identify improved quality and currency of instruction, better mentoring and support during teaching placements, stronger links between educational theory and classroom practice, and enhanced training in relevant digital technology hardware and software as opportunities for improvement in ITE. This is consistent across both traditional ITE and alternative teacher preparation models.<sup>104</sup> <sup>105</sup> <sup>106</sup> <sup>107</sup>

Insights from AITSL's Initial teacher education: Data report 2019<sup>108</sup> illustrate the changing patterns of delivery of ITE: it is increasingly delivered with an online component, and the proportion of students studying ITE at a postgraduate level is increasing. Those studying at a postgraduate level and by mixed mode of study (on campus as well as online) are increasingly likely to complete their ITE studies when compared with other ITE students. Currently, the majority of ITE commencements are still female, aged 24 years and younger, from medium socio-economic status backgrounds, and from metropolitan locations; however, there are slightly increasing numbers of lower socio-economic status commencements and completions in ITE courses when compared with other higher education courses, which might reflect shifts in the pattern of delivery in line with student needs.

Broader options for ITE delivery and study raise the potential for an increasingly diverse range of ITE students – such as through improving the attractiveness of ITE for students who might otherwise have not considered the profession. Development of ITE delivery has the potential to further enrich the diversity of our teacher workforce and ensure that teacher preparation continues to progress towards meeting the needs of educators and students into the future.



# **Building data and evidence**

Policy is most effective when informed by evidence. Building and connecting national data and evidence will allow us to identify, measure, and address shared challenges in the teacher workforce.



A focus on building data and evidence is a consistent theme across each of the key focus areas of *Teaching Futures*. It is vital that planning decisions are informed by strong data and robust evidence. Workforce planning requires high quality data to provide a strong evidence-base for identifying priorities, reviewing potential responses, and evaluating success.

However, gaps exist in currently available data and evidence, particularly at the national level. Opportunities exist for expansion, linking, improved timeliness and depth. These collections could be more powerfully used through greater sharing of data, attention to data analysis and evaluation, consistency in definitions and approaches, and a focus on addressing and filling gaps in knowledge. National, consistent, longitudinal and comprehensive data and evidence are critically required to understand the nature and trend of supply and demand in the teacher workforce, determine actions to address specific issues over time – including support for early career teachers, subject specialisation demand, and the needs of regional, rural and remote schools – and to evaluate and share policy and programs that work.

Building our data and evidence will provide a more thorough and usable national picture of the profession and the teaching career lifecycle. Continuing to build out the Australian Teacher Workforce Data (ATWD), exploration of other data linkage projects such as the Multi-Agency Data Integration Project (MADIP) and the establishment and sharing of further research and evaluation data could provide valuable insights for workforce planning. Everyone benefits when we evaluate and share information about policy and programs.

### **Current data sources**

A number of data sources and projects provide separate silos of data and a preliminary evidencebase for the education sector across factors such as recruitment, retention and career progression, and workforce characteristics for teachers and school leaders.

### Australian Teacher Workforce Data (ATWD)<sup>109</sup>

A notable undertaking in teacher workforce data and evidence is the ATWD initiative. Endorsed by Education Council in 2016, the ATWD is a national project, jointly funded by the Australian Government and all state and territory governments.

The ATWD is a nationally agreed data linkage project that – for the first time in Australia – brings together both national and jurisdictional-based data on ITE and the teacher workforce. It provides nationally consistent, longitudinal data and information about the teacher workforce – from ITE, to the end of teaching career; across states and territories, systems and sectors.

The purpose of the ATWD is to gain an understanding of the lifecycle of the modern teaching career, and to identify trends in teacher education, the teacher supply pipeline and the teacher workforce in Australia, that will help inform national policy and programs to support the profession and improve student outcomes. Implementation of the ATWD is well underway, with the first reporting made available through the initiative in November 2020. A fully national data set is anticipated by 2021.

New data sources provided through the ATWD include:

- For the first time, de-identified teacher registration data will be collated nationally and linked to data from the Higher Education Information Management System (HEIMS) and Quality Indicators for Learning and Teaching (QILT) surveys, eventually providing a longitudinal view of the teaching career lifecycle.
- The ATWD Teacher Survey, which from 2020 has included participation of teachers in all states and territories.

Over time, the ATWD will enable further and ongoing data collection; more thorough insights for workforce modelling; currency of strategic workforce responses; progress towards nationally consistent terms, definitions and approaches; and increased confidence and involvement in the initiative, resulting in greater depth and national scope of the data.

### Teacher preparation data sources: Higher Education Student Data Collection (HESDC)<sup>110</sup> and Quality Indicators for Learning and Teaching (QILT)<sup>111</sup>

The HESDC includes data for all students who have completed an ITE program at an Australian tertiary provider. The HESDC is a census of administrative and statistical information on higher education students in Australia. Data are collected by higher education providers and submitted to the Australian Government Department of Education, Skills and Employment (DESE) through the Higher Education Information Management System (HEIMS) under the *Higher Education Support Act 2003*. HESDC data includes data on enrolments, units of study, programs, and completions for students attending higher education who are eligible for Commonwealth assistance.

The QILT surveys comprise the Student Experience Surveys (SES), the Graduate Outcomes Surveys (GOS) and the Employer Satisfaction Surveys (ESS) which are conducted annually across all higher education students by the Social Research Centre on behalf of DESE.

As these two teacher preparation data sources focus on higher education learning and teaching, they provide insight into pre-service teachers' and early career teachers' experiences during teacher preparation. The HESDC data covers all students (census data) and as such is a rich source of critical insight into the characteristics of ITE in Australia. The QILT surveys achieve large sample responses, and with improving response rates are a developing and useful source of data on employment outcomes.

These two data sources are linked at the unit record level in the ATWD, providing critical insights into outcomes of ITE, supply trends and characteristics, to facilitate ITE innovation and improvement.

### Multi-Agency Data Integration Project (MADIP)<sup>112</sup>

The Multi-Agency Data Integration Project (MADIP) collates and combines data from six Australian government agencies to integrate and increase the utility of data on education, healthcare, population statistics (such as the Census), taxation records and welfare payments. MADIP relies on government agency partnerships, and enables identification of trends across the population across these social impact areas.

This data integration and agency collaboration has enabled a more sophisticated and 'joined up' use of this national data and evidence and promotes insight into key workforce markets for teachers and school leaders in Australia. Further opportunities for data integration would require continued collaboration and investment in these processes.

### Teaching and Learning International Survey (TALIS)<sup>113</sup>

The OECD's Teaching and Learning International Survey (TALIS) collects internationally comparable data on the learning environment and the working conditions of teachers and principals in schools across the world every three years. Australia's participation in TALIS 2018 was managed by the Australian Council for Educational Research (ACER), and involved a total of 6,603 teachers and 453 principals from a representative sample of primary and secondary schools across Australia.<sup>114</sup>

The results of the survey continue to provide valid, timely and comparable information from the perspective of school practitioners to help countries review and define policies for developing a high quality teaching profession.

### Australian Bureau of Statistics (ABS)

The Australian Bureau of Statistics (ABS) collects and reports data on schools, students and staff through Category 4221.0, 'Schools, Australia',<sup>115</sup> and on populations and population projections by State and Territory and nationally through Category 3222.0, 'Population Projections'.<sup>116</sup>

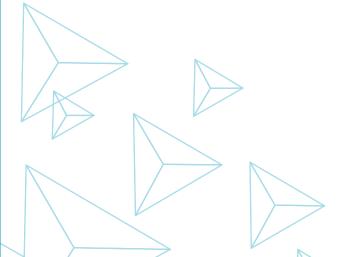
It is the main source of data on education demand through the provision of Australian population statistics.

### Employer–employee data: Longitudinal Linked Employer Employee Dataset 2006-2017 (L-LEED)<sup>117</sup> and the Survey of Employers who have Recently Advertised (SERA)<sup>118</sup>

The Longitudinal Linked Employer-Employee Data (L-LEED) project, drawing on efforts by DESE, the Treasury and the Australian Taxation Office, is part of the Commonwealth Data Integration Partnership for Australia (DIPA) collaboration of government agencies to share data for purposes of policy and program evaluation and improvements.

For teacher workforce planning purposes, the L-LEED project makes use of DESE data on university-level educational attainment alongside personal and business income records, linking business and employer data with employee data. This enables identification of figures and trends within the teacher workforce.

The Survey of Employers who have Recently Advertised (SERA) is a small-scale telephone survey conducted by DESE with employers in particular fields. Essentially a small data set of recruitment and skills shortage data, its limitations due to small sample size affect its reliability for teacher workforce planning purposes. It has been used to identify trends and patterns in principals' reported recruitment difficulties across jurisdictions and school sectors, but larger-scale and greater level of detail assist in predictions and responses to recruitment and skills shortage trends identified.



### Teacher registration and professional surveys data

A range of TRA and professional bodies' survey data is available across the Australian jurisdictions. Examples that are relevant for teacher workforce planning include:

- Victorian Institute of Teaching's (VIT) annual Casual Relief Teacher Survey of over 4,000 casual relief, emergency, relieving and relief teachers<sup>119</sup>
- Queensland College of Teachers (QCT) commissioned survey and research into motivations for joining the teacher workforce<sup>120</sup>
- Australian Council for Educational Research (ACER) Staff in Australian Schools (SiAS) survey, conducted in 2007, 2010 and 2013, on behalf of the Australian Government<sup>121</sup> <sup>122</sup> <sup>123</sup>
- The Grattan Institute's Attracting High Achievers to Teaching Survey, March–May 2019 with approx. 950 respondents, and resultant research report<sup>124</sup>
- The Australian Principal Occupational Health, Safety and Wellbeing Survey, an annual survey since 2011, funded by the Australian Research Council<sup>125</sup>

These sources provide significant insight at the jurisdictional level, however are not often shared and not necessarily comparable due to inconsistency in methodology and lack of generalisability from a national perspective.

### Schools data: My School<sup>126</sup>

My School, overseen by the Australian Curriculum, Assessment and Reporting Authority (ACARA), collates and reports school data, with a focus on data consistency and student progress. A national undertaking, the My School website provides publicly-accessible information about all Australian schools, their size, demographics, performance and funding.

Data is collected regarding student and teacher numbers, attendance rates, funding, student diversity (including parental occupation and education, socio-educational advantage, and Aboriginal and Torres Strait Islander status), and comparisons of improvement.

# Addressing gaps in currently available data and evidence

The early indications are that the ATWD will deliver critical new insights from the analysis of linked data and new and powerful information as the collection builds out longitudinally.

### Initial teacher education and pipeline supply data

The ATWD, through access to linked, de-identified unit record data will allow deeper analysis of the ITE supply pipeline, and provide an understanding of the progress of different student cohorts from program commencement to program completion or exit. Such recorded data include:

- Demographic profiles: age, gender, socioeconomic status, disability, citizenship, Aboriginal and Torres Strait Islander status and diversity
- Field of education (early childhood, primary, secondary and mixed)
- Qualification type and program level
- State and territory of a student's residential address compared to the location of their higher education provider
- Subjects that students are being prepared to teach.

It is expected that the initial ATWD findings will provide the foundation for more detailed and comprehensive analysis of ITE data in future years, providing such insights as:

- Improved estimates of the number of ITE students studying early childhood, primary and secondary education
- A comprehensive demographic assessment of which students commence and complete ITE, who they are and where they come from
- Improved clarity on the factors influencing an accurate determination of the available supply of graduates available to work in any state or territory
- Assessing the subject areas that ITE students will be qualified to teach, such as mathematics and science.

#### Workforce characteristics data

The ATWD will also provide an improved understanding of the profile and demographics of Australian teachers, including an insight into the transition between ITE and teaching including:

- Characteristics of the teacher workforce across jurisdictions, sectors, and nationally, comprising how many teachers there are, where they teach, qualifications held and the FTE supply of teachers nationally and within jurisdictions
- Gaps in supply of teachers across sectors and jurisdictions
- Potential surplus or shortage through ITE and within the workforce, by jurisdictional labour market and across the nation, including by specialisation and by diversity characteristics.

Over time, and as the data builds out longitudinally, ATWD reports will provide an analysis of local and national supply trends in specialities and subjects, including an analysis of:

- Employment outcomes of ITE
- Graduate perceptions
- Early career experiences labour contracts, time to employment, early career support
- Teaching career paths
- Early and later career retention and attrition rates
- Factors that influence decisions to leave teaching.

Additionally, the ATWD will increasingly provide comprehensive national data to support the development and evaluation of programs and policy reform initiatives such as strategies to increase the number of Aboriginal and Torres Strait Islander teachers, support teachers in rural and remote areas, and provide longitudinal data on the pipeline of science and mathematics teachers.

# Opportunities to continue to build our data and evidence

There is a very evident opportunity for ongoing build-out of the ATWD, commitment to data linkage projects such as MADIP and for establishment and sharing of further research and evaluation data. This will call for ongoing national data collection, sharing of evidence and insights, and provision of evaluation and analysis.

Building our data and evidence could provide a more thorough and usable national picture of the profession and the teaching career lifecycle – contributing to evidence-based insights for current and predicted workforce characteristics at a national level, to support jurisdictional workforce planning, determine national collaborative effort and enable sharing of best practice in addressing areas of national priority for the teacher workforce.

Detailed population and predictive data about school students, such as through the ABS or MADIP, could contribute insights into trends and rates in student populations and resultant teacher demand pockets. For instance, population predictions of increases or decreases in parts of the country or affecting specific student cohorts highlight where more or fewer teachers will be needed, by location, teaching specialisation, or diversity characteristics. Such modelling draws on ABS and Census information, namely ABS Schools Australia and range of ABS population projections sources.

These available data sources offer considerable potential to be linked-up with other sources on supply and used for comprehensive labour market modelling.

# Conclusion

In December 2020, Education Council agreed to publish a narrative, *National Initiatives to Support Teaching and School Leadership*, that will guide decision-making and commissioning of work at a national level to strengthen the teacher workforce and support quality teaching and school leadership.<sup>127</sup>

It highlights what has been achieved by governments working collaboratively and sets out the case for continued national collaboration. It recognises that different jurisdictions, schools, school systems and sectors have different priorities, and that for national initiatives to succeed requires a consensus approach. It also establishes principles for national collaboration, which will be used to guide future decisions on pursuing national actions. National collaboration must complement, not duplicate or contradict, local approaches. The narrative will inform future work at a national level to support the teacher workforce, which will be carried forward as part of the Education Ministers Meeting workplan. *Teaching Futures* highlights opportunities for potential future efforts to build an effective, sustainable, supported, and high-status teacher workforce. By working together, Australia's school systems and sectors can achieve improved outcomes for teachers and school leaders, for employers, and for initial teacher education providers – and ultimately, for <u>students in every classroom across the country</u>.

### References

- Australian Bureau of Statistics 2021, 4221.0–Schools, Australia, 2020: Key statistics, data file, Australian Bureau of Statistics, <https://www.abs.gov.au/statistics/people/education/schools/ latest-release>.
- Productivity Commission 2020, Report on Government Services 2020: Part B, Section 4: School Education, released 4 February 2020, Commonwealth of Australia, Australian Government Productivity Commission, Canberra, <a href="https://www.pc.gov.au/">https://www.pc.gov.au/</a> research/ongoing/report-on-government-services/2020/ child-care-education-and-training/school-education>.
- Education Council 2020, Education Council Meeting Communique

   15 December 2020, Education Council, Carlton South, Victoria,
   <a href="http://ec.edu.au/site/DefaultSite/filesystem/documents/">http://ec.edu.au/site/DefaultSite/filesystem/documents/</a> Communiques%20and%20Media%20Releases/2020%20
   Communiques/Education%20Council%20Meeting%20
   Communique%20-%2011%20December%202020%20.pdf>.
- Australian Bureau of Statistics, Cat. No. 3101.0, Australian Demographic Statistics, data category, Australian Bureau of Statistics, <https://www.abs.gov.au/ausstats/abs@.nsf/ mf/3101.0>.
- Australian Bureau of Statistics, Cat. No. 3222.0, Population Projections, Australia, 2017 (base) – 2066 (Series B), data category, Australian Bureau of Statistics, <https://www.abs.gov. au/AUSSTATS/abs@.nsf/mf/3222.0>.
- Australian Institute for Teaching and School Leadership (AITSL) 2019, *Initial teacher education: Data report 2019*, AITSL, Melbourne, <a href="https://www.aitsl.edu.au/research/ite-data-report-2019">https://www.aitsl.edu.au/research/ite-data-report-2019</a>>.
- Australian Bureau of Statistics 2021, 4221.0–Schools, Australia, 2020: Key statistics, data file, Australian Bureau of Statistics, <https://www.abs.gov.au/statistics/people/education/schools/ latest-release>.
- Productivity Commission 2020, Report on Government Services 2020: Part B, Section 4: School Education, released 4 February 2020, Commonwealth of Australia, Australian Government Productivity Commission, Canberra, <https://www.pc.gov.au/ research/ongoing/report-on-government-services/2020/ child-care-education-and-training/school-education>.
- Council of Australian Governments 2018, National School Reform Agreement, Australian Government Department of Education, Skills and Employment, Canberra, page last modified 2 July 2020, <a href="https://docs.education.gov.au/node/51606">https://docs.education.gov.au/node/51606</a>>.
- Council of Australian Governments 2018, National School Reform Agreement, Part 3 – Reform Activity, 44B(i), p. 9, Australian Government Department of Education, Skills and Employment, Canberra, page last modified 2 July 2020, <https://docs. education.gov.au/node/51606>.
- Education Council 2019, Alice Springs (Mparntwe) Education Declaration, Education Services Australia, Council of Australian Governments Education Council, Carlton South, Victoria, <www. educationcouncil.edu.au>.
- Education Council 2019, Alice Springs (Mparntwe) Education Declaration, Supporting quality teaching and leadership, Education Services Australia, Council of Australian Governments Education Council, Carlton South, Victoria, p. 11, <www. educationcouncil.edu.au>.
- Australian Institute for Teaching and School Leadership (AITSL) 2011, Australian Professional Standards for Teachers, AITSL, Melbourne, <a href="https://www.aitsl.edu.au/teach/standards">https://www.aitsl.edu.au/teach/standards</a>.
- Australian Institute for Teaching and School Leadership 2014, Improve leadership with the Principal Standard, AITSL, Melbourne, <https://www.aitsl.edu.au/lead-develop/understand-the-principalstandard>.

- Australian Institute for Teaching and School Leadership (AITSL) 2019, Accreditation of initial teacher education programs in Australia – Standards and procedures, AITSL, Melbourne, <https:// www.aitsl.edu.au/tools-resources/resource/accreditation-of-initialteacher-education-programs-in-australia---standards-andprocedures>.
- Australian Institute for Teaching and School Leadership (AITSL) 2011, Nationally consistent registration for all teachers, <a href="https://www.aitsl.edu.au/docs/default-source/national-policy-framework/nationally-consistent-registration-for-all-teachers">https://www.aitsl.edu.au/docs/default-source/national-policy-framework/nationally-consistent-registration-for-all-teachers.pdf?sfvrsn=d97ff3c\_4>.</a>
- Australian Institute for Teaching and School Leadership (AITSL) 2017, Guide to the Certification of Highly Accomplished and Lead Teachers in Australia, AITSL, Melbourne, <a href="https://www.aitsl.edu.au/docs/default-source/certification/guide-to-the-certification-of-halt-in-australia-(review-edits).pdf?sfvrsn=25c2c83c\_2>.</a>
- Teacher Education Ministerial Advisory Group 2014, Action Now: Classroom Ready Teachers. Teacher Education Ministerial Advisory Group Final Report, Department of Education and Training, Canberra, <a href="https://www.aitsl.edu.au/tools-resources/resource/action-now-classroom-ready-teachers">https://www.aitsl.edu.au/tools-resource/action-now-classroom-ready-teachers></a>.
- Gonski, D 2018, Through Growth to Achievement: Report of the Review to Achieve Educational Excellence in Australian Schools, Commonwealth of Australia, Australian Government Department of Education and Training, Canberra, <htps://docs.education. gov.au/documents/through-growth-achievement-report-reviewachieve-educational-excellence-australian-0>.
- Australian Institute for Teaching and School Leadership (AITSL) 2018, One teaching profession: Teacher registration in Australia, AITSL / Education Services Australia / Education Council, <https://www.aitsl.edu.au/docs/default-source/national-review-ofteacher-registration/report/one-teaching-profession---teacherregistration-in-australia.pdf?sfvrsn=491cf13c 2>.
- Productivity Commission 2016, National Education Evidence Base, Report No. 80, Commonwealth of Australia, Australian Government Productivity Commission, Canberra, <a href="https://www.pc.gov.au/inquiries/completed/education-evidence/report/education-evidence.pdf">https://www.pc.gov.au/inquiries/completed/education-evidence/report/education-evidence.pdf</a>>.
- Productivity Commission 2017, Shifting the Dial: 5 Year Productivity Review, Report No. 84, Commonwealth of Australia, Australian Government Productivity Commission, Canberra, <a href="https://www.pc.gov.au/inquiries/completed/productivity-review/report/productivity-review/report/productivity-review/report/productivity-review/report/">https://www.pc.gov.au/inquiries/completed/productivity-review/report/</a> productivity-review.pdf>.
- 23. Department of Education, Skills and Employment n.d., *What is the National School Reform Agreement?*, Australian Government Department of Education, Skills and Employment, Canberra, <https://docs.education.gov.au/system/files/doc/other/what\_is\_the\_national\_school\_reform\_agreement\_5.pdf>.
- 24. Productivity Commission, National Indigenous Reform Agreement, Commonwealth of Australia, Australian Government Productivity Commission, Canberra, <a href="https://www.pc.gov.au/research/supporting/national-agreements/indigenous-reform">https://www.pc.gov.au/research/supporting/national-agreements/indigenous-reform</a>>.
- Education Council 2015, National Aboriginal and Torres Strait Islander Education Strategy 2015, Australian Government Department of Education, Skills and Employment, Canberra, / Education Council, Carlton South, Victoria, <<a href="https://docs.education.gov.au/system/files/doc/other/natsi\_educationstrategy\_v3.pdf">https://docs.education.gov.au/system/files/doc/other/natsi\_educationstrategy\_v3.pdf</a>>.
- Department of the Prime Minister and Cabinet 2020, Closing the Gap Report 2020, Australian Government Department of the Prime Minister and Cabinet, Canberra, <a href="https://ctgreport.niaa.gov.au/">https://ctgreport.niaa.gov.au/</a>>
- Joint Council on Closing the Gap 2020, National Agreement on Closing the Gap, Australian Government, Canberra, <a href="https://www.closingthegap.gov.au/sites/default/files/files/national-agreement-ctg.pdf">https://www.closingthegap.gov.au/sites/default/files/files/national-agreement-ctg.pdf</a>>.

- Halsey, J 2018, Independent Review into Regional, Rural and Remote Education, Australian Government Department of Education, Skills and Employment, Canberra, <a href="https://docs.education.gov.au/node/50281">https://docs.education.gov.au/node/50281</a>>.
- Webbe, S 2019, Report of the Review of the national architecture for schooling in Australia, Australian Government Department of Education, Skills and Employment, Canberra, <http://www. educationcouncil.edu.au/site/DefaultSite/filesystem/documents/ Reports%20and%20publications/Publications/National%20 Architecture%20Review/National%20Architecture%20for%20 Schooling%20Review%20Report.pdf>
- Conran, P 2020, Review of COAG Councils and Ministerial Forums: Report to National Cabinet, Australian Government Department of the Prime Minister and Cabinet, <<a href="https://pmc.gov.au/sites/default/files/final-report-review-coag-councils-ministerial-forums.pdf">https://pmc.gov.au/sites/default/files/final-report-review-coag-councils-ministerial-forums.pdf</a>>.
- Education Council 2019, STEM School Education Interventions: Synthesis Report, Education Council, Carlton South, Victoria, <www.educationcouncil.edu.au>.
- Education Council n.d., *Reports and Publications*, Education Council, Carlton South, Victoria, <a href="http://www.educationcouncil.edu.au/EC-Reports-and-Publications.aspx">http://www.educationcouncil.edu.au/EC-Reports-and-Publications.aspx</a>>.
- Education Council 2019, Review of Senior Secondary Pathways, August 2019–June 2020, Education Council, Carlton South, Victoria, <a href="https://pathwaysreview.edu.au/>">https://pathwaysreview.edu.au/</a>.
- Royal Commission into Institutional Responses to Child Sexual Abuse 2017, *Final Report: Recommendations*, Commonwealth of Australia, Canberra, <<a href="https://www.childabuseroyalcommission.gov">https://www.childabuseroyalcommission.gov</a>, au/sites/default/files/final\_report\_-\_recommendations.pdf>.
- Department of Education, Skills and Employment 2020, Factsheet: How are schools funded in Australia?, Australian Government Department of Education, Skills and Employment, Canberra, </https://docs.education.gov.au/node/44546>.
- Organisation for Economic Co-operation and Development (OECD) 2019, A Flying Start: Improving Initial Teacher Preparation Systems, OECD Publishing, Paris, France, <<a href="https://doi.org/10.1787/cf74e549-en">https://doi. org/10.1787/cf74e549-en</a>.
- Australian Institute for Teaching and School Leadership (AITSL) 2019, Initial teacher education: Data report 2019, AITSL, Melbourne, p. xvi; see also p. 57, Figure 36, <https://www.aitsl. edu.au/research/ite-data-report-2019>.
- Australian Institute for Teaching and School Leadership (AITSL) 2019, *Initial teacher education: Data report 2019*, AITSL, Melbourne, p. xvi; see also p. 57, Figure 36, <https://www.aitsl. edu.au/research/ite-data-report-2019>.
- Australian Bureau of Statistics, Cat. No. 3101.0, Australian Demographic Statistics, data category, Australian Bureau of Statistics, <https://www.abs.gov.au/ausstats/abs@.nsf/ mf/3101.0>.
- Australian Bureau of Statistics, Cat. No. 3222.0, Population Projections, Australia, 2017 (base) – 2066 (Series B), data category, Australian Bureau of Statistics, <https://www.abs.gov. au/AUSSTATS/abs@.nsf/mf/3222.0>.
- Australian Bureau of Statistics, Cat. No. 3101.0, Australian Demographic Statistics, data category, Australian Bureau of Statistics, <https://www.abs.gov.au/ausstats/abs@.nsf/ mf/3101.0>.
- Australian Bureau of Statistics, Cat. No. 3222.0, Population Projections, Australia, 2017 (base) – 2066 (Series B), data category, Australian Bureau of Statistics, <https://www.abs.gov. au/AUSSTATS/abs@.nsf/mf/3222.0>.
- 43. Department of Education, Skills and Employment 2018, Primary school teacher occupational reports (ANZSCO 2412-13), Australian Government Department of Education, Skills and Employment, Canberra, <a href="https://docs.employment.gov.au/collections/">https://docs.employment.gov.au/collections/</a> primary-school-teacher-occupational-reports>.

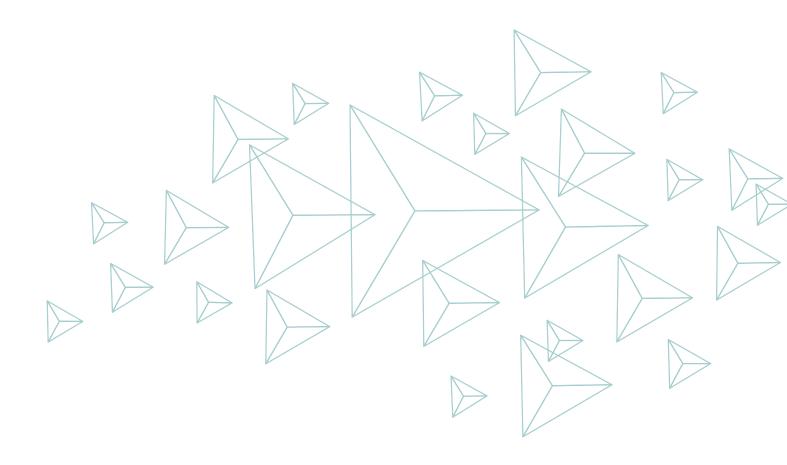
- 44. Department of Education, Skills and Employment 2018, Secondary school teacher occupational reports (ANZSCO 2414-11), Australian Government Department of Education, Skills and Employment, Canberra, <https://docs.employment.gov.au/collections/ secondary-school-teacher-occupational-reports>.
- Department of Employment, Skills, Small and Family Business 2019, School teachers – Australia. TRIM reference D19/1670069, Australian Government Department of Employment, Skills, Small and Family Business, Canberra, <a href="https://docs.employment.gov">https://docs.employment.gov</a> au/documents/school-teachers-australia>.
- Department of Employment, Skills, Small and Family Business 2019, School teachers – Australia. TRIM reference D19/1670069, Australian Government Department of Employment, Skills, Small and Family Business, Canberra, <https://docs.employment.gov. au/documents/school-teachers-australia>.
- Australian Institute for Teaching and School Leadership (AITSL) n.d., *Initial teacher education: Data report 2019*, Entry into initial teacher education, Figure 3; Progress through initial teacher education, Figure 21, <htps://www.aitsl.edu.au/research/ ite-data-report-2019>.
- Australian Institute for Teaching and School Leadership (AITSL) 2016, Spotlight: Diversity in school leadership, AITSL, Melbourne, p. 3.
- Australian Institute for Teaching and School Leadership (AITSL) 2016, Spotlight: Diversity in school leadership, AITSL, Melbourne, p. 13.
- Australian Institute for Teaching and School Leadership (AITSL) 2016, Spotlight: Induction of beginning teachers in Australia – What do early career teachers say?, AITSL, Melbourne.
- Weldon, P 2018, 'Early career teacher attrition in Australia: Evidence, definition, classification and measurement', *Australian Journal of Education*, vol. 62, no. 1, pp. 61-78, <https://doi.org/10.1177/0004944117752478>.
- Australian Institute for Teaching and School Leadership (AITSL) 2016, Spotlight: What do we know about early career teacher attrition rates in Australia?, AITSL, Melbourne, p. 6.
- Macdonald, D 1999, 'Teacher attrition: A review of literature', Teaching and Teacher Education, vol. 15, no. 8, pp. 835–48.
- Weldon, P 2018, 'Early career teacher attrition in Australia: Evidence, definition, classification and measurement', *Australian Journal of Education*, vol. 62, no. 1, pp. 61–78.
- Australian Institute for Teaching and School Leadership (AITSL) 2016, Spotlight: What do we know about early career teacher attrition rates in Australia?, AITSL, Melbourne, p. 4.
- Department of Education 2020, COVID intensive learning support program, NSW Government, Parramatta, <<a href="https://education.nsw.gov.au/teaching-and-learning/curriculum/covid-learning-support-program">https://education.nsw.gov.au/teaching-and-learning/curriculum/covid-learning-support-program</a>>.
- Department of Education and Training 2020, *Tutor learning initiative*, Victorian Government, Melbourne, <a href="https://www.education.vic.gov.au/about/careers/teacher/Pages/tutors.aspx">https://www.education.vic.gov.au/about/careers/teacher/Pages/tutors.aspx</a>>.
- Mercieca, B 2017, 'What are we doing to our early career teachers?: The issue of the casualisation of the teaching workforce', *Australian Educational Leader*, vol. 39, no. 1, pp. 38-41.
- Australian Institute for Teaching and School Leadership (AITSL) 2016, Spotlight: Induction of beginning teachers in Australia – What do early career teachers say?, AITSL, Melbourne.
- Australian Institute for Teaching and School Leadership (AITSL) 2016, Spotlight: What do we know about early career teacher attrition rates in Australia?, AITSL, Melbourne, p. 11.
- Australian Institute for Teaching and School Leadership (AITSL) 2016, Spotlight: Induction of beginning teachers in Australia – What do early career teachers say?, AITSL, Melbourne, p. 11.
- Australian Institute for Teaching and School Leadership (AITSL) 2019, Spotlight: Professional Learning for Relief Teachers, AITSL, Melbourne.

- 63. Department of the Prime Minister and Cabinet 2020, *Closing the Gap Report 2020*, Commonwealth of Australia, Department of the Prime Minister and Cabinet, Canberra.
- Ernst and Young 2017, Aboriginal and Torres Strait Islander Teacher 2015 Workforce Analysis, More Aboriginal and Torres Strait Islander Teachers Initiative (MATSITI).
- Buckskin, P 2016, More Aboriginal and Torres Strait Islander Teachers Initiative: Final Report, Commonwealth of Australia / University of South Australia, <a href="http://matsiti.edu.au/report/">http://matsiti.edu.au/report/</a>>.
- Johnson, P, Cherednichenko, B & Rose, M 2016, Evaluation of the More Aboriginal and Torres Strait Islander Teachers Initiative Project: Final Report, More Aboriginal and Torres Strait Islander Teachers Initiative (MATSITI), University of South Australia, Adelaide, <a href="http://matsiti.edu.au/wp-content/uploads/2016/05/MATSITI-2016-Project-Evaluation-Final-Report.pdf">http://matsiti.edu.au/wp-content/uploads/2016/05/MATSITI-2016-Project-Evaluation-Final-Report.pdf</a>>
- Santoro, N, Reid, J, Crawford, L & Simpson, L 2011, 'Teaching Indigenous children: Listening to and learning from Indigenous teachers', *Australian Journal of Teacher Education*, vol. 36, no. 10, pp. 64–76.
- Australian Institute for Teaching and School Leadership (AITSL) 2017, Aboriginal and Torres Strait Islander education, AITSL, Melbourne, <a href="https://www.aitsl.edu.au/deliver-ite-programs/">https://www.aitsl.edu.au/deliver-ite-programs/</a> aboriginal-and-torres-strait-islander-education>.
- Santoro, N 2015, 'The drive to diversify the teaching profession: Narrow assumptions, hidden complexities', *Race Ethnicity and Education*, vol. 18, no. 6, pp. 858–76, <https://doi.org/10.1080/1361 3324.2012.759934>.
- Woodroffe, T 2020, AITSL Cultural Competence: Final Report, College of Indigenous Futures, Arts and Society, Charles Darwin University, Darwin.
- Australian Institute for Teaching and School Leadership (AITSL) 2020, Indigenous cultural competency in the Australian teaching workforce: Discussion paper, AITSL, Melbourne, <https://www. aitsl.edu.au/docs/default-source/comms/cultural-competency/ aitsl\_indigenous-cultural-competency\_discussion-paper\_2020. pdf>.
- Woodroffe, T 2019, 'The importance of including Indigenous knowledge in pre-service teacher education', PhD thesis, Northern Institute, Charles Darwin University, Darwin.
- Rice, S, Richardson, PW & Gilchrist Watt, HM 2017, 'Hard-to-staff Australian school: How can we ensure that all students have access to quality teachers', in T Bentley & GC Savage (eds), *Educating Australia: Challenges for the decade ahead*, Melbourne University Publishing, Melbourne, pp. 279-95.
- Dally, KA, Ralston, MM, Strnadová, I, Dempsey, I, Chambers, D, Foggett, J, Paterson, D, Sharma, U & Duncan, J 2019, 'Current issues and future directions in Australian special and inclusive education', Australian Journal of Teacher Education, vol. 44, no. 8, pp. 57-73, <a href="https://doi.org/10.14221/ajte.2019v44n8.4>">https://doi.org/10.14221/ajte.2019v44n8.4></a>.
- Dempsey, I & Dally, K 2014, 'Professional standards for Australian special education teachers', *The Australasian Journal of Special Education*, vol. 38, no. 1, pp. 1-13, <https://doi.org/10.1017/ jse.2014.1>.
- Forlin, C & Chambers, D 2017, 'Catering for diversity: Including learners with different abilities and needs in regular classrooms', in R Maclean (ed.), Life in schools and classrooms, Vol. 38: Education in the Asia Pacific region: Issues, concerns and prospects, Springer, Singapore, pp. 555-71.
- Buchanan, J, Prescott, A, Schuck, S, Aubusson, P, Burke, P & Louviere, J 2013, 'Teacher retention and attrition: Views of early career teachers', *Australian Journal of Teacher Education*, vol. 39, no. 4, pp. 112–29.
- Kline, J, White, SJ & Lock, G 2013, 'The rural practicum: Preparing a quality teacher workforce for rural and regional Australia', *Journal* of Research in Rural Education, vol. 28, no. 3, pp. 1–13.
- Lonsdale, M & Ingvarson, L 2003, 'Initiatives to address teacher shortage', ACER Policy Briefs, 5, November, <a href="http://research.acer.edu.au/workforce/4">http://research.acer. edu.au/workforce/4</a>.

- Halsey, J 2018, Independent Review into Regional, Rural and Remote Education, Department of Education, Skills and Employment, Canberra, <https://docs.education.gov.au/ node/50281>.
- Lonsdale, M & Ingvarson, L 2003, 'Initiatives to address teacher shortage', ACER Policy Briefs, 5, November, < http://research.acer. edu.au/workforce/4>.
- Lonsdale, M & Ingvarson, L 2003, 'Initiatives to address teacher shortage', ACER Policy Briefs, 5, November, < http://research.acer. edu.au/workforce/4>.
- Department of Employment, Skills, Small and Family Business 2019, School teachers – Australia, TRIM reference D19/1670069, Australian Government Department of Employment, Skills, Small and Family Business, Canberra, <a href="https://docs.employment.gov">https://docs.employment.gov</a>, au/documents/school-teachers-australia>.
- Department of Education, Skills and Employment, Occupational reports – Education professionals, Australian Government Department of Education, Skills and Employment, Canberra, <https://docs.employment.gov.au/collections/occupationalreports-education-professionals>.
- Department of Education, Skills and Employment 2018, Skill Shortage Research Methodology, Australian Government Department of Education, Skills and Employment, Canberra, <https://docs.employment.gov.au/documents/skill-shortageresearch-methodology-0>.
- Australian Institute for Teaching and School Leadership (AITSL) 2016, Spotlight: Induction of beginning teachers in Australia – What do early career teachers say?, AITSL, Melbourne, p. 6.
- Bennett, GA, Newman, E, Kay–Lambkin, F & Hazel, G 2016, Start well: A research project supporting resilience and wellbeing in early career teachers—Summary report, Everymind, Newcastle, NSW, <https://everymind.imgix.net/assets/Uploads/Summary-Report\_ rebranded.pdf>.
- Kang, S & Berliner, DC 2012, 'Characteristics of teacher induction programs and turnover rates of beginning teachers', *Teacher Educator*, vol. 47, no. 4, pp. 268–82, <https://doi.org/10.10 80/08878730.2012.707758>.
- Ingersoll, RM 2012, 'Beginning teacher induction: What the data tell us', *Phi Delta Kappan*, vol. 93, no. 8, pp. 47–51.
- Kutsyuruba, B, Godden, L & Tregunna, L 2014, 'Curbing early-career teacher attrition: A pan-Canadian document analysis of teacher induction and mentorship programs', *Canadian Journal* of Educational Administration and Policy, vol. 161, pp. 1–42.
- Australian Institute for Teaching and School Leadership, 2016, Spotlight: Induction of beginning teachers in Australia – What do early career teachers say?, AITSL, Melbourne, p. 11.
- Kilpatrick, S & Fraser, S 2019, 'Using the STEM framework collegially for mentoring, peer learning and planning', *Professional Development in Education*, vol. 45, no. 4, pp. 614–26, <https://doi. org/10.1080/19415257.2018.1463925>.
- Australian Institute for Teaching and School Leadership 2019, Spotlight: Highly Accomplished and Lead Teachers, AITSL, Melbourne.
- Wills, J, Spooner-Lane, RS, Crosswell, L & Churchward, P 2019, Recognising the Impact of Highly Accomplished and Lead Teachers in Queensland Independent Schools: Key Findings, Working Paper, February 2019, Independent Schools Queensland, Brisbane, <https://eprints.qut.edu.au/127699/>.
- 95. Australian Institute for Teaching and School Leadership 2018, One teaching profession: Teacher registration in Australia, AITSL / Education Services Australia / Education Council, <https://www.aitsl.edu.au/docs/default-source/national-review-of-teacher-registration/report/one-teaching-profession---teacher-registration-in-australia.pdf?sfvrsn=491cf13c\_2>.
- Australian Institute for Teaching and School Leadership 2020, Spotlight: What works in online/distance teaching and learning?, AITSL, Melbourne.

- Buckskin, P 2016, More Aboriginal and Torres Strait Islander Teachers Initiative: Final Report, Commonwealth of Australia / University of South Australia, <a href="http://matsiti.edu.au/report/">http://matsiti.edu.au/report/</a>>.
- 98. Australian Institute for Teaching and School Leadership 2016, Spotlight: Diversity in school leadership, AITSL, Melbourne.
- Rodriguez, KL, Schwartz, JL, Lahman, MKE & Geist, MR 2011, 'Culturally responsive focus groups: Reframing the research experience to focus on participants', *International Journal of Qualitative Methods*, vol. 10, no. 4, p. 413, <https://doi.org/10.1177/ 160940691101000407>.
- 100. Samuels, AJ 2018, 'Exploring culturally responsive pedagogy: Teachers' perspectives on fostering equitable and inclusive classrooms', SRATE (Southeastern Regional Association of Teacher Educators) Journal, vol. 27, no. 1, p. 22.
- Education Council 2019, Alice Springs (Mparntwe) Education Declaration, Education Services Australia, Council of Australian Governments Education Council, Carlton South, Vic, <www. educationcouncil.edu.au>.
- 102. Gonski, D 2018, Through Growth to Achievement: Report of the Review to Achieve Educational Excellence in Australian Schools, Commonwealth of Australia, Australian Government Department of Education and Training, Canberra, <a href="https://docs.education.gov">https://docs.education.gov</a>, au/documents/through-growth-achievement-report-reviewachieve-educational-excellence-australian-0>.
- 103. Teacher Education Ministerial Advisory Group 2014, Action Now: Classroom Ready Teachers. Teacher Education Ministerial Advisory Group Final Report, Australian Government Department of Education and Training, Canberra, <https://www.aitsl.edu.au/ tools-resources/resource/action-now-classroom-ready-teachers>.
- 104. Ferfolja, T 2009, 'Teach for Australia! Classmates as a model of teacher preparation', Professional Voice: Special Issue: Social Inclusion, vol. 7, no. 1, pp. 31–5, <http://www.aeuvic.asn.au/sites/ default/files/PV\_V7\_1.pdf>.
- Pilkington, K & Lock, G 2012, 'Education Direct: An alternative entry pathway to pre-service teacher education', *Australian Journal of Teacher Education*, vol. 37, no. 8, pp. 32–45.
- 106. Weldon, P, McKenzie, P, Kleinhenz, E & Reid, K 2012, Teach for Australia pathway: Evaluation report phase 2 of 3, Australian Council for Educational Research / Commonwealth of Australia, Australian Government Department of Education, Employment and Workplace Relations, Canberra, <a href="https://research.acer.edu.au/teachereducation/10/">https://research.acer.edu.au/teachereducation/10/</a>>.
- 107. Weldon, P, McKenzie, P, Kleinhenz, E & Reid, K 2013, Teach for Australia pathway: Evaluation report phase 3 of 3, Australian Council for Educational Research, <https://research.acer.edu.au/ teacher education/12/>.
- 108. Australian Institute for Teaching and School Leadership 2019, Initial teacher education: Data report 2019, AITSL, Melbourne, <https:// www.aitsl.edu.au/research/ite-data-report-2019>.
- Australian Institute for Teaching and School Leadership (AITSL), *Australian Teacher Workforce Data*, AITSL, Melbourne, <<a href="https://www.aitsl.edu.au/research/australian-teacher-workforce-data">https://www.aitsl.edu.au/research/australian-teacher-workforce-data</a>.
- 110. Department of Education, Skills and Employment, HEIMSHELP: Higher Education Student Data Collection, Australian Government Department of Education, Skills and Employment, Canberra, <a href="https://heimshelp.education.gov.au/he-student-data-collection">https://heimshelp.education.gov.au/he-student-data-collection</a>>.
- 111. Quality Indicators for Learning and Teaching (QILT), Australian Government Department of Education, Skills and Employment, Canberra / Social Research Centre, Melbourne, <https://www.gilt.edu.au/>.
- 112. Australian Bureau of Statistics, *Multi-Agency Data Integration Project (MADIP)*, page last modified 20 December 2019, <https://www.abs.gov.au/websitedbs/D3310114.nsf/home/ Statistical+Data+Integration+-+MADIP>.

- Organisation for Economic Co-operation and Development (OECD), TALIS – The OECD Teaching and Learning International Survey, OECD, Paris, France, <a href="http://www.oecd.org/education/talis/">http://www.oecd.org/education/talis/</a>>.
- 114. Australian Council for Educational Research 2020, *TALIS 2018: The Teaching and Learning International Survey*, Australian Council for Educational Research / Organisation for Economic Co-operation and Development, <a href="https://www.acer.org/au/talis">https://www.acer.org/au/talis</a>.
- Australian Bureau of Statistics 2020, 4221.0 Schools, Australia, 2019, data file, Australian Bureau of Statistics, <<a href="https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/4221.0>">https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/4221.0></a>.
- Australian Bureau of Statistics 2020, Cat. No. 3222.0 Population Projections, Australia, 2017 (base) – 2066, data category, Australian Bureau of Statistics, <<a href="https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3222.0>">https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3222.0></a>.
- 117. Department of the Prime Minister and Cabinet, *Data Integration Partnership for Australia*, Australian Government Department of the Prime Minister and Cabinet, Canberra, <a href="https://www.pmc.gov.au/">https://www.pmc.gov.au/</a> public-data/data-integration-partnership-australia>.
- Department of Employment, Skill shortage research methodology, Australian Government Department of Employment, Canberra, <https://docs.employment.gov.au/system/files/doc/other/ss\_ methodology\_0.pdf>.
- Victorian Institute of Teaching, CRT survey, Victorian Institute of Teaching, Melbourne, <a href="https://www.vit.vic.edu.au/registered-teacher/casual-relief-teachers/crt-survey">https://www.vit.vic.edu.au/registered-teacher/casual-relief-teachers/crt-survey</a>.
- 120. Wyatt-Smith, C, Du Plessis, A, Hand, K, Wang, J, Alexander, C & Colbert, P 2017, Why choose teaching? A matter of choice: Evidence from the field, a report prepared for the Queensland College of Teachers, Learning Sciences Institute Australia, Australian Catholic University, Brisbane, <https://www.qct.edu.au/ pdf/WhyChooseTeachingReport.pdf>.
- 121. McKenzie, P, Kos, J, Walker, M, Hong, J & Owen, S 2008, Staff in Australia's Schools 2007, Australian Council for Educational Research / Commonwealth of Australia, Australian Government Department of Education, Employment and Workplace Relations, Canberra, <https://research.acer.edu.au/tll\_misc/3>.
- 122. McKenzie, P, Rowley, G, Weldon, P & Murphy, M 2011, Staff in Australia's schools 2010: Main report on the survey, Australian Council for Educational Research / Commonwealth of Australia, Australian Government Department of Education, Employment and Workplace Relations, Canberra, <a href="https://research.acer.edu.au/tll\_misc/14">https://research.acer.edu.au/tll\_misc/14</a>>.
- 123. McKenzie, P, Weldon, P, Rowley, G, Murphy, M & McMillan, J 2014, Staff in Australia's schools 2013: Main report on the survey, Australian Council for Educational Research / Commonwealth of Australia, Australian Government Department of Education, Canberra, <https://research.acer.edu.au/tll\_misc/20/>.
- 124. Goss, P, Sonnemann, J & Nolan, J 2019, Attracting high achievers to teaching, Grattan Institute Report No. 2019-08, July 2019, Grattan Institute, Carlton, Victoria, <a href="https://grattan.edu.au/wp-content/uploads/2019/08/921-Attracting-high-achievers-to-teaching.pdf">https://grattan.edu.au/ wp-content/uploads/2019/08/921-Attracting-high-achievers-toteaching.pdf</a>>.
- 125. Teachers Health & Australian Primary Principals Association, Principal Health and Wellbeing: Reports, Principal Health, Fitzroy, Victoria / Australian Catholic University, North Sydney / Deakin University, Melbourne, <https://www.principalhealth.org/au/ reports.php>.
- Australian Curriculum, Assessment and Reporting Authority 2020, My School, ACARA, <a href="https://myschool.edu.au/>">https://myschool.edu.au/</a>.
- 127. Education Council 2020, Education Council Meeting Communique – 15 December 2020, Education Council, Carlton South, Victoria, <http://ec.edu.au/site/DefaultSite/filesystem/documents/ Communiques%20and%20Media%20Releases/2020%20 Communiques/Education%20Council%20Meeting%20 Communique%20-%2011%20December%202020%20.pdf>.





### aitsl.edu.au

Telephone: +61 3 9944 1200 Email: info@aitsl.edu.au

AITSL is funded by the Australian Government