Australian Government

National Skills Commission

2022 Skills Priority List

Key Findings Report

6 October 2022



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1. Overview

1.1 Introduction

The Skills Priority List (SPL) provides a detailed view of occupations in shortage, nationally, and by state and territory, as well as the future demand for occupations in Australia. The list is a single source of intelligence on occupations in shortage. While the SPL helps inform advice on the targeting of policy initiatives, it is important to note that it is not the only input into any such advice.

The SPL is released annually as a point-in-time assessment of the labour market. The list and occupation assessments are determined through extensive statistical analysis of the labour market, employer surveys, and broad stakeholder engagement with peak bodies, industry groups, professional associations, unions, regional representative bodies and major employers in the Australian labour market, combined with consultations with federal, state and territory governments.

The use of various sources of evidence and stakeholder consultations ensures the SPL represents a comprehensive assessment of occupational shortages. The NSC thanks all participants for their input and their expertise in developing the SPL. In particular, we thank state and territory agencies for their insights into the occupational shortages that are specific to their jurisdictions, including points of difference in their labour market when compared to the national picture.

This Key Findings Report provides readers with a high-level overview of results from the 2022 SPL, focussing on the themes that emerged during its production. A common pattern uncovered was that occupation shortages were most acute in Professional occupations, requiring higher level qualifications and experience, and Skill Level 3 occupations among Technicians and Trades Workers.

The past year has shown a significant tightening in the Australian labour market, and the findings of the 2022 SPL reflect this, with a large proportion of diverse occupations in shortage. The ongoing effects of COVID-19, along with the changing economic landscape have influenced a range of challenges in many occupations, including Health Professionals and Teachers, while ongoing issues in the labour market remain, such as persistent shortages of Technicians and Trades Workers.

For further detail on how the 2022 Skills Priority List was produced, please refer to the Skills Priority List Methodology (v 1.2).

1.2 A tight labour market has implications for skill shortages

This section of the paper outlines what the strength of the labour market means for skills shortages.[1] An important conclusion is that a tightening labour market will generally indicate that employers will increasingly compete for workers, resulting in a greater number of occupations in shortage as employers are unable to fill advertised vacancies.

ABS data shows that the labour market has tightened significantly since 2021.[2] The tightening can be gauged from the unemployment rate, which fell to 3.4% in July 2022 – the lowest rate recorded since August 1974. Further, the employment-to-population ratio stands at 64.2%, slightly down from a record high the previous month. These developments suggest the supply of workers available to employers is constrained.

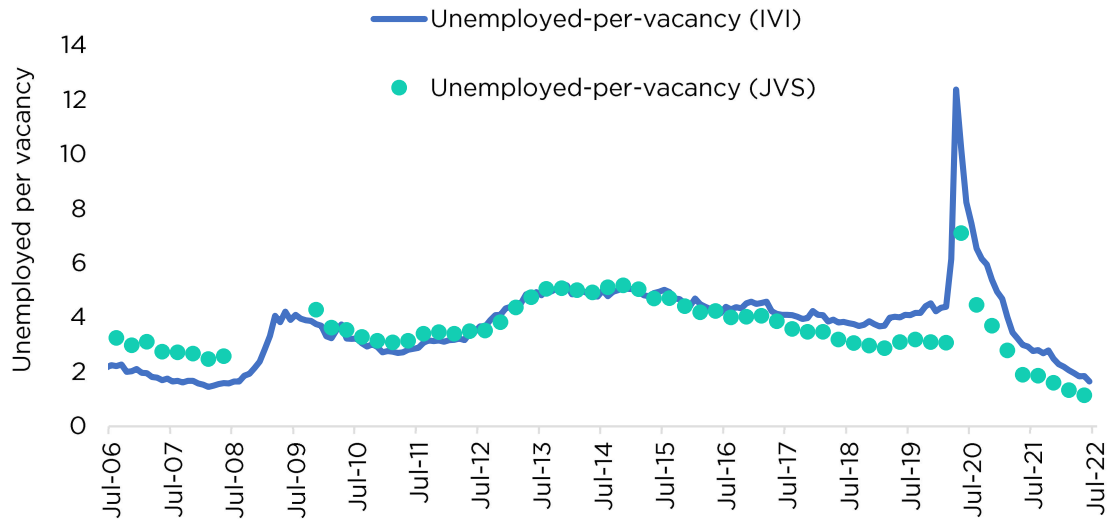
At the same time, the demand for workers has increased rapidly over the past two years to 2022. The number of jobs advertised in Australia reached 309,900 in August 2022, a 42% increase from the same time last year. This figure is among the highest levels on record since the inception of the Internet Vacancy Index (IVI) series in January 2006.[3] This growth in labour demand has contributed to a reduction in the number of unemployed persons per job vacancy, a trend which can be seen since June 2020 (see Figure 1).

[1] An occupation is considered to be in shortage when employers are unable to fill or have considerable difficulty filling vacancies for an occupation or cannot meet significant specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and in reasonably accessible locations. Based on this definition, the primary measure of an occupational shortage is the ability of employers to fill vacancies (known as the vacancy fill rate).

[2] ABS, *Labour Force, Australia*, July 2022, *seasonally adjusted* data.

[3] NSC, *Internet Vacancy Index, Preliminary,* August 2022, *seasonally adjusted* data

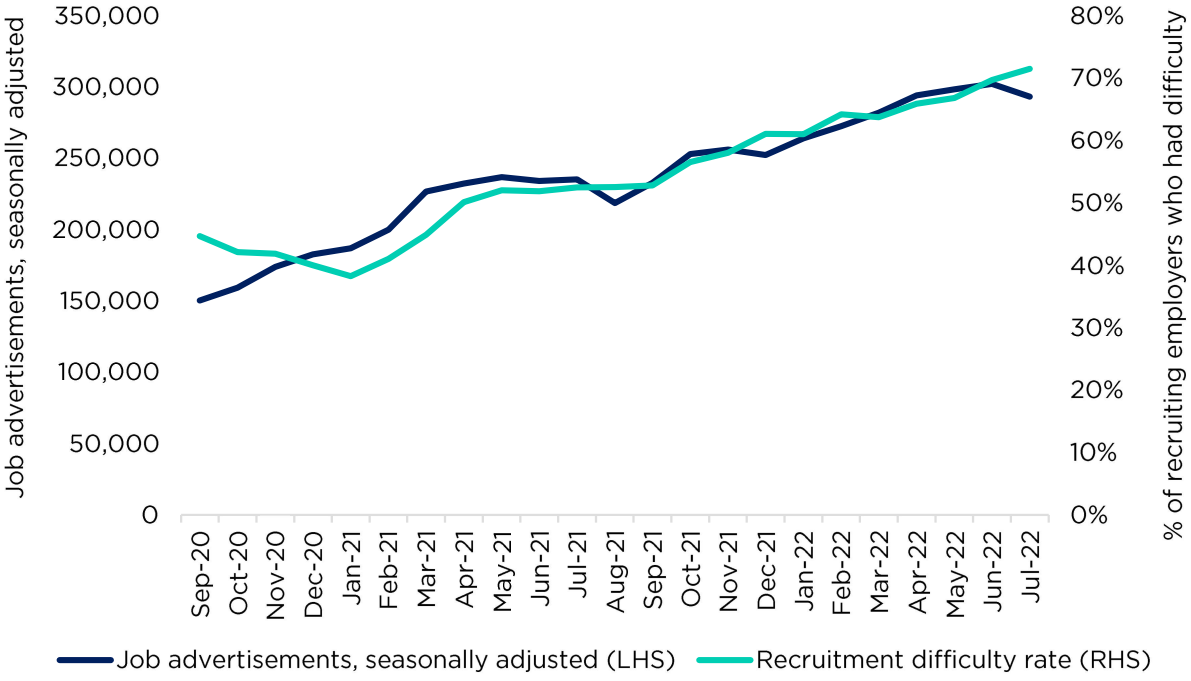
Figure 1: Unemployed persons per job vacancy, July 2006 to July 2022



Source: NSC, *Internet Vacancy Index,* July 2022; ABS, *Labour Force, Australia,* July 2022, ABS, *Job Vacancies, Australia,* May 2022, *all seasonally adjusted data.*

Moreover, Figure 2 shows that the surge in online job advertisements seen in 2022 – also apparent in 2021 – is reflected in increases in the recruitment difficulty rate during those periods.

Figure 2: Recruitment difficulty (3-month moving average) and IVI job ads (seasonally adjusted), September 2020 to July 2022



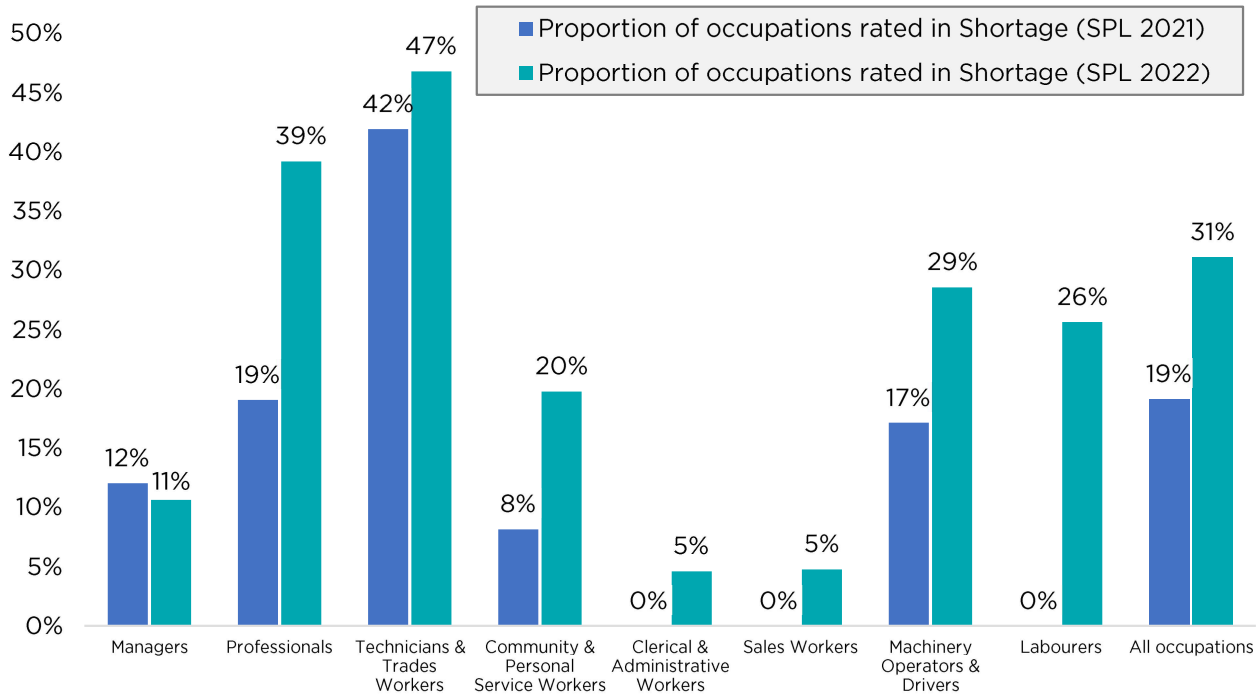
Source: NSC, *Recruitment Experiences and Outlook Survey, August 2022;* NSC, *Internet Vacancy Index, August 2022, seasonally adjusted data*

Additional evidence of recruitment difficulty can be found in the Survey of Employers who Recently Advertised (SERA), which shows that employers have received fewer suitable applicants per vacancy in 2021-22 compared with 2020-21, and more vacancies remained unfilled. Specifically, the vacancy fill rate declined for 51 out of 63 six-digit ANZSCO occupations surveyed in both 2020-21 and 2021-22.[4] On average, across these occupations, the fill rate declined by 13 percentage points from 61% to 48%.

Consistent with the aforementioned developments, the 2022 SPL shows that, overall, more occupations were in national shortage compared to 2021 (Figure 3 and Table 1).

At a macro level, in the 2022 SPL, 286 out of 914 (or 31%) of occupations assessed were in shortage compared with 153 out of 799 (or 19%) of assessed occupations in 2021. This reflects occupations that were rated nationally as either 'S' (for shortage in both metropolitan and regional areas nationally) or 'R' (for shortage in regional areas nationally). The remaining 628 occupations were rated nationally as 'NS' (no shortage), noting that some of these occupations were assessed as being in shortage in some states and territories.

Figure 3: Proportion of occupations in shortage on the 2021 and 2022 SPL, by Major Occupation Group



Source: NSC, *2022 Skills Priority List*

[4] Only includes those occupations with sufficient sample sizes across both periods.

Table 1: Count and proportion of occupations in shortage on the 2021 and 2022 SPL, by Major Occupation Group

Major Occupation Group	2021 SPL			2022 SPL		
	Occupations assessed	Occupations in Shortage (No.)	Occupations in Shortage (%)	Occupations assessed	Occupations in Shortage (No.)	Occupations in Shortage (%)
Managers	83	10	12%	94	10	11%
Professionals	283	54	19%	324	127	39%
Technicians and Trades Workers	167	70	42%	203	95	47%
Community and Personal Service Workers	86	7	8%	91	18	20%
Clerical and Administrative Workers	62		0%	65	3	5%
Sales Workers	20		0%	21	1	5%
Machinery Operators and Drivers	70	12	17%	77	22	29%
Labourers	28		0%	39	10	26%
All occupations	**799**	**153**	**19%**	**914**	**286**	**31%**

Source: NSC, *2022 Skills Priority List*

Comparisons of the findings of the 2021 and 2022 SPL fell into three broad categories: occupations that were newly in shortage in 2022, those that were in shortage in both years and those that were no longer in shortage compared to 2021.

The tight labour market is reflected in the year-on-year changes in the SPL, with 129 occupations being assessed as in shortage in 2022 that were not in shortage in 2021.[5] Additionally, there were 127 occupations that were in shortage in both years.[6] Finally, there were only 17 occupations that were no longer in shortage in 2022 after being in shortage in 2021.[7] Of the 286 occupations in shortage in 2022, 30 occupations were not assessed in 2021, due to a change in the ANZSCO classification.[8]

The occupations which were in shortage in both years were concentrated in Professional occupations and Technicians and Trades Worker occupations.

Labour market statistics that reflect employment in each ANZSCO six-digit occupation are only provided once every five years, via the ABS Census. Table 2 below presents the top 20 largest employing six-digit occupations on the SPL, based on 2016 Census data.[9] From this list, 11 are in shortage, nationally.[10] These 11 occupations also cover around 1.3 million workers and represented about 12% of total employment (of around 10.7 million) in 2016. However, all occupations in shortage on the SPL in 2022 comprised 3.5 million workers and 32% of total employment based on 2016 Census data.[11]

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[5] The full list is in Appendix A.

[6] The full list is in Appendix B.

[7] The full list is in Appendix C.

[8] Different sets of occupations were assessed for the 2022 SPL compared with the 2021 SPL. This is a result of changes to the ABS ANZSCO classification structure and changes to the NSC SPL Methodology where not elsewhere classified (nec) occupations were included in the SPL this year. A comparative sample was created to enable direct comparisons between 2021 and 2022. The sample composed of 780 occupations.

[9] The ABS Labour Force Survey does not provide estimates of employment at the 6-digit level. Labour force related variables from the 2021 Census will not be released by the ABS until October 2022.

[10] Occupations in shortage also includes occupations in regional shortage.

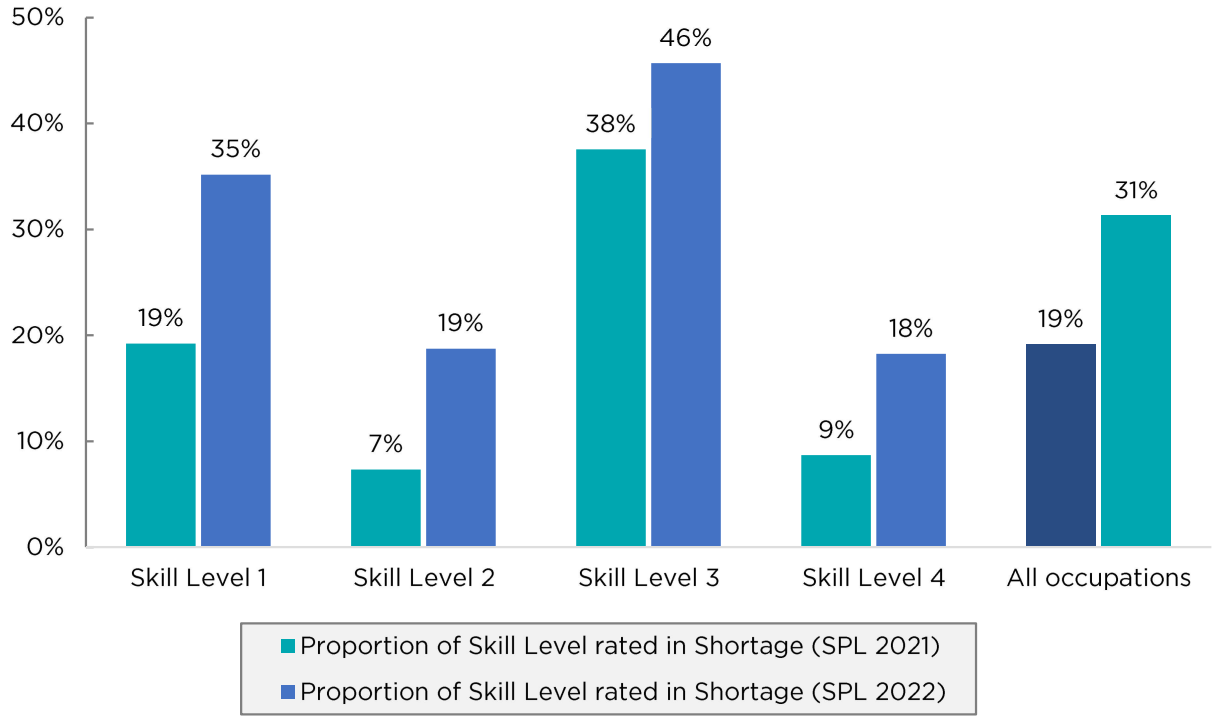
[11] This calculation is based on the 2013 ABS ANZSCO structure.

Table 2: Top 20 largest employing occupations on the SPL, by 2022 SPL ratings

2021 ANZSCO Code	Occupation title	Labour Market Rating	Future Demand	Employment size (in the 2016 ABS Census)
531111	General Clerk	NS	Moderate	219,800
142111	Retail Manager (General)	S	Moderate	170,300
241213	Primary School Teacher	S	Moderate	148,500
241411	Secondary School Teacher	S	Moderate	137,300
733111	Truck Driver (General)	S	Moderate	137,200
423111	Aged or Disabled Carer	S	Strong	132,300
221111	Accountant (General)	NS	Moderate	130,100
512111	Office Manager	NS	Moderate	115,600
341111	Electrician (General)	S	Strong	111,900
741111	Storeperson	NS	Strong	108,200
431511	Waiter	NS	Strong	106,400
131112	Sales and Marketing Manager	NS	Moderate	100,600
421111	Child Care Worker	S	Strong	96,300
542111	Receptionist (General)	NS	Moderate	93,700
551111	Accounts Clerk	NS	Moderate	93,300
331212	Carpenter	S	Soft	92,500
511112	Program or Project Administrator	S	Strong	88,500
351311	Chef	S	Moderate	80,700
551211	Bookkeeper	NS	Soft	79,200
321211	Motor Mechanic (General)	S	Moderate	73,500

Source: NSC, *2022 Skills Priority List*; ABS, *2016 Census of Population and Housing*

Figure 4: Proportion of occupations in shortage on the 2021 and 2022 SPL, by Skill Level [12]



Source: NSC, *2022 Skills Priority List*

The proportion of occupations in shortage also rose across every Skill Level between 2021 and 2022 (Figure 4). Skill Level 3 occupations, which are occupations generally needing a Certificate III or IV – and includes traditional trade occupations – recorded the highest share of occupations in shortage (46% in 2022, up from 38% in 2021).

On the other hand, the largest increase in the share of occupations in shortage was for Skill Level 1 occupations, which are occupations generally needing a bachelor degree or higher and are predominantly Professional occupations. The share of these Skill Level 1 occupations in shortage rose from 19% in 2021 to 35% in 2022.

[12] Skill Level 5 occupations are excluded from the SPL. Skill Level 1 occupations are commensurate with a bachelor degree or higher educational attainment level. Skill Level 2 occupations are commensurate with an advanced diploma or diploma educational attainment level. Skill Level 3 occupations are commensurate with a certificate IV or III educational attainment level. Skill Level 4 occupations are commensurate with a certificate II or III educational attainment level. Skill Level 5 occupations are commensurate with a certificate I or secondary education attainment level.

2. Major occupation group findings

In this part of the report, comparisons between 2021 and 2022 SPL findings are made by major occupation group. The section also draws on data from SERA to shed light on potential reasons for shortages among the occupation groups.

2.1 Professional occupations

The Professionals occupation group saw a large increase in the number of occupations in shortage, with about two in five occupations (or 39%) in shortage in 2022, compared with one in five (or 19%) in 2021. This is the second largest percentage increase in shortages within any major occupation group. The result was largely driven by Health Professional occupations, which is discussed in further detail later in the paper. Large employing Professional occupations that were found to be in shortage were primarily health and education occupations, including Primary School Teacher, Secondary School Teacher, General Practitioner and Registered Nurses.

Most employers recruiting for Professionals required applicants to hold qualifications, most often a bachelor's degree. Employers though, typically held additional requirements for applicants, with SERA data for Professional occupations showing that employers found roughly two thirds of applicants who held the required qualifications unsuitable. A lack of experience was the most cited reason for finding applicants unsuitable.

Furthermore, SERA data shows around one quarter of unfilled Professional vacancies remained unfilled despite employers finding suitable applicants. Most commonly this was because the applicant found alternative work in the same occupation, which provides some evidence of strong competition for experienced and qualified workers in this occupation group.

The overall findings relating to Professional occupations are in line with Australia's tightening labour market. Structural change may also play a role in skill shortages within Professional occupations. Services – particularly knowledge-intensive services such as Professional, Scientific and Technical; Health Care and Education – are among the fastest growing industries in Australia across both employment and output. Over

time, these industries have comprised a greater proportion of the Australian economy. As the economy continues to shift toward services, the ongoing demand for Professional occupations has the potential to translate into a greater number of skill shortages among the Professionals occupation group, especially if the supply of workers is unable to meet the growing demand. The 2022 SPL found that over 85% of professional occupations, which have a large presence in service industries, had strong or moderate future demand.

2.2 Technicians and Trades Workers occupations

Noting the change in the Professionals occupation group, shortages were still most prevalent within the Technicians and Trades Workers occupation group, with almost half (47%) of all occupations in this group in shortage in 2022. Last year, shortages were found in 42% of the Technicians and Trades Workers occupations. The 2022 SPL reveals that the largest employing occupations in shortage in this major group were Electrician (General), Carpenter, Chef and Motor Mechanic (General).

Some shortages within this broad group of occupations appear to be persistent over time.[13] This means that economic developments, such as the tightening or loosening of the labour market, simply exacerbate or mitigate the underlying trend of shortages among some occupations within Technicians and Trades Workers.

The tightness in the labour market for Technicians and Trades Workers is also evident in the SERA data, which shows that employers typically receive small pools of applicants, with only around a third being suitably qualified. Most employers required applicants to hold a formal qualification, most commonly a Certificate III or IV, or an equivalent trade qualification. Despite this, employers still mostly struggled to find applicants who satisfied their experience requirements, with the majority of applicants (65%) in this major group being found unsuitable due to a lack of experience in the occupation.

[13] The historical analysis provides a broad trend only and focused on pre-COVID 19 pandemic years to avoid including occupations that fell into shortage due to the economic impacts of COVID 19.

2.3 Other occupation groups

Table 1 also shows that shortages increased in Machinery Operator and Driver occupations (29% in 2022 compared to 17% in 2021). Large employing occupations within this major group that were in shortage include Truck Driver (General) and Bus Driver.

Data from the SERA show employers of Machinery Operators and Drivers typically valued experience over qualifications, with more than 80% of employers requiring applicants with experience, while only around half required applicants with a relevant qualification.

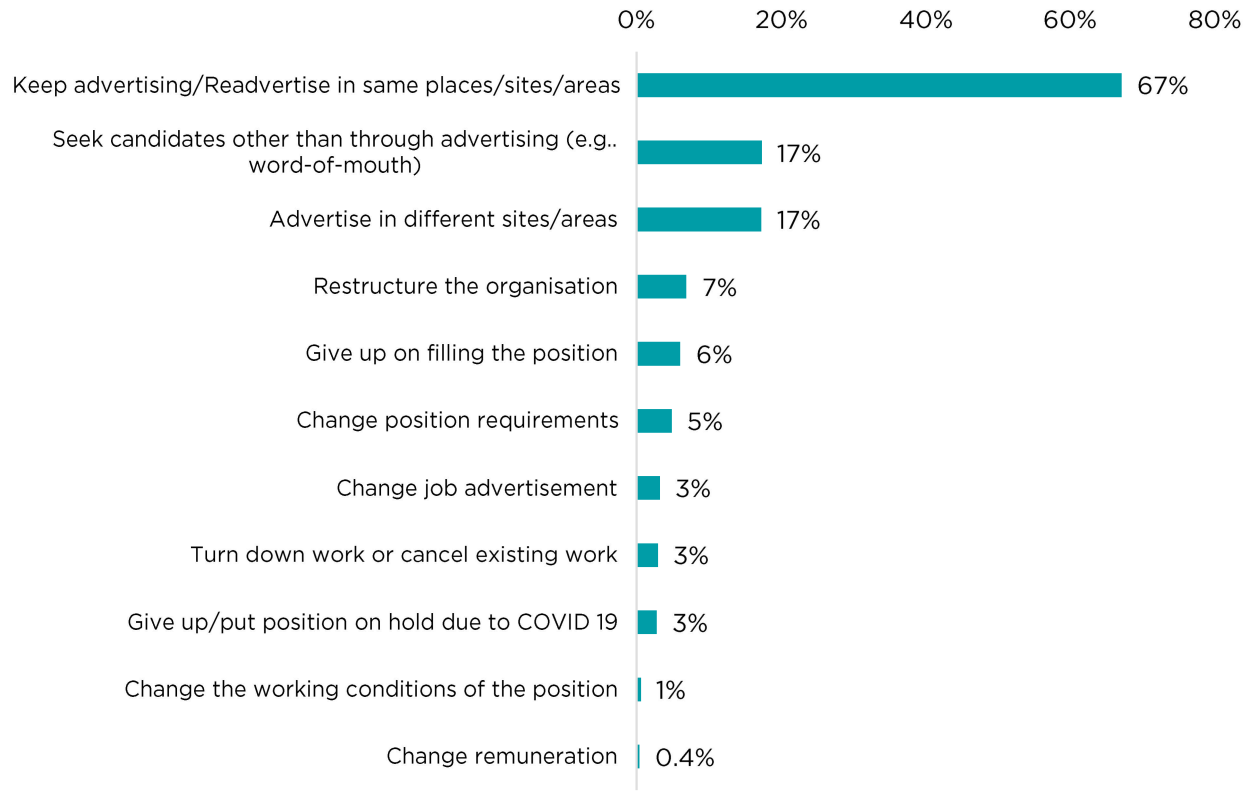
The proportion of occupations in shortage also increased in the Community and Personal Service Worker occupation group (20% in 2022 compared to 8% in 2021). The largest employing occupations in shortage in this major group are Aged or Disabled Carer and Child Care Worker. Data from the SERA show that for occupations surveyed within this major occupation group, employers received small pools of applicants for advertised positions, and considered fewer than two applicants as suitable on average, per vacancy. A lack of experience was the most common reason that applicants were considered unsuitable with around 80% of employers requiring experienced applicants. On average, employers considered around one year of experience to be necessary.

Depending on the occupation, the share of employers requiring applicants to hold formal qualifications varied considerably. For example, all employers in Child Care Worker occupations require mandated minimum formal qualifications, compared with around 90% of employers recruiting for Aged and Disabled Carer, where minimum qualifications are highly desired but not mandatory. Other occupations can see a much smaller share of employers seeking formal qualifications.

Figure 5 below shows the most common actions taken by employers in response to unfilled vacancies as reflected in the NSC's SERA survey. The most common action of employers with unfilled vacancies was to continue advertising in the same place (67%) or advertise in a different way (17%).

Employers advertising for Labourer positions were the most likely to continue advertising in the same area, followed by employers of Community and Personal Service Workers and Machinery Operators and Drivers. Over 70% of employers with unfilled vacancies in these major occupation groups undertook this course of action.

Figure 5: Employer responses to unfilled vacancies, per cent



Source: NSC, *Survey of Employers who Recently Advertised,* unpublished data

Notably, employers were more likely to restructure the organisation (7% of employers), give up on filling the position (6%) or change the position requirements (5%) rather than change remuneration (less than 1% of employers).

Employers in the Manager occupation group were most likely to undertake a restructure of the organisation in response to unfilled vacancies, followed by employers in Professional occupation group and Sales Worker occupations.

Worth noting is that the SERA questionnaire focusses on a single vacancy (at a point in time) and does not, for example, ask about all actions taken in the past year to resolve an unfilled position. For example, the June 2022 Business NSW *Workforce Skills Survey* found that 47% of businesses reported increasing wages, salaries or bonuses for existing staff to addresses workforce shortages in the last 12 months. That is, it is possible that a greater share of employers have, over time, needed to adjust remuneration in order to fill positions relative to the results reported through the NSC's SERA survey for a specific vacancy.

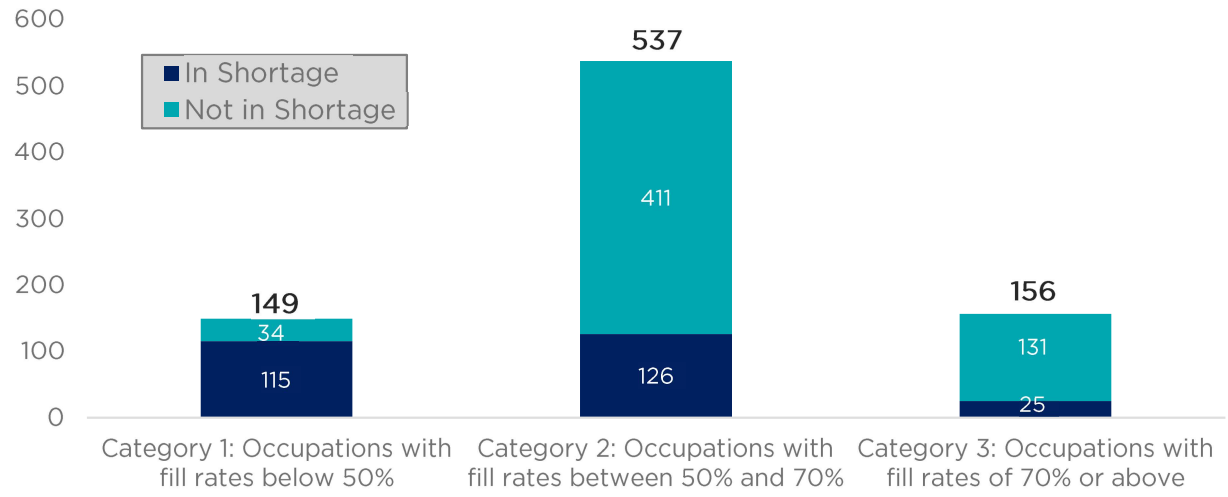
3. Vacancy fill rates are a sound indicator of skill shortages

This segment presents the connection between the estimated vacancy fill rates from the SPL model and the final labour market ratings of occupations.[14] While the final labour market rating for occupations is based on a holistic assessment of all available sources of information and evidence, the fill rate is the primary measure of shortage in an occupation, as it aligns to the definition of shortage used in the Skills Priority List.

The estimated fill rates have been formulated to create a predicted percentage of vacancies that will be filled for a particular occupation over the 12-month research period.

A key conclusion from this section is that an occupation is generally in shortage when the estimated fill rate shows that employers are unable to fill or have considerable difficulty filling vacancies. Additional factors, such as skill level or experience requirements, can influence the ability of employers to fill vacancies, and ultimately the labour market ratings.

Figure 6: Count of occupations on the 2022 SPL, by three estimated fill rates categories



Source: NSC, *2022 Skills Priority List*

[14] The estimated fill rate incorporates many labour market indicators (for example, internet vacancy numbers, unemployment rates, employment figures) and also includes SERA data, when available, to further enhance the robustness of this research.

Generally, lower estimated fill rates imply a tighter labour market for that occupation and therefore more likelihood that the occupation will be in shortage. On the other hand, higher estimated fill rates suggest that employers are having less difficultly filling vacancies, and these occupations are less likely to be in shortage. The shortage ratings for occupations on the SPL generally follow this pattern (Figure 6).

There are 149 occupations with estimated fill rates below 50%. Of these, most (or 115) were in shortage on the SPL. For these occupations, the number of suitable applicants per vacancy was also generally quite low. SERA data shows roughly four-fifths of applicants were found unsuitable for these vacancies, with applicants most commonly being found unsuitable due to a lack of experience and/or a lack of qualifications. A large proportion of employers (around 30%) advertising vacancies for these occupations required specialised skills or experience, with a lack of specific skills or experience being the third most common reason applicants were found unsuitable.

Consistent with the overall findings reported previously, most of the low estimated fill rate occupations found in shortage were concentrated in the Professionals and Technician and Trades Worker occupation groups. Examples include Educational Psychologist within the Professionals occupation group and Motor Mechanic within the Technicians and Trades Worker occupation group. Data from the SERA show that across both major occupation groups, the number of suitable applicants received per vacancy was around or below the average for all occupations. The most common reason that employers considered applicants unsuitable was a lack of experience in the occupation, followed by lack of qualifications or registration.

Of the 34 occupations with low estimated fill rates (i.e. less than 50%) that are not in shortage, the majority generally require a lower qualification, such as a Certificate I or II, or equivalent experience, indicating a relatively low barrier to entry. Of these, most are within the major occupation groups of Machinery Operators and Drivers, and Labourers. Occupations that were higher in Skill Level in other major groups had very low levels of employment and limited data availability, including stakeholder information or other sources of evidence, resulting in a limited ability to detect shortages.

There are 156 occupations with fill rates of 70% or above. The majority (131 or 84%) were not in shortage. Again, worth noting are those that were found to be in shortage. Of the 25 that were in shortage, most (about 15) were all nursing occupations, including Registered Nurses, Nurse Practitioners and Enrolled Nurses.

Others included teaching professions or ICT professionals. A common thread among these occupations is that they require high level of skill, qualification, and experience. In these instances, a large number of diverse stakeholders presented evidence of shortages.

There are a group of occupations that fall between the high and low vacancy fill rates. Indeed, 537 occupations that fell into this category with 411 (or 77%) estimated to be not in shortage.

In instances the estimated vacancy fill rate does not necessarily provide a strong indication, other factors can determine whether the occupation is in shortage or not.

For example, Pet Groomer and Kennel Hand were not in shortage in either 2021 or 2022 while still having relatively low estimated vacancy fill rates. These occupations do not appear to have been affected by developments in the labour market. Partly explaining the finding could be that these occupations generally do not require extensive experience and have low formal qualification requirements, posing few barriers to job entry.

Of the remaining 126 occupations that had a fill rate of between 50% and 70% and were found to be in shortage, a large portion (40% or 51 occupations) were higher skill level Professional occupations, while a further 26% (or 33 occupations) were among the Technicians and Trades Worker group.

4. Spotlights on selected occupations

The above section of the report identifies a common finding: occupational shortages have tended to be in Professionals and Technicians and Trades Workers occupation groups. In this final piece of the report, three brief case studies are provided relating to occupations within these major occupation groups.

4.1 Shortages surge for Health Professionals

Within the Professionals group, the proportion of Health Professional occupations in shortage went up by 47 percentage points in 2022 – the largest of any sub major group. As shown in Figure 7, the number of suitable applicants for Health Professionals almost halved between the SPL 2021 research period (July 2020 to March 2021) and the SPL 2022 research period (July 2021 to March 2022). Also, employers struggled to fill vacancies for these occupations, with around half of the vacancies for Health Professionals remaining unfilled. While Health Professional occupations are at a high skill level, requiring a high level of qualification and experience, which can pose barriers to job entry, the result appears mostly driven by the impacts of the COVID-19 pandemic.

The ABS reported that the Health Care and Social Assistance industry accounted for the largest share of people who changed jobs in the year ending February 2022 (12.2%).[15] This may indicate that the Health Care and Social Assistance industry is experiencing workforce instability including a temporary redistribution of the Australian workforce in response to the COVID-19 pandemic, as well as burn-out of workers.

On redeployment in response to the pandemic, an online survey with 7,846 respondents showed that during the height of the pandemic (August to October 2020), 21.5% of frontline healthcare workers increased their unpaid work hours, 16.8% were redeployed to a new work area, and 27.3% changed their work role.[16] Regarding

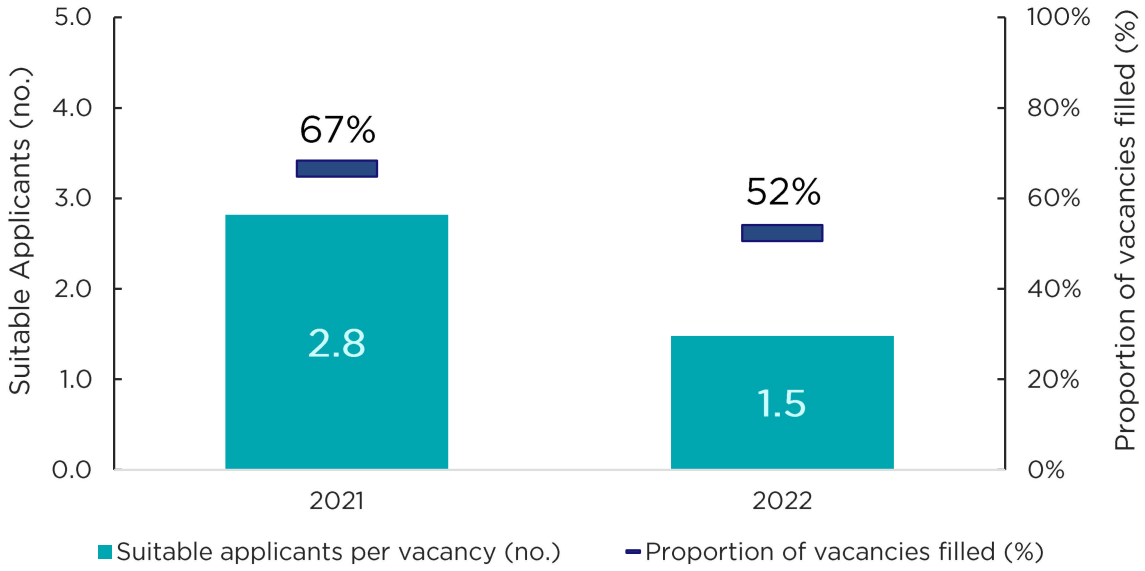
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[15] ABS, Job mobility, February 2022

[16] Smallwood et al. *Occupational Disruptions during the COVID-19 Pandemic and Their Association with Healthcare Workers' Mental Health,* September 2021

burn out, a survey (conducted in August to October 2020) showed that over 70% of healthcare workers experienced moderate to severe burn out.[17] The impacts of redeployment and burn out could be lingering and/or ongoing as since the initial COVID-19 outbreak in Australia, there have been multiple waves of outbreaks of COVID-19.

Figure 7: Proportion of vacancies filled (%) and suitable applicants per vacancy (no.) for Health Professionals, 2021 and 2022 SPL research periods[18]



Source: NSC, 2022 and 2021 *Skills Priority List*

Registered Nurses (ANZSCO 2544) are the largest employing occupation in the Health Care and Social Assistance industry. All Registered Nurse occupations, at the six-digit ANZSCO level, were in shortage on the 2022 SPL. A broad range of other Health Professional occupations, including General Practitioners and specialists were also in shortage.

The demand for Health Professionals has strengthened considerably in recent years. The number of advertised vacancies for these workers has increased significantly since early 2020, more than doubling to be at an historical peak in July 2022.[19] Furthermore, Health Professional occupations are predicted to experience moderate to high demand over the next five years. These findings are consistent with population ageing in Australia, placing upward pressure on demand for Health Professionals going forward.

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[17] Smallwood et al. *High levels of psychosocial distress among Australian frontline healthcare workers during the COVID-19 pandemic: a cross-sectional survey,* September 2021

[18] Research period for 2021, July 2020 to March 2021; Research period for 2022, July 2021 to March 2022.

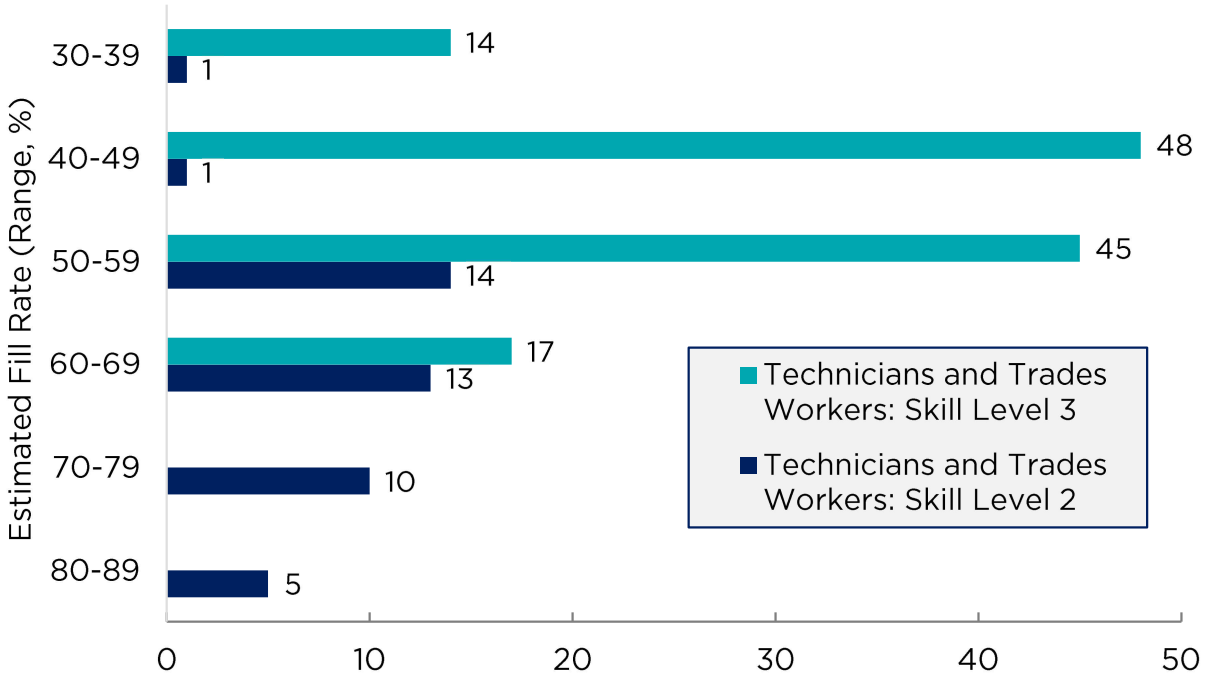
[19] NSC, *Internet Vacancy Index,* July 2022, *seasonally adjusted* data

4.2 Apprentice-trained Technicians and Trades Workers remain in shortage

Within the Technicians and Trades Worker occupation group, the estimated vacancy fill rate was particularly low for occupations in Automotive and Engineering Trades, Construction Trades, Electrotechnology and Telecommunications Trades. Supply of workers for these trade groups is often through an apprenticeship training pathway, which aligns broadly with a Skill Level 3 rating in ANZSCO. The greatest variance of estimated fill rates occurred within the Technicians and Trades Worker group, with high vacancy fill rates estimated for some occupations, and low vacancy fill rates estimated for others.

Overall, Skill Level 3 Technicians and Trades Workers had much lower estimated vacancy fill rates compared with the Skill Level 2 cohort of Technicians and Trades Worker occupations (Figure 8). This potentially indicates that employers are having difficulty filling vacancies for positions that require an apprenticeship training pathway and provides some explanation for the variance of estimated fill rates within the broader Technicians and Trades Workers occupation group.

Figure 8: Count of Technician and Trades Worker Occupations assessed for the 2022 SPL per fill rate range by Skill Level



Source: NSC, *2022 Skills Priority List*

Moreover, 59% (84 of 143) of Skill Level 3 Technician and Trades Worker occupations were in shortage on the 2022 SPL, compared with just 20% (11 out of 56) of Skill Level 2 occupations.[20] Shortages also appear to be more persistent over time among the Skill Level 3 group of Technicians and Trades Worker occupations. Last year, over half (52%) were in shortage.[21] In addition, 11 occupations that were in shortage in 2021 and 2022 were also found to be consecutively in shortage in the 5 years to 2019, based on analysis undertaken by the Department of Education, Skills and Employment (and its predecessors).

4.3 Teachers: a tightening labour market

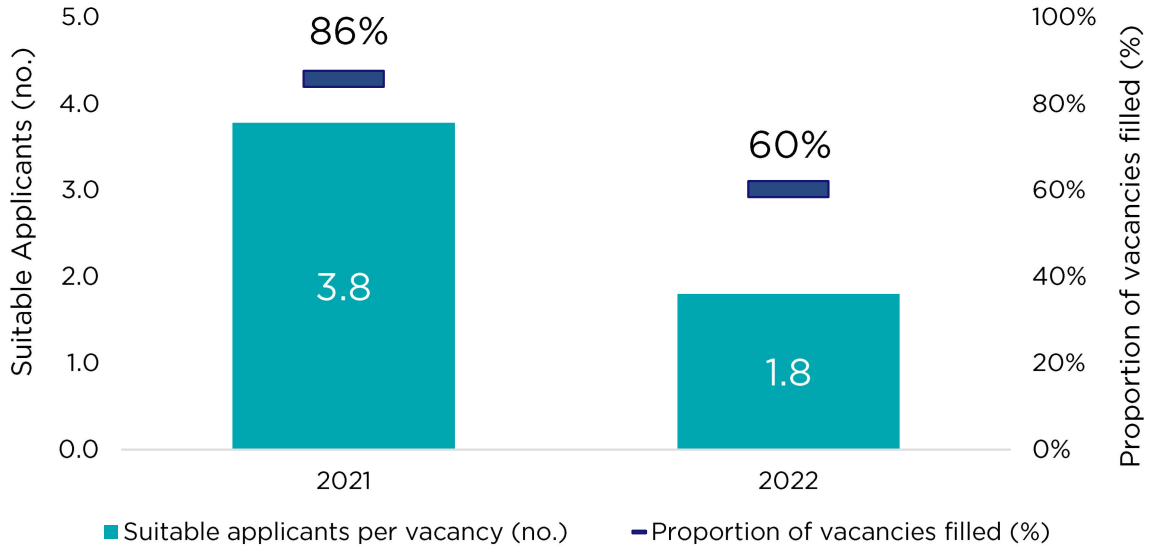
The labour market has tightened for Education Professionals in recent years. There has been a sharp decline in suitable applicants for Education Professionals, including Early Childhood (pre-primary school) Teachers, Primary School Teachers, and Secondary School Teachers. As shown in Figure 9, the number of suitable applicants (per vacancy) for Education Professionals more than halved for the 2022 SPL research period, compared with the SPL 2021 research period.[22] Also, employers had much more difficulty filling vacancies for these occupations in 2022 compared to 2021. It is also worth noting that the estimated fill rate for Vocational Education Teacher/Polytechnic Teacher declined significantly over the past year, from more than 70% in 2021 to less than 50% in 2022.

[20] Note, the 2022 SPL uses the ANZSCO 2021 classification and NEC occupation are also now in scope.

[21] The changes to ABS ANZSCO classification and the increase of SPL scope means that the occupations on the 2022 SPL do not align exactly with the occupations on the 2021 SPL.

[22] Research period for 2021 is July 2020 to March 2021; Research period for 2022 is July 2021 to March 2022.

Figure 9: Proportion of vacancies filled (%) and suitable applicants per vacancy (no.) for Education Professionals, 2021 and 2022 SPL Research Periods



Source: NSC, 2022 and 2021 *Skills Priority List*

However, analysis suggests that the number of graduates who are trained and qualified as Primary School and Secondary School teachers in the Australian labour market should be sufficient to meet demand.[23] This highlights the complexities of occupational skills shortages in Australia, and that a supply of trained professionals may not necessarily translate to an adequate supply to meet labour market needs.

The 'true' supply of workers for teaching occupations may be influenced by a range of other factors including but not limited to workplace conditions,[24] remuneration and perceptions of remuneration,[25] impacts on wellbeing and mental health,[26] skills wastage and attrition such as loss of qualified teachers to other occupations. Worth noting is that the median age for the teaching workforce was 40 years in 2021, which is similar to that of Professional occupations but is older compared with some other occupation groups such as Sales Worker, which has a median age of 29 years.[27]

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[23] Department of Education, Skills and Employment, 2020 Section 14 Award course completions - Department of Education, Skills and Employment, Australian Government (dese.gov.au); Department of Education, Skills and Employment, Australian Government (dese.gov.au), Completion Rates of Higher Education Students - Cohort Analysis, 2005-2020 ; Productivity Commission Schools Workforce - Research report (pc.gov.au), 2012.

[24] Teacher Workforce Shortages – Issues Paper, Department of Education, Skills and Employment, August 2022; National Children's Education and Care Workforce Strategy Shaping Our Future: A ten-year strategy to ensure a sustainable, high-quality children's education and care workforce 2022–2031 (acecqa.gov.au)

[25] Information about the Quality Initial Teacher Education Review - Department of Education, Skills and Employment, Australian Government (dese.gov.au)

[26] Survey data from the Australian Institute for Teaching and School Leadership (Workforce Characteristics Report, December 2021) found 25% of teachers intend to leave the profession before retirement and a further 34% were considering doing so. Of those, 60% cent said it was because teaching was affecting their wellbeing or mental health.

[27] ABS, *Participation, Job Search and Mobility, Australia,* February 2021 [Tablebuilder].

However, 16% of teachers are aged over 60 years and are likely to retire in the next five to ten years.[28]

The Department of Education's *Next Steps: Report of the Quality Initial Teacher Education Review, 2021* highlighted that a recurring theme in many of the submissions to the review was the need for greater insight into the factors that influence teachers' decisions to leave the profession for both early career teachers and other teachers. If supply and demand is to be fully understood, greater insight into teacher attrition rates across the teaching lifecycle is needed.[29]

Australia's Education Ministers held a Teacher Roundtable on 12 August and agreed to develop a National Teacher Workforce Action Plan, that includes *Better understanding future teacher workforce needs* as one of its five priority areas for action.[30] Better data and evidence is also a focus of the Implementation and Evaluation Plan for the National Children's Education and Care Workforce Strategy, released by the Australian Children's Education & Care Quality Authority (ACECQA) in September 2022.[31] Following the National Jobs and Skills Summit, the Australian Government agreed to develop a comprehensive blueprint with key stakeholders to support and grow a quality VET teacher workforce.[32]

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[28] Australian Teacher Workforce Data: National Teacher Workforce Characteristics Report December 2021

[29] Department of Education, Skills and Employment, Next Steps: Report of the Quality Initial Teacher Education Review, 29 October 2021

[30] Department of Education, Skills and Employment, Education Ministers Meeting Communique, 12 August 2022

[31] Australian Children's Education & Care Quality Authority, The National Children's Education and Care Workforce Strategy (2022-2031)

[32] Department of the Treasury, Jobs and Skills Summit September 2022 – Outcomes

Appendices

Appendix A: Occupations in shortage in 2022 that were not in shortage in 2021

There are 129 occupations that were assessed as being in shortage (either in shortage nationally or regional shortage nationally) in 2022 but were not found to be in shortage in 2021.

2021 ANZSCO Code	Occupation title
121311	Apiarist
132511	Research and Development Manager
141311	Hotel or Motel Manager
141411	Licensed Club Manager
142111	Retail Manager (General)
142114	Hair or Beauty Salon Manager
222113	Insurance Broker
225411	Sales Representative (Industrial Products)
233111	Chemical Engineer
233112	Materials Engineer
233411	Electronics Engineer
233513	Production or Plant Engineer
233915	Environmental Engineer
234212	Food Technologist
241213	Primary School Teacher
241411	Secondary School Teacher
241511	Special Needs Teacher
241512	Teacher of the Hearing Impaired
241513	Teacher of the Sight Impaired
242211	Vocational Education Teacher / Polytechnic Teacher
251211	Medical Diagnostic Radiographer
251212	Medical Radiation Therapist
251912	Orthotist or Prosthetist
252312	Dentist
253311	Specialist Physician (General Medicine)
253313	Clinical Haematologist
253315	Endocrinologist
253316	Gastroenterologist
253317	Intensive Care Specialist
253318	Neurologist
253321	Paediatrician
253322	Renal Medicine Specialist
253323	Rheumatologist
253324	Thoracic Medicine Specialist
253512	Cardiothoracic Surgeon
253513	Neurosurgeon
253514	Orthopaedic Surgeon
253515	Otorhinolaryngologist
253516	Paediatric Surgeon

2021 ANZSCO Code	Occupation title
253517	Plastic and Reconstructive Surgeon
253518	Urologist
253521	Vascular Surgeon
253912	Emergency Medicine Specialist
254212	Nurse Researcher
254411	Nurse Practitioner
254412	Registered Nurse (Aged Care)
254413	Registered Nurse (Child and Family Health)
254414	Registered Nurse (Community Health)
254415	Registered Nurse (Critical Care and Emergency)
254416	Registered Nurse (Developmental Disability)
254417	Registered Nurse (Disability and Rehabilitation)
254418	Registered Nurse (Medical)
254421	Registered Nurse (Medical Practice)
254422	Registered Nurse (Mental Health)
254423	Registered Nurse (Perioperative)
254424	Registered Nurse (Surgical)
254425	Registered Nurse (Paediatrics)
261111	ICT Business Analyst
261112	Systems Analyst
261212	Web Developer
261311	Analyst Programmer
262111	Database Administrator
263111	Computer Network and Systems Engineer
263112	Network Administrator
263113	Network Analyst
263211	ICT Quality Assurance Engineer
263213	ICT Systems Test Engineer
312113	Building Inspector
312114	Construction Estimator
312511	Mechanical Engineering Draftsperson
312512	Mechanical Engineering Technician
312912	Metallurgical or Materials Technician
322111	Blacksmith
322112	Electroplater
322115	Metal Polisher
323314	Precision Instrument Maker and Repairer
323411	Engineering Patternmaker
323412	Toolmaker
324211	Vehicle Body Builder
324212	Vehicle Trimmer
342313	Electronic Equipment Trades Worker
342315	Electronic Instrument Trades Worker (Special Class)
361112	Horse Trainer
361311	Veterinary Nurse
362611	Gardener (General)
363312	Wool Classer
392111	Print Finisher

2021 ANZSCO Code	Occupation title
392112	Screen Printer
394212	Picture Framer
399913	Optical Dispenser / Dispensing Optician
399914	Optical Mechanic
399916	Plastics Technician
399918	Fire Protection Equipment Technician
411211	Dental Hygienist
411212	Dental Prosthetist
411213	Dental Technician
411214	Dental Therapist
411715	Residential Care Officer
411716	Youth Worker
442217	Security Officer
451111	Beauty Therapist
451412	Tour Guide
451612	Travel Consultant
452312	Gymnastics Coach or Instructor
452315	Swimming Coach or Instructor
511111	Contract Administrator
511112	Program or Project Administrator
599111	Conveyancer
611211	Insurance Agent
711211	Industrial Spraypainter
711514	Plastics Production Machine Operator (General)
712111	Crane, Hoist or Lift Operator
712211	Driller
712212	Miner
721112	Logging Plant Operator
721911	Aircraft Baggage Handler and Airline Ground Crew
721914	Railway Track Plant Operator
721916	Streetsweeper Operator
731211	Bus Driver
733111	Truck Driver (General)
821412	Home Improvement Installer
821711	Construction Rigger
821712	Scaffolder
821713	Steel Fixer
821714	Structural Steel Erector
821911	Crane Chaser
831211	Meat Boner and Slicer
831212	Slaughterer
899411	Motor Vehicle Parts and Accessories Fitter (General)

Source: NSC, 2021 and 2022 *Skills Priority List*

Appendix B: Occupations in shortage in both 2021 and 2022

There are 127 occupations that were assessed as being in shortage (either in shortage nationally or regional shortage nationally) in both 2021 and 2022.

2021 ANZSCO Code	Occupation title
133111	Construction Project Manager
133112	Project Builder
133211	Engineering Manager
139914	Quality Assurance Manager
221213	External Auditor
221214	Internal Auditor
232212	Surveyor
233211	Civil Engineer
233212	Geotechnical Engineer
233213	Quantity Surveyor
233214	Structural Engineer
233215	Transport Engineer
233311	Electrical Engineer
233512	Mechanical Engineer
233611	Mining Engineer (excluding Petroleum)
233612	Petroleum Engineer
234111	Agricultural Consultant
234411	Geologist
234412	Geophysicist
234413	Hydrogeologist
234711	Veterinarian
234912	Metallurgist
241111	Early Childhood (Pre-primary School) Teacher
251214	Sonographer
251411	Optometrist
251511	Hospital Pharmacist
251513	Retail Pharmacist
252411	Occupational Therapist
252511	Physiotherapist
252611	Podiatrist
252712	Speech Pathologist / Speech Language Therapist
253111	General Practitioner
253112	Resident Medical Officer
253211	Anaesthetist
253312	Cardiologist
253314	Medical Oncologist
253411	Psychiatrist
253511	Surgeon (General)
253911	Dermatologist
253913	Obstetrician and Gynaecologist

2021 ANZSCO Code	Occupation title
253914	Ophthalmologist
253915	Pathologist
253917	Diagnostic and Interventional Radiologist
254111	Midwife
261211	Multimedia Specialist
261312	Developer Programmer
272311	Clinical Psychologist
272312	Educational Psychologist
272313	Organisational Psychologist
311312	Meat Inspector
312211	Civil Engineering Draftsperson
312212	Civil Engineering Technician
321111	Automotive Electrician
321211	Motor Mechanic (General)
321212	Diesel Motor Mechanic
321213	Motorcycle Mechanic
321214	Small Engine Mechanic
322113	Farrier
322114	Metal Casting Trades Worker
322211	Sheetmetal Trades Worker
322311	Metal Fabricator
322312	Pressure Welder
322313	Welder (First Class) (Aus) / Welder (NZ)
323111	Aircraft Maintenance Engineer (Avionics)
323112	Aircraft Maintenance Engineer (Mechanical)
323113	Aircraft Maintenance Engineer (Structures)
323211	Fitter (General)
323212	Fitter and Turner
323213	Fitter-Welder
323214	Metal Machinist (First Class)
323313	Locksmith
324111	Panelbeater
324311	Vehicle Painter
331111	Bricklayer
331112	Stonemason
331211	Carpenter and Joiner
331212	Carpenter
331213	Joiner
332111	Floor Finisher
332211	Painting Trades Worker
333111	Glazier
333211	Fibrous Plasterer
333212	Solid Plasterer
333311	Roof Tiler
333411	Wall and Floor Tiler
334111	Plumber (General)

2021 ANZSCO Code	Occupation title
334112	Airconditioning and Mechanical Services Plumber
334113	Drainer / Drainlayer
334114	Gasfitter
334115	Roof Plumber
341111	Electrician (General)
341112	Electrician (Special Class)
342111	Airconditioning and Refrigeration Mechanic
342211	Electrical Linesworker / Electrical Line Mechanic
342212	Technical Cable Jointer
342411	Cabler (Data and Telecommunications)
342412	Telecommunications Cable Jointer
342413	Telecommunications Linesworker / Telecommunications Line Mechanic
342414	Telecommunications Technician
351111	Baker
351112	Pastrycook
351211	Butcher or Smallgoods Maker
351311	Chef
351411	Cook
362411	Nurseryperson
363311	Shearer
391111	Hairdresser
393311	Upholsterer
394111	Cabinetmaker
394211	Furniture Finisher
394213	Wood Machinist
411311	Diversional Therapist
411411	Enrolled Nurse
421111	Child Care Worker
423111	Aged or Disabled Carer
423211	Dental Assistant
423313	Personal Care Assistant
721111	Agricultural and Horticultural Mobile Plant Operator
721211	Earthmoving Plant Operator (General)
721212	Backhoe Operator
721213	Bulldozer Operator
721214	Excavator Operator
721215	Grader Operator
721216	Loader Operator
721912	Linemarker
721913	Paving Plant Operator
721915	Road Roller Operator

Source: NSC, 2021 and 2022 *Skills Priority List*

Appendix C: Occupations not in shortage in 2022 that were in shortage in 2021

There are 17 occupations that were assessed as not being in shortage in 2022 but were previously in shortage (either in shortage nationally or regional shortage nationally) in 2021.

2021 ANZSCO Code	Occupation title
121318	Pig Farmer
121321	Poultry Farmer
132111	Corporate Services Manager
135112	ICT Project Manager
221111	Accountant (General)
221112	Management Accountant
221113	Taxation Accountant
232611	Urban and Regional Planner
234513	Biochemist
251412	Orthoptist
312311	Electrical Engineering Draftsperson
312312	Electrical Engineering Technician
399112	Shipwright
399611	Signwriter
423312	Nursing Support Worker
712918	Train Controller
731311	Train Driver

Source: NSC, 2021 and 2022 *Skills Priority List*