



Australian Government



Jobs and Skills Australia

Education and training divides

Gendered skills, pathways and outcomes





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An aerial photograph of a coastline. The ocean is a deep blue-green, with white foam from waves crashing onto a dark, textured shore. The shore appears to be covered in low-lying vegetation or coral. The waves are breaking in a curved pattern, creating a sense of movement and energy. The overall tone is natural and serene.

Acknowledgement of Country

Jobs and Skills Australia acknowledges the Traditional Owners of Country throughout Australia and recognises the continuing connection to lands, waters and communities. We pay our respect to Aboriginal and Torres Strait Islander cultures, and to Elders past and present.

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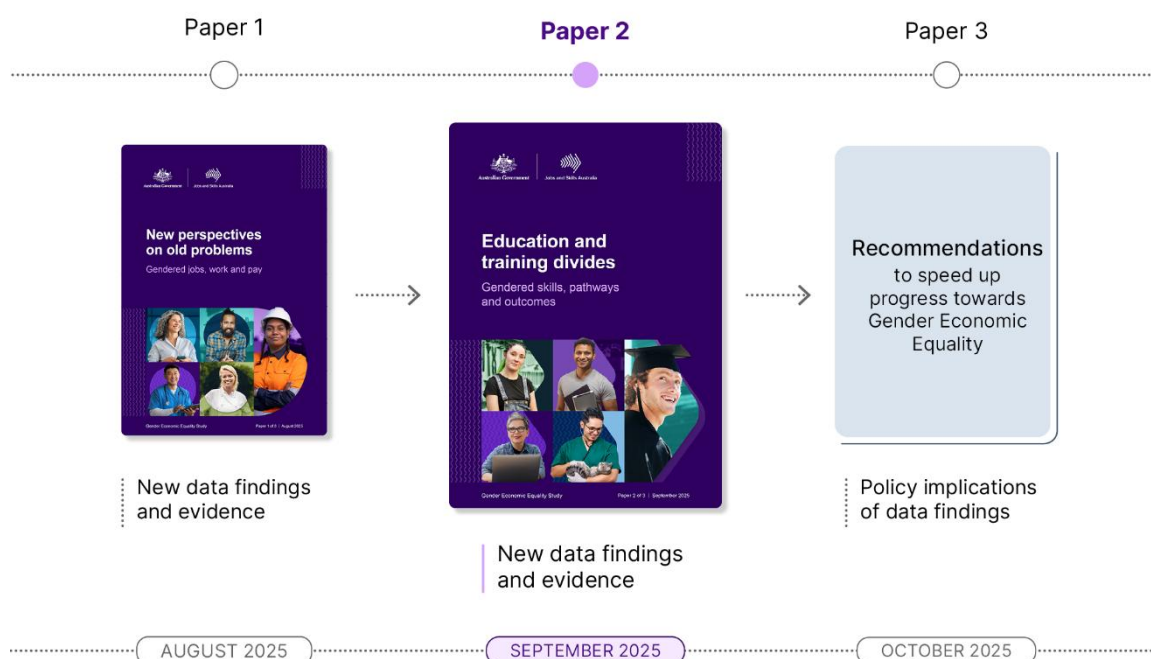
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Executive Summary

Education and training choices, skills, outcomes and pathways—like jobs, work, and pay—are highly gendered in Australia, and contribute to both ongoing gender economic inequalities and high levels of gender occupational segregation intensity. In this second data findings paper of the study, we focus on how the skills system intersects with and contributes to maintaining gendered work and pay in Australia.

We highlight further links between segregation intensity and skill trends. This includes skill mismatches, which can lead to the underutilisation of workers full skill potential, impacting productivity and reinforcing structural barriers, bias and discrimination in the labour market. We also identify how these skills trends have links to occupation shortages and the return on investment for education pathways and careers, including across the Gender Segregation Intensity Scale (GSIS) that we introduced in [Paper 1](#).

Figure 1: Gender Economic Equality Study publications



As [Paper 1](#) findings demonstrated, women are now more highly qualified than men in Australia but are still earning less, on average, in almost all occupations. Throughout our analysis, we flag the policy implications of these links for discussion in our third and final recommendations focused Gender Economic Equality Study Paper 3.

In this paper we provide new perspectives on Australia's education and training gender divides, including intersectional and longitudinal insights into gendered skills, training pathways and outcomes. We provide further insights on CALD and First Nations workers but expand our analysis to people with disability, to extend our intersectional approach. We put a spotlight on highly gendered training pathways to identify trends, challenges and opportunities across the skills system. For example, how the choices people make in what education and training pathways and areas of study they pursue and the employment, economic and return on investment outcomes this leads to post-training over different time periods.

Part 1: New perspectives on education and training choices, skills mismatches and outcomes

In this opening section of Paper 2, we summarise the current gendered segregation patterns in education and training in Australia through a snapshot of both enrolments and completions across Vocational Education and Training (VET) and higher education. We apply the GSIS to Australia's top 20 areas of study, more technically classified as [Fields of Education](#) illustrating an additional use of the new GSIS measure.

Our key findings across education and training choices are:

- Recent VET and higher education program enrolments *and* completions indicate current training pipelines will not significantly improve existing gendered labour market segregation and occupational shortages.
- Likewise, pronounced gender segregation patterns are seen in training pipelines for key reform areas, such the Net Zero transition; digital transformation; and qualifications that support a high quality and efficient care sector.
- Distinct gender divides persist across study choices. This continues to be seen across the VET training pathways into Australia's top 20 growing occupations. In higher education, only three of the 12 broad fields of education (25%) had gender balanced enrolments in 2023.
- When looking at higher education and VET completions across the 69 narrow fields of education with available data, only 14 (20%) had gender balanced completions across the three years of 2015-2017. This is a similar finding to [Paper 1's](#) headline finding that only one in five workers work in gender balanced occupations.
- There are also only three gender balanced areas of study across the top 10 largest narrow fields of education.

We also found that social and cultural norms have a significant influence on shaping education and training choices, careers and pathways from an early age. These ultimately influence and reinforce gender stereotypes and biases about which jobs men and women are suited or should aspire to. It is clear that intervening early in gendered education and training choices is key to addressing occupational segregation.

We provide insights on the gendered divides across skills mismatches and education and training outcomes. For the skills mismatch analysis, we identify how 'skill underutilisation' or job 'mismatching' is gendered across both the workforce and top 10 areas of study. We include intersectional insights across both on First Nations and CALD graduates as well as people with disability.

Our key findings on gendered divides across skills mismatches are:

- Females are more likely than males to be working in Skill Level 1 roles, the highest Skill Level of any occupation, but they are also more likely to be skills mismatched. This means women's skill potential is more commonly underutilised than males.
- Overall, people with disability with higher qualifications and higher skill level jobs had the lowest skills mismatching rates across cohorts with little gendered differences between males and females.

- Generally, CALD workers and First Nations workers had similar rates of skills mismatching compared to the broader population of graduates and all female graduates. However, gendered mismatching rates within these cohorts paint a different picture, with skills matching highest for CALD females and First Nations males at 35%.
- Across Bachelor Degree and above qualifications (AQF 7+), skills mismatches were low across all cohorts and between genders. The most pronounced gender skills mismatches were seen at the Diploma, Advanced Diploma and Associate Degree levels (AQF 5 and 6).
- Across the top 10 areas of study for Bachelor or above qualification graduates:
 - The lowest skill mismatching was in Teacher Education, Nursing and Rehabilitation Therapies.
 - The highest skills mismatching was in Business Management, Communication and Media Studies, Behavioural Science, Other Health and Other Natural and Physical Sciences.

We explored gendered divides across education and training outcomes using two different approaches and datasets. Across both we find that education and training does not guarantee improved economic equality, despite women surging ahead with qualifications.

In considering economic inequalities seen 5 and 10 years after training, we find that, despite similar education qualifications, women are consistently more likely to be out of the labour force and earn less than men, with income gaps widening over time. We look at people with non-English speaking backgrounds more closely and follow cohorts of workers from early in the careers at age 25 as they age into their thirties, forties and fifties.

Our headline findings are:

- Males have slightly better employment outcomes across all levels of education, and this remains the case as workers age into their mid and late thirties.
- There are few gender differences for unemployed people regardless of education level but much larger gender disparities across people who aren't in the labour force, especially for women with lower levels of education.
- Regardless of a worker's education attainment or qualification level, there is significant gendered economic inequality when looking at incomes, and this becomes more pronounced as people age.
 - Males are almost twice as likely to earn incomes over \$100,000 than females at 35-40 years across all levels of education.
 - Even when workers have completed a Bachelor Degree or higher, there remains significant income disparity between males and females.
- When exploring divides across incomes for First Nations people and migrants arriving from countries with either English or Non-English speaking backgrounds, we found significant disparities compared to the total population.
- Employed males born overseas in a country with a Main English-Speaking Background (MESB) are far more likely to have higher incomes than those born in Other Than Main English-Speaking Countries (OTMESB). First Nations males and females also have worse income disparity than their MESB and OTMESB counterparts.

- Disparities worsen further when looking at gendered differences within cohorts.

As with [Paper 1](#) findings, this income disparity compounds over time, particularly for females in their mid-thirties to fifties. While caring responsibilities are one factor, structural gender and racial economic inequality are also factors. These findings highlight the current structural inequities in Australia's labour market and the need for inclusive policy interventions.

This paper also explores VET outcomes and how students with compounding forms of disadvantage fare across the top 100 VET qualifications one year after training. We provide new perspectives and intersectional insights on the gendered trends across VET graduates with disability, of First Nations status, and CALD identity. These insights are an extension of JSA's [Strong and Responsive VET Pathways | Jobs and Skills Australia](#).

Our headline findings are that:

- Males have better economic outcomes than females, but females had slightly better employment outcomes. Across the top 100 VET qualifications at Certificate III level or above:
 - Males had higher median incomes in 82% of the qualifications.
 - Females had better employment outcomes than males in just under half (47%) of the qualifications.
- Female graduates tend to earn higher incomes in fields that are generally associated with lower overall earnings. However, they also earned significantly more than males one year after training in some almost completely male dominated training pathways, such as the pathway to an Electrician, and Mechanical Engineering.
- CALD female graduates experience comparatively weaker economic outcomes post-training.
- Reflecting [Paper 1](#) findings, CALD male and female graduates earned more than other workers within aged care and disability support related occupations.
- People with disability had the lowest economic and employment outcomes overall but secured relatively good outcomes in several courses.
 - Females with disability had good employment outcomes in selected Hospitality, Veterinary Nursing, and Early Childhood Education and Care qualifications.
 - Males with disability had good employment outcomes in selected Carpentry, and Mechanical Trade qualifications.
- Policymaker attention in VET training pathways in IT, community service, and sports and aquatics qualifications is needed to improve outcomes for students with disability.
- First Nations females appear to fare better in education and training pathways that lead to gender balanced and female dominated occupations, while First Nations males' outcomes are better in training pathways leading to male dominated occupations, such as trades.

This can be explored further through the study's third dashboard: [Intersectional VET Outcomes Dashboard](#).

Part 2: Gendered divides across highly gendered training and occupational pathways

In Part 2 of Paper 2, we use the GSIS to provide intersectional insights on VET outcomes; occupational pathways across different areas of study; and gendered trends across the length of time workers stay in a job. All three contribute to new evidence for gendered divides across career trajectories and the 'leaky pipeline' post-training, which is one of the reasons occupational segregation is so hard to shift.

It is crucial to look at longitudinal pathways across, into and out of jobs to make sense of the career decisions and transitions that different types of workers are more or less likely to make. Understanding this can assist in policies to address occupational gender segregation.

Our key GSIS insights on VET outcomes and training pathways into top growing occupations are:

- Males generally have better economic outcomes in post-training, regardless of the gender segregation intensity occupation the training pathway leads into, even those that are female dominated.
- First Nations females and males have positive employment and economic outcomes in selected gender balanced Real Estate and Commercial Cookery training pathways.
- First Nations males secured relatively positive outcomes in male dominated trade training pathways, such as Electrical, Carpentry and Mechanical Engineering trades, but not in qualifications tied to mining. Likewise, better support for males with disability studying to become electricians, an important qualification for Australia's Net Zero Transition, is needed.
- There are positive shifts in enrolments and median income outcomes for females and First Nations males.

Our key GSIS insights on different occupation pathways and economic outcomes three years post-completion in different areas of study are:

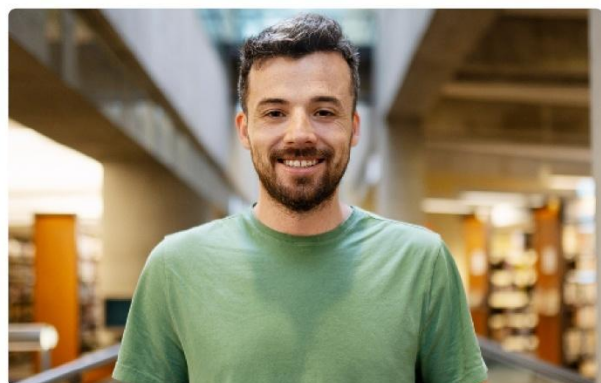
- Despite the female dominated occupation pathways in Human Welfare Studies and Service, males are paid more in each of the related occupations.
- Female law graduates are more likely to become Solicitors but they earn slightly less than males three years post-completion, within this gender balanced occupation.
- In IT related fields of study, females and CALD females are generally securing relatively good economic outcomes and even the highest median incomes in some occupations, such as Software and Applications Programmer after studying Computer Science or IT Manager after studying Information Systems.

This indicates a strong return on investment for this field of study, at least early in women's careers but our qualitative findings still point to gender bias, discrimination and barriers in workplaces across this industry.

Lastly, we use the GSIS to explore gendered trends across time in jobs to further reveal the relationship between these trends, segregation intensity, occupation shortages, and skill level. We consider differences in time in jobs, retention and turnover patterns seen at different levels of occupational gender segregation intensity.

Our key GSIS insights on different gendered divides across time in jobs are:

- Males and females stay longer in occupations that are dominated by their own gender across the GSIS.
- Unlike occupation shortages, time in job is more closely tied to Skill Level than gender segregation intensity. Males and females generally stay similar lengths of time in higher skilled professional jobs regardless of gender segregation intensity.
- Across Skill Level 1 occupations with high CALD representation such as Pharmacists, Veterinarians, Accountants, and Other Medical or Dental Practitioners, males and females also have similar time in job patterns.
- Females do stay longer than males in lower skilled gender balanced roles like Kitchenhands, Cooks, and Packers and this lines up with [Paper 1](#) findings that in some lower skilled jobs like these become increasingly female dominated as workers age.
- In top growing occupations, females stayed longer in health and care roles and males stayed longer in jobs like Chefs, and Ambulance Officers and Paramedics.
- Some of the occupations at Skill Level 3 with the largest gendered differences in time in job are Auctioneers, and Stock and Station Agents, and Fire and Emergency Workers, in which males stay on average more than two years longer than females.
- Females generally stay longer in jobs in health, education and social work.



Part 3: New perspectives on describing jobs and recognising skills

Part 3 provides Australia's first insights using OSCA and how it increases our understanding of Australia's gendered jobs, work and pay and better recognises and values women's skills.

Our key findings on OSCA include that it has:

- Improved the gendered language that was present in ANZSCO, which is important for tackling persistent gendered norms that play a role in perpetuating occupational gender segregation.
- Improved the recognition of leadership roles (and invisible skills) within female dominated occupations. Overall, the number of leadership occupations in the highly female dominated or almost completely female dominated segregation intensity has increased substantially, rising from 11% of leadership occupations in ANZSCO to 17% in OSCA.
- Increased identification of vertical segregation in workforces with the addition of new occupations, such as the Assistant School Principal, which has a higher percentage of females than School Principals.
- Significantly improved the identification and recognition of female dominated jobs, and therefore also women's skills across Australia. There are also new female dominated occupations being captured in OSCA outside of leadership positions.
- moved towards the recognition and valuation of cultural skills through the further identification of First Nations occupations.

Other key findings include:

- While OSCA has significantly improved the identifying and recognition of female dominated jobs, and women's skills across Australia, there is still gender bias in how we describe female dominated occupations compared with male dominated occupations, which should be considered in future updates.
- Of the new occupations in OSCA that have increased in Skill Level, most of these are male dominated occupations.

What's coming next? From data and findings to recommendations for change in Paper 3

The data and findings in this paper point to the need for change if we are to accelerate progress towards gender economic equality. In Paper 3, we will present recommendations, drawing on the themes that have emerged throughout both [Paper 1](#) and Paper 2.

Government efforts and policy interventions are one part of this change but insights from these papers point to changes that are needed across workplaces, educational institutions, employers, and society more broadly.

In this paper the following reform themes which focus on education, training and skills have emerged:

- The potential role for system-wide occupational awareness or career education to influence early gendered study choices, which contribute to persistent gendered occupational segregation.
- The need for specific scholarships, funding and wrap-around supports for trainers (and potentially students in combination with existing Government efforts) in highly gendered training pathways. The aim is to increase the number of women in male dominated teaching fields (and vice versa) and to build the capability and capacity of all trainers to better support underrepresented cohorts in learning environments.
- Developing resources and supports for education and training institutions and providers in highly gendered pathways.
- A focus on collaboration with, and capacity building for, the workers, employers, organisations and actors involved in system-level changes in recommendations.
- What monitoring, reporting and evaluation on gender differences in working arrangements should be done next, based on the new OSCA and GSIS evidence. For example, our new evidence will allow new data collection and analysis on new almost completely female dominated occupations that would meet criteria in the National Gender Segregation Profile (Cortis et al. 2023).
- The need to address gender bias in ongoing labour market frames and concepts such as skill recognition and occupation and industry classifications.

This paper has also identified emerging themes that are consistent with and related to those highlighted in [Paper 1](#):

- Firmer links between occupation shortages and selected skill mismatch trends.
- Further evidence on occupations and training pathways with more significant gender disparities in income 3 years after training, which align with insights into gender pay gaps.
- Identification of qualifications where more disadvantaged cohorts such as people with disability have good outcomes and the policy implications of those including for apprenticeship policy design.
- The need for better supports across the life course to support unpaid care, community support and other work beyond younger children.
- Further evidence on compounding inequalities for First Nations and CALD workers in relation to the return on investment in skills and education, in addition to the pay gaps.

Introduction

In Paper 2 we switch the focus from gendered jobs, work and pay to gendered skills, training pathways and outcomes. We focus on how the skills system intersects with and contributes to maintaining the highly gendered Australian labour market that we explored in [Paper 1](#). Education and training choices and pathways like occupations across the Australian economy are highly gender segregated.

To begin Part 1 of the paper, we summarise Australian's current education and training gendered segregation patterns through a snapshot of 2023 enrolments across Vocational Education and Training (VET) and higher education. We find that despite decades of policy attention, Australian VET and higher education sectors continue to exhibit gender segregation across fields of study. We identify the drivers of gendered education and training choices—including the significant influence social and cultural norms have from an early age on shaping study choices, careers and pathways. We demonstrate how these ultimately reinforce gender stereotypes and biases about which jobs men and women are suited or should aspire to. Intervening early in gendered education and training choices is therefore key to successfully addressing occupational segregation.

After setting this scene, we offer new perspectives in three different parts of the paper.

- Part 1 is on gendered divides across skills mismatches and education and training outcomes.
- Part 2 uses the GSIS to provide intersectional insights on VET outcomes; occupational pathways across different areas of study; and explores gendered trends across the length of time workers stay in a job. All three contribute to new evidence for gendered divides across career trajectories and the 'leaky pipeline' post-training.
- Part 3 provides Australia's first ever labour market analysis using OSCA and how it increases our understanding of Australia's gendered jobs, work and pay and better recognises and values women's skills.

In Part 1, we provide new perspectives on:

1. **Gendered divides across skill mismatches.** Using PLIDA data we examine how the qualifications people hold compare to the actual skill level of the job they are doing. We identify how this 'skill underutilisation' or job 'mismatching' across the workforce is gendered. We also offer intersectional insights on skills mismatches across First Nations workers, CALD workers and workers with disability. We map the [Australian Qualifications Framework](#) (AQF) against ANZSCO Skill Levels to explore the intersectional snapshot of skills mismatches. This also helps us better understand the intersections between the labour market and skills system and the policy implications of how to fix skills mismatches. We also offer a deeper dive by exploring the skills mismatches across the top 10 Fields of Education (FOEs) where people have a Bachelor Degree and above and the same occupational pathway across gender, CALD status and graduates with disability. We apply the GSIS to these areas of study illustrating an additional use of the measure.

2. **Gendered divides across education and training outcomes.** Using longitudinal Census data, we provide *an intersectional snapshot of economic inequalities 5 and 10 years after training*. We look at the post-training disparities in employment and income for different cohorts from 2011 to 2021 and control for educational attainment. We then explore how students with compounding forms of disadvantage fair across the VET skills system. We provide *an intersectional snapshot of post-training outcomes across the top 100 VET qualifications in Australia*. Across both we find that education does not guarantee economic equality despite women surging ahead with qualifications.

In Part 2, we apply the GSIS to highly gendered training and occupational pathways offering three new perspectives:

1. **GSIS insights on VET outcomes and training pathways into top growing occupations.** We explore qualifications that have a direct training pathway into large employing in shortage occupations across different categories of the GSIS. Namely, Cooks, Electricians, Aged and Disabled Carer, Child Care Workers, and Security Officers. We offer informative intersectional insights on outcomes for different cohorts across these qualifications.
2. **An intersectional snapshot of occupation pathways and economic outcomes across different areas of study.** We offer insights on four areas of study—Human Welfare Studies and Service, Law and Computer Science and Information Systems—which have occupational pathways into female dominated, gender balanced and male dominated roles respectively.
3. **Gendered divides across time in jobs and the leaky pipeline post-training.** In this analysis we present new data on the gendered trends around the average time workers stay in jobs and provide GSIS insights on these gendered trends. We also delve into occupation shortages and Skill Level trends in more detail, exploring how the average time in jobs across different categories on the GSIS is central to this labour market challenge and gendered in multiple ways.

It is crucial to look at longitudinal pathways across, into and out of jobs to make sense of the career decisions and transitions that different types of workers are more or less likely to make. Understanding this can assist in intervening in particular pain points or challenges workers face across the life course that effectively embed or worsen occupational gender segregation. This is an important future area of research for intervening in the leaky pipeline post training which is a key reason why occupational segregation is so hard to shift.

The new perspectives in Part 2 also set a precedent for ongoing longitudinal and intersectional analysis for different demographic cohorts or age groups that face barriers across the skills system and their careers so we can better manage them.

In Part 3 of the paper, we delve into how the new occupational classification—OSCA—that we introduced in [Paper 1](#) significantly improves our understanding of Australia's gendered jobs, work, pay, skills, post-training outcomes and pathways. Our two new perspectives are:

1. **How OSCA improves what we know about Australia's gendered jobs and better recognises and values women's skills.** We demonstrate how the move to OSCA has addressed some of the gender bias in the occupational classification system, why this matters and how Australia is positioning itself as a leader internationally in this space. We provide analysis of how OSCA has significantly improved the identification and recognition of female dominated jobs, and therefore also women's skills across Australia.

We also find that OSCA has improved the gendered language of ANZSCO; better recognises leadership (and Skill Level) within female dominated occupations; and allows us to identify vertical occupational segregation across the workforce in new ways. We also note that, while OSCA has made progress in the above areas, there is still a remaining gender bias in workforce counts with more occupational classifications for male dominated occupations.

2. **Australia's first labour market insights using OSCA.** We apply the GSIS to OSCA-coded Census data, based on our collaboration with the ABS. Through this we provide new perspectives on gendered occupational segregation, including how OSCA better recognises women's skills and female dominated occupations. We also describe how this translates into a more nuanced and useful understanding of occupational segregation policy challenge and how to manage it in future.



Key Concepts Explainer

- **Field of education (FOE)** refers to the category of education classified by the ABS. There are 12 broad FOEs such as engineering, health, management and commerce, and creative arts and 71 narrow FOEs. We use both in this paper to provide insights on gendered trends and also refer to them as 'areas of study'.
- The **leaky pipeline** refers to the progressive loss of individuals across specific career pathways from schooling into late career. For example, women leaving male dominated building and trades careers due to workplace culture or discrimination.
- **Level of education** refers to the [Australian Qualifications Framework](#) (AQF) which outlines the knowledge and skill level of each qualification in VET and higher education.
- **Skill Level** is a measure of the amount of formal education and training, work experience, or on-the-job training required for an occupation. There are five ANZSCO skill levels across this classification, with Skill Level 1 the highest and Skill Level 5 the lowest as introduced in [Paper 1](#).
- **Post-training outcomes** refers to the pathways to further study, employment destination, improved income, and exits from income support that individuals experience following the completion of training. See [Technical Paper 2](#).
- **Occupation pathways** refers to the career trajectories and occupations students work in post-training including the occupations they work in post-training across different time periods. For example, one, three, and 10 years post training.
- **Skills mismatches** broadly refers to when workers don't have the skills required to do their job which can lead to inefficiencies and productivity issues across the broader economy. There are different types of skills mismatches including vertical or over/underqualification skills mismatches and field of study mismatches. In this paper we focus mainly on overqualification skills mismatch and define this in line with OECD indicators: when workers qualification and level of education doesn't match with the ANZSCO Skill Level required for that job (OECD 2022).
- **Skills underutilisation** refers to the gap between the skills or qualifications that workers possess, and the skills they use in their current jobs. It highlights how labour resources are not being fully leveraged in the economy. Even in tight labour markets, high rates of skill underutilisation indicate deeper mismatches; either regional, sectoral or between education systems and workplace needs. Tackling this requires coordinated action on training, credential recognition, and job design to ensure people's talents are fully engaged.
- **Skills return on investment (ROI)** is a metric that quantifies the economic benefits gained from investing in workforce skills relative to the costs of acquiring those skills. It expresses the financial payoff. For example, increased earnings or productivity improvements for every dollar spent on training, upskilling, or formal education.

Part 1: New perspectives on education and training choices, mismatches and outcomes

In looking across the jobs and skills systems, our qualitative study findings found that gender inequality was more obvious in workplaces than in education and training settings. Most people reported that their higher education and vocational courses tended to have broad student bases and supportive, open-minded cultures that took strengths-based approaches to differences between students. However, it also found that male dominated VET pathways were far more challenging for women. When teaching staff and other students were all or mostly male within these courses, women were more likely to experience gender-based bias (from either or both the staff and other students).

We also know that while gender equality in education and training appears to be gender balanced (such as in enrolments and attainment metrics) there are still systemic gender inequities, biases and barriers when looking at other measures (such as outcomes, vertical segregation and pay gaps in teaching roles).

The Australian Human Rights Commission (AHRC) also highlighted serious and systemic cases of gender discrimination, harassment and abuse in universities in their investigations of the higher education sector (AHRC 2017). The Government has since acted on this and is currently rolling out the National Higher Education Code to Prevent and Respond to Gender-based Violence. The 2024 interim Respect at Uni report and ongoing work exploring Racism@Uni by the AHRC is also notable (AHRC 2024).

There have been recent significant Government efforts in supporting women across the skills system including in male dominated training pathways and our data findings offer evidence and approaches for future evaluations of these efforts. For example, large-scale skills reforms like Job-ready Graduates (JRG), Free TAFE, reducing student loans, Australian Apprenticeship Incentive System (AAIS) and programs under the National Skills Agreement (NSA) and Australian Skills Guarantee. Other examples include programmes and funding to support women who face completion challenges in VET under the NSA and apprenticeships targets for women in Government-funded construction and major ICT projects under the Australian Skills Guarantee.

This is also the case for more recent and targeted policy levers in the skills system that aim to intervene in occupational segregation such as the Building Women's Careers Program, Women in Trades, Women in STEM, Women in STEM Cadetships and Advanced Apprenticeships Program, Advancing Gender Equality in Gender Segregated Industries; and Commonwealth Practicum payments to support students undertaking mandatory placements in female dominated occupations such as nursing, midwifery, teaching and social work.

Our intersectional insights and approaches could also be used to inform current efforts to develop Future Made in Australia (FMIA) Community Benefit Principles to require decision-makers to consider how projects that receive FMIA support will promote safe and secure jobs and develop more skilled and inclusive workforces. We will explore these and other initiatives, including links to our data findings in Paper 3.

While overall gender inequality, discrimination and bias has often been characterised as a workplace, industry or occupation challenge, the influence of gendered norms on the jobs and careers people choose—and the education and training pathways into them—are often decided on early in life. This opening section of Paper 2 summarises this dilemma and how gendered education and training choices are a further handbrake on intervening in the stubborn policy challenge of gendered occupational segregation.

The following two sections offer intersectional snapshots of skills mismatches and gendered divides across education and training outcomes.

Gendered divides across education and training choices

Gendered education and training choices are embedded from an early age, shaped strongly by entrenched social and cultural norms that permeate families, schools, and media representations (Master et al. 2021; Brussino and McBrien 2022). These gender stereotypes influence educational interests and persist through schooling and commonly guide the training pathways students take in VET and higher education (DoE 2021; NCVER 2024a).

What are gendered norms?

Gendered norms refer to standards and expectations to which women and men generally conform, within a range that defines a particular society, culture and community at that point in time (European Institute for Gender Equality n.d.). For example, men not training for roles in the care and early education sector due to gender norms and stereotypes about care.

Internationally, results from the OECD Programme for International Student Assessment (PISA) further reflect gendered subject choices and views on education and training with a questionnaire conducted as part of the assessment showing that parents were more likely to expect their sons, rather than their daughters to work in STEM. Unsurprisingly, the influence of gendered norms from parents was prevalent, as the PISA results showed that only 14% of 15 year old girls who were top performers in science or mathematics reported that they expect to work as professionals in science or engineering, compared to 26% of top performing boys at the same age. Gender stereotypes that girls faced at home, in school and within communities also exacerbated fears of failure and a lack of confidence in girls' ability to solve mathematics or science problems (Encinas-Martin and Cherian 2023).

In Australia, gendered differences in aspirations towards STEM careers are also reflected in data from the STEM Equity Monitor which shows that girls were nearly half as likely as boys to aspire to a career in STEM (22% compared to 43%) (Department of Industry, Science and Resources 2025).

Consequently, despite relatively balanced overall domestic program enrolments in VET with a 48% female enrolment in 2023 (NCVER 2024a), and females accounting for the majority (60%) of undergraduate enrolments in higher education in 2023 (DoE 2024), distinct gender divides persist across students Field of Education (FOE) choices.

These early-established norms result in significant gender division in the Australian labour market, with higher portions of females typically clustered in lower-paid sectors, even though

they often have similar or higher qualifications compared to men (NCVER 2024b; Quality Indicators for Learning and Teaching, 2024). What is clear is that early stage gendered educational pathways intensify economic inequalities, as females consistently experience lower financial returns on their qualifications compared to their male counterparts, highlighting that occupational segregation extends beyond personal educational decisions into systemic disparities within the labour market (NCVER, 2024b).

Gendered divides across training pipelines in VET and Higher Education

Analysis of the 2023 VET training pipeline into gendered occupations highlights persistent gender division, suggesting the current pipeline will not significantly improve existing labour market imbalances. In reviewing the top 20 growing occupations discussed in [Paper 1](#), the 2023 enrolments in VET continue to mirror the gender divides prevalent in Australia's workforce.

Despite relatively balanced overall domestic program enrolments in VET with a 48% female enrolment in 2023 (NCVER 2024a), and females accounting for the majority (60%) of undergraduate enrolments in higher education in 2023 (DoE 2024), distinct gender divides persist across students' Field of Education (FOE) choices. This gendered educational trajectory, driven by early socialisation through cultural norms, parental influences, and media representations (Master, et al. 2021; Brussino and McBrien 2022), limits the potential of vocational training to address occupational gender-division meaningfully. Consequently, despite similar participation rates in VET at the aggregate level, entrenched gender biases in the underlying education and training choices continue to reinforce Australia's highly gendered labour market outcomes (Quality Indicators for Learning and Teaching 2024; NCVER 2024b).

Of the 5.1 million VET students enrolled in nationally recognised VET in 2023, the gender divide remains very pronounced: females account for just 17% of STEM program enrolments yet they comprise a majority of non-STEM fields with 56% of enrolments. In engineering and related technologies, one of the fastest-growing sectors, they comprise only 12% of VET program enrolments (Department of Industry, Science, and Resources 2024). Top female dominated fields/courses such as nursing, personal care and community services continue to attract overwhelmingly female enrolments, replicating the occupational segregation identified in the broader workforce (as highlighted in [Paper 1](#)). This alignment between VET enrolment patterns and the gender distribution of the top 20 largest employing occupations indicates that the current VET pipeline is unlikely to exert downward pressure on existing labour market gender imbalances or interrelated occupation shortages.

Additionally, Table 1 below outlines training packages which are linked to priority occupations and emerging industries aligned with the [Future Made in Australia](#) program and the [5 reform pillars](#) explored by the Productivity Commission. Significant gender segregation was seen in 2023 enrolments within electrotechnology, construction and manufacturing qualifications, information and communications technology qualifications supporting the digital transformation, and care and health qualifications aimed at delivering quality care more efficiently.

Table 1: 2023 VET enrolments in training packages aligned with Australian Government reform, by gender

Training Package	Female Enrolments (%)	Male Enrolments (%)
Community Services (CHC)	80%	20%
Construction, Plumbing and Services Integrated Framework (CPC)	7%	93%
Health (HLT)	82%	18%
Information and Communications Technology (ICT)	24%	76%
Manufacturing (MSA)	19%	81%
Electrotechnology (UEE)	6%	94%

Source: NCVER 2024, Total VET students and courses 2023: program enrolments DataBuilder, Total, Training package, Gender by Year

In higher education, gender segregation in related occupations is also unlikely to shift due to similar segregation patterns in field of education choice. Only the Natural and Physical Sciences, Architecture and Building, and Management and Commerce fields of education had gender balanced enrolments in 2023 among the 12 broad fields of education.

Table 2: 2023 Higher Education enrolments by broad field of education and gender

Field of Education (FOE)	Female Enrolments (%)	Male Enrolments (%)
Natural and Physical Sciences	54%	46%
Information Technology	22%	78%
Engineering and Related Technologies	20%	80%
Architecture and Building	45%	55%
Agriculture, Environmental and Related Studies	60%	40%
Health	75%	25%
Education	76%	24%
Management and Commerce	47%	53%
Society and Culture	68%	32%
Creative Arts	61%	39%
Food, Hospitality and Personal Services	84%	16%
Mixed Field Programmes	67%	33%

Source: Perturbed Student Enrolments Pivot Table 2023, student enrolments by broad field of education (DoE 2024).

Similarly, higher education completions reveal that 72% of research doctorates in Education and 65% in Health are now awarded to women, contrasted with 70% of doctorates in Engineering awarded to men. Females also represent 60% of all completed undergraduate and postgraduate higher education awards yet remain underrepresented in high-tech and STEM disciplines where female enrolment rates languish around 19-25%. This persistent segregation of education study and training choices indicates that policy efforts have had limited impact on altering deeply embedded gendered enrolment and completion profiles (WGEA 2021).

Addressing these biases demands coordinated interventions across the education continuum from embedding gender balanced examples in teaching resources to implementing school-level programmes that challenge traditional roles, broaden perceptions of 'who belongs' in each discipline, and support diverse career aspirations. It also means reforming and removing the gendered bias within education and training policy settings such as training packages, apprenticeship systems and funding models. There is rich history of research in this space that this paper builds on (Butler and Ferrier 2022; McMahon 2025).

For example, schools research suggests a connection between academic success, subject selection, and later, career choice. Research has found gendered study choices reflect students' comparative advantage across subjects. Boys often perform relatively worse in reading/humanities than in mathematics/science, so they gravitate to STEM because switching to humanities would impose a higher 'opportunity cost' (Goulas et al 2022). Girls may equal or outperform boys in mathematics, but are typically even stronger in reading, so humanities appear to be their comparative advantage. As a result, women-in-STEM initiatives alone won't fully shift participation if boys' relative weakness in literacy continues to funnel them into mathematics/science (Kirkham and Chapman 2022).

How do gendered norms, stereotypes and biases drive education and training divides?

Education and training choices, including decisions to enter VET or higher education, are largely shaped during early childhood. From the ages of five and six, children internalise social and cultural expectations communicated by family, community and media about 'appropriate' fields of study and careers (Brussino and McBrien 2022). These early influences create enduring perceptions of personal suitability that guide subject selection in secondary school and underpin pathways into VET or university. Consequently, by the time learners reach senior secondary years, social and cultural norms have already filtered them into gendered streams—maths and science for boys; humanities and care-based pathways for girls—reflecting entrenched stereotypes rather than individual aptitude or genuine interest.

Children as young as six endorse the belief that girls are inherently less interested than boys in computer science and engineering: a stereotype that directly undermines girls' sense of belonging and deters their engagement in these fields. An OECD review underscores that these interest-based stereotypes persist throughout schooling, influencing curriculum design, teacher expectations and peer interactions, and continue to shape tertiary study choices and, ultimately, occupational segregation (Brussino and McBrien 2022).

Cultural norms placed on migrants, culturally and linguistically diverse people, and First Nations people also intersect with gendered norms, stereotypes and biases to drive education and training choices and access to educational attainment (Webb et al. 2017; Australian Human Rights Commission 2020; Perales et al. 2021).

"My wife faced additional barriers during her training at TAFE. She was the only female in her course for the entire four years and had no female teaching staff, which limited her aspirations as a plumber." Education and de-stigmatising non-traditional roles encourage others to pursue careers outside of gendered norms."

— Male focus group participant, aged 30-54 years, Social Worker

Other drivers of gendered education and training choices include:

- Gender stereotypes embedded in curriculum design and teacher expectations and bias. For example, textbooks and teaching materials which reinforce traditional gender roles and norms (UNESCO 2019).
- Lack of structural flexibility and supports in educational institutions for those with caring responsibilities.
- Low representation and visibility of women and girls in male dominated fields and vice versa—both in teaching roles during training and post-training once workers enter the workforce and pursue careers.
- Work-based learning, particularly apprenticeships, can lack flexibility for learners and pose significant barriers to participation. Gendered workplace environments and behaviours may further reinforce occupational segregation into the training system and negatively influence learner perceptions (Simon and Clarke 2016).
- Learning environments enabling exposure to overt sexual harassment and discrimination. Research has found that exposure to sexual harassment and other forms of discrimination were often more pronounced for certain priority cohorts including women apprentices in male dominated trades, First Nations apprentices, apprentices with disability, and apprentices from other marginalised backgrounds (Bridges et al. 2021; DEWR 2025).
- Perceived (and often actual as our [Paper 1](#) findings showed) lower labour market returns including higher gender pay gaps or rates of sexual discrimination in male dominated workplaces (World Economic Forum 2023). Barriers to career advancement and senior leadership roles especially for women employed in male dominated fields are also connected to this.
- Even when men and women choose to pursue highly gendered training pathways, opposite to their gender, discrimination and a lack of support can lead to a leaky pipeline during training before even entering highly gender segregated jobs in the workforce.

Applying the GSIS to areas of study

In this section, we apply the GSIS to FOEs that are used throughout Paper 2 offering GSIS insights on the top 10 and 20 narrow fields of education using the gender splits of students. This illustrates how the GSIS can be used for different measures, other than occupations which was the focus in [Paper 1](#). See Figure 2.

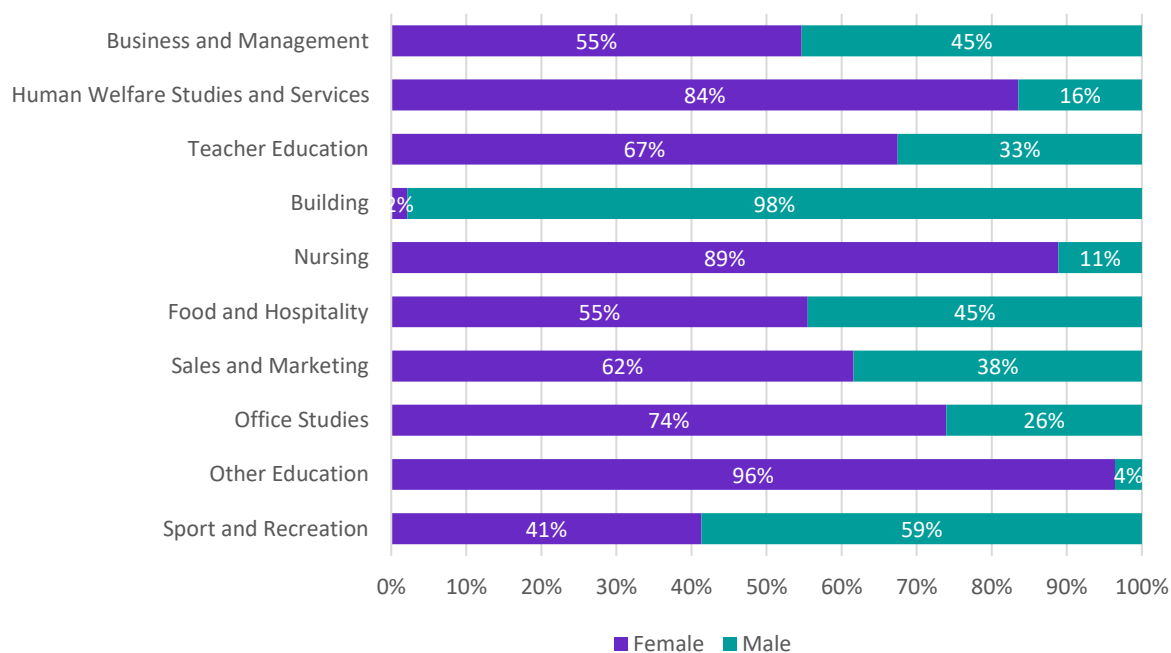
Figure 2: Gender Segregation Intensity Scale applied to Narrow Fields of Education (FOE)

Segregation Intensity	Definition	Examples
Gender balanced	Less than 60%	Business and Management (55% female) Sport and Recreation (59% male)
Moderately female or male dominated	Between 60-75%	Sales and Marketing (62% female) Agriculture (71% male)
Highly female or male dominated	Between 75-90%	Nursing (89% female) Process and Resources Engineering (85% male)
Almost completely female or male dominated	90% and above	Other Education (96% female) Building (98% male)

Source: ABS, Person Level Integrated Data Asset (PLIDA), customised data. Gender splits based on all AQF levels for graduate completions from 2015, 2016 and 2017 (inclusive).

In doing so, we find that across the top 10 narrow FOEs, which cover over half of all people studying in Australia, there are three gender balanced fields of education, one that is almost completely male dominated, and six that are female dominated—either moderately, highly or almost completely female dominated. See Figure 3 below.

Figure 3: Top 10 most common Fields of Education by gender (%)



Source: ABS, Person Level Integrated Data Asset (PLIDA), customised data

Beyond the top 10 FOEs, three almost completely male dominated FOEs and two highly male dominated FOEs form the top 15. In order of size, these are the two almost completely male dominated FOEs of Automotive Engineering and Technology, and Electrical and Electronic Engineering and Technology; the two highly male dominated FOEs of Other Society and Culture and Process and Resource Engineering; followed by another almost completely male dominated FOE of Mechanical and Industrial Engineering and Technology.

Three gender balanced and two moderately female dominated FOEs round out the top 20 FOEs across Australian graduates from 2015-2017. The gender balanced FOEs are Banking, Finance and Related Fields, General Education Programmes and Public Health. Other Health and Accounting are the two moderately female dominated FOE's. See Table 3.

Across the 69 narrow FOEs with available data, only 20% or 14 FOEs had gender balanced completions, a similar finding to [Paper 1's](#) heading finding that only one in five workers work in gender balanced occupations.

Table 3: Top 20 most common Narrow Fields of Education by gender segregation intensity

Field of Education (in order of size)	Segregation intensity
Business and Management	Gender balanced
Human Welfare Studies and Services	Highly female dominated
Teacher Education	Moderately female dominated
Building	Almost completely male dominated
Nursing	Highly female dominated
Food and Hospitality	Gender balanced
Sales and Marketing	Moderately female dominated
Office Studies	Moderately female dominated
Other Education	Almost completely female dominated
Sport and Recreation	Gender balanced
Automotive Engineering and Technology	Almost completely male dominated
Electrical and Electronic Engineering and Technology	Almost completely male dominated
Other Society and Culture	Highly male dominated
Process and Resources Engineering	Highly male dominated
Mechanical and Industrial Engineering and Technology	Almost completely male dominated
Banking, Finance and Related Fields	Gender balanced
Other Health	Moderately female dominated
General Education Programmes	Gender balanced
Public Health	Gender balanced
Accounting	Moderately female dominated

Source: ABS, Person Level IPntegrated Data Asset (PLIDA), customised data

Gendered divides across Education and Training Choices: Key Findings

- Recent VET and higher education enrolments and completions indicate current training pipelines will not significantly improve existing gendered labour market segregation and occupational shortages.
- Despite relatively balanced overall enrolments in VET with a 48% female enrolment in 2023 and females accounting for the majority (60%) of undergraduate enrolments in higher education in 2023 distinct gender divides persist across students' area of study choices.
 - Of the 5.1 million Australians enrolled in nationally recognised VET in 2023 females account for just 17% of STEM enrolments but dominate non-STEM fields (76%) of enrolments.
 - Females represent 60% of all completed undergraduate and postgraduate higher education awards yet remain underrepresented in high-tech and STEM disciplines where female enrolment rates languish around 19-25%.
 - Higher education completions reveal that 72% of research doctorates in Education and 65% in Health are now awarded to women, contrasted with 70% of Engineering doctorates awarded to men.
- Amongst the top 20 growing occupations discussed in [Paper 1](#), 2023 VET training pipelines mirror the gender segregation in those occupations.
- Likewise, significant gender segregation patterns are seen in training pipelines for Government priority reform areas such as electrotechnology, construction and manufacturing qualifications for the Net Zero transition; information and communications technology qualifications for the digital transformation; and care and health qualifications to support a higher quality and efficient care sector.
- Gendered divides persist across areas of study when looking at broad and narrow FOEs:
 - In higher education, only the Natural and Physical Sciences, Architecture and Building, and Management and Commerce fields of education had gender balanced enrolments in 2023 among the 12 broad fields of education.
 - Similar gender patterns exist across VET and higher education completions based on an analysis of the 71 narrow areas of study; there are only three gender balanced areas of study across the top 10 areas of study and six across the top 20 based on completions from 2015-2017.
 - Across the 69 narrow FOEs with available data, only 20% (14 FOEs) had gender balanced completions.
- Social and cultural norms have a significant influence on shaping education and training choices, careers and pathways from an early age. These ultimately reinforce gender stereotypes and biases about which jobs men and women are suited or should aspire to. Intervening early in gendered education and training choices is key to successful interventions in occupational segregation.

Gendered divides across skills mismatches

Skills mismatches occurs where there is a gap between the skills employers require and the skills workers possess. Skills mismatches reflect fundamental supply-and-demand imbalances: when labour supply does not match employers' skills demands, both vacancies and unemployment can rise simultaneously, signaling an inefficient allocation of resources (Treasury 2024). It may be the case that certain groups of people are more likely to possess skills, meaning other groups will be part of a skills mismatch. However, skills mismatches are also driven by systemic structural discrimination and bias associated with gender, sexuality, race, disability, and social class (Lind and Colquhoun 2021). This includes gender differences in field of study choices and occupational segregation itself which also contribute significantly to skills mismatch (Moro-Egido 2020).

Internationally and in Australia, women often have higher educational attainment than men, face higher rates of overqualification, and are more likely to have their skills underutilised as a result. Women are also likely to be overqualified in part time or flexible roles due to unpaid care and other work demands (ILO 2023; WGEA n.d.). All of these contribute to lower payoffs for women when investing in their education and the persistent gender pay gaps we explored in [Paper 1](#). Gendered differences in field of study choices and occupational segregation also contribute to skills mismatches (Moro-Egido 2020).

Skills mismatches also restrict access to learning opportunities and funnel certain groups into limited occupational pathways (JSA 2025a). For example, 44% of permanent migrants work below their qualification level, representing an untapped skills pool that could inject up to \$9 billion annually into the economy if better harnessed (SSI 2025). Overlapping systems of inequality shape educational and training opportunities and constraints. Different cohorts of people are often clustered in qualification levels and occupations because of the way gender, culture, disability and associated social-economic backgrounds intersect with education and the labour market.

Skills mismatches are felt by workers, employers, and the broader economy. Workers may suffer from low job satisfaction, reduced opportunities for career advancement, and stagnating incomes. Employers face productivity losses, substandard work quality, and higher turnover and training costs; an inefficient labour allocation curbs economic growth and stifles innovation potential (Treasury 2024).

This misalignment across supply and demand leads directly to occupational shortages, and as we showed in [Paper 1](#), there is a clear correlation between these shortages and gendered labour market trends. Female dominated fields such as aged care and early childhood education continue to struggle to fill vacancies, while male dominated fields like engineering and trades report persistent gaps. For example, 73% of almost completely male dominated occupations are rated in shortage, compared to 47% of almost completely female dominated roles. JSA's Australian Occupation Shortage List identifies various female dominated health roles like Registered Nurses, and Aged or Disabled Carers being in shortage (JSA 2024a). Meanwhile, technology roles, where men remain overrepresented, face a significant shortfall in positions like software engineers and data analysts (JSA 2025a). In fact, in Australia, skills mismatches are most pronounced in sectors underpinned by both demographic shifts and rapid technological change.¹ This reflects international

¹ The technology and AI sector alone reports a 20% shortfall in critical roles such as software engineers and data analysts, while healthcare is grappling with an estimated shortage of 15,000 registered nurses and allied health professionals nationwide (Industry Partners Australia 2025).

trends where women are underrepresented in reskilling programs for high demand tech roles and more broadly in the green economy (OECD 2023).

Internationally, it has also been evident that skills mismatches impede economic and social progress. The International Labour Organisation highlights that discrepancies between employer demand and worker capabilities, made worse by inadequate mechanisms for lifelong skilling, reskilling, and upskilling, are a barrier to smooth labour market transitions and a human-centred future of work (ILO n.d.).

One solution to managing skills mismatches is to develop a more 'tertiary harmonised' education and training system where workers and students can more readily move between VET and higher education. This could better enable reskilling and upskilling, lifelong learning via innovative qualifications, micro credentials, and improved credit transfers (JSA 2025b).

There is also a need to promote gender-sensitive reskilling programs in emerging sectors and highly gender segregated industries to intervene in both skills mismatching trends and accelerate progress towards gender economic equality in Australia, especially for women with compounding disadvantage. Our intersectional skills mismatch data findings begin to fill key gaps in the literature to develop more nuanced policy solutions—including in specific fields of study and associated occupational pathways.

Skills mismatch approach

There are different ways to explore skills mismatches, and our analysis focuses specifically on overqualification, where a worker's level of education exceeds the skill level required for their current job. This allows us to identify foundational insights into how many workers, and which types, are either fully utilising their skills or potentially underutilised in jobs below their qualification level.

Using data from ABS Personal Level Integrated Data Asset (PLIDA), we examine the occupations of individuals who have completed Australian qualifications between 2015 and 2017, and the Skill Level of the occupation they are working in three years later, between 2018 and 2020. We compare the qualifications they completed aligned with the [Australian Qualifications Framework](#) (AQF) to the [ANZSCO Skill Level](#) of the occupations three years later. See Table 4.

Table 4: Qualification type mapped to AQF and ANZSCO Skill Levels

Qualification Type	AQF level/s (3 years before)	ANZSCO Skill Level/s for current Occupation (3 years post AQF qualification)
Bachelor Degree or higher	7+	1
Diploma, Advanced Diploma and Associated Degree	5 and 6	2
Certificate IV	4	3
Certificate II and III	2 and 3	4
Certificate I	1	5

Source: ABS ANZSCO Skill Level to qualification type concordance

Note: Further detail on this mapping is in [Technical Paper 2](#).

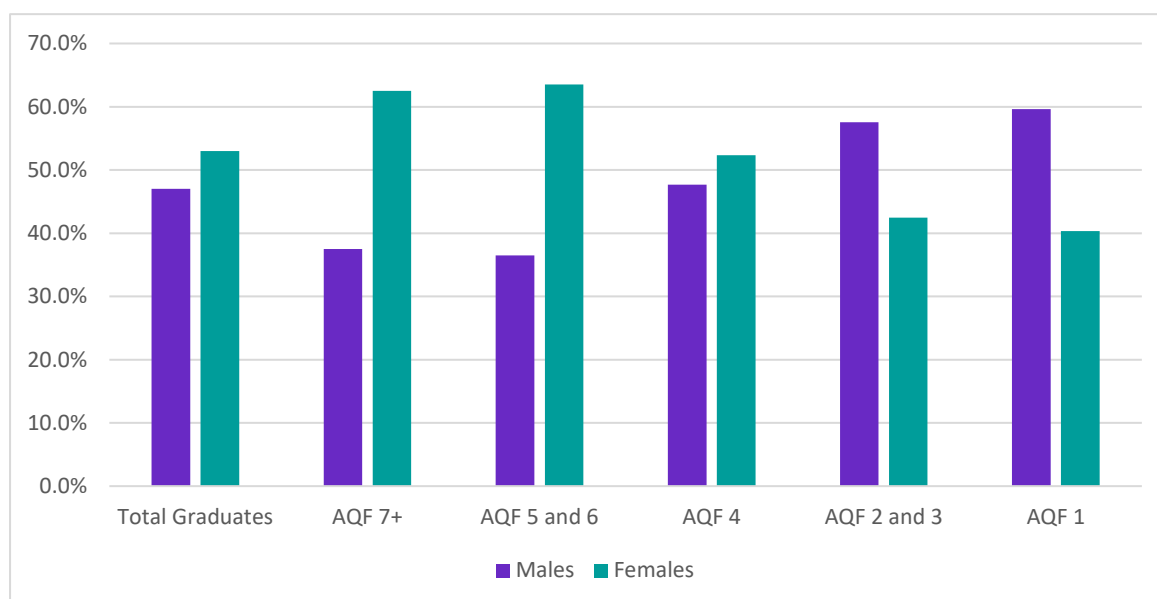
The analysis covers 1.2 million graduates from VET and higher education under Commonwealth Supported Placements (CSP), but one notable limitation of data is that we cannot determine whether individuals have pursued further study or upskilled in the three years following their initial qualification.² This limitation, along with the methodology is outlined [Technical Paper 2](#). We also include analysis on the most common AQF level of qualifications that male and females graduate in to offer broader context for our findings. For example, in this data set there is far higher uptake of higher-level qualifications, especially AQF 7+ (Bachelor Degree and above) qualifications by females. See Figure 4.

Across cohorts there are also differences in this data, the most common qualification level for total graduates and First Nations is AQF 2 and 3. First Nations graduates are concentrated in lower AQF levels, with around three in every four First Nations graduates at AQF 1 to AQF 4. However, as [Paper 1](#) showed, there are complex structural and historical barriers at play here because of educational systemic barriers making it disproportionately harder for First Nations people to access and complete formal educational qualifications needed to secure higher skill roles.

AQF 7+ was also the most common level for people with disability and CALD graduates. People with disability were almost exclusively at AQF 7+ in this data set which has implications for our findings which we elaborate on in [Technical Paper 2](#).

² As a result, the analysis is limited to identifying skills mismatches based on whether a person is working in an occupation below their ANZSCO Skill Level relative to their current AQF Level. For example, using Figure 4, someone with an AQF4 qualification would be considered matched if employed three years later in an occupation classified at ANZSCO Skill Level 1, 2 or 3. However, if they are working in an occupation at ANZSCO Skill Level 4 or 5, they would be considered mismatched and underutilised in terms of their skill potential.

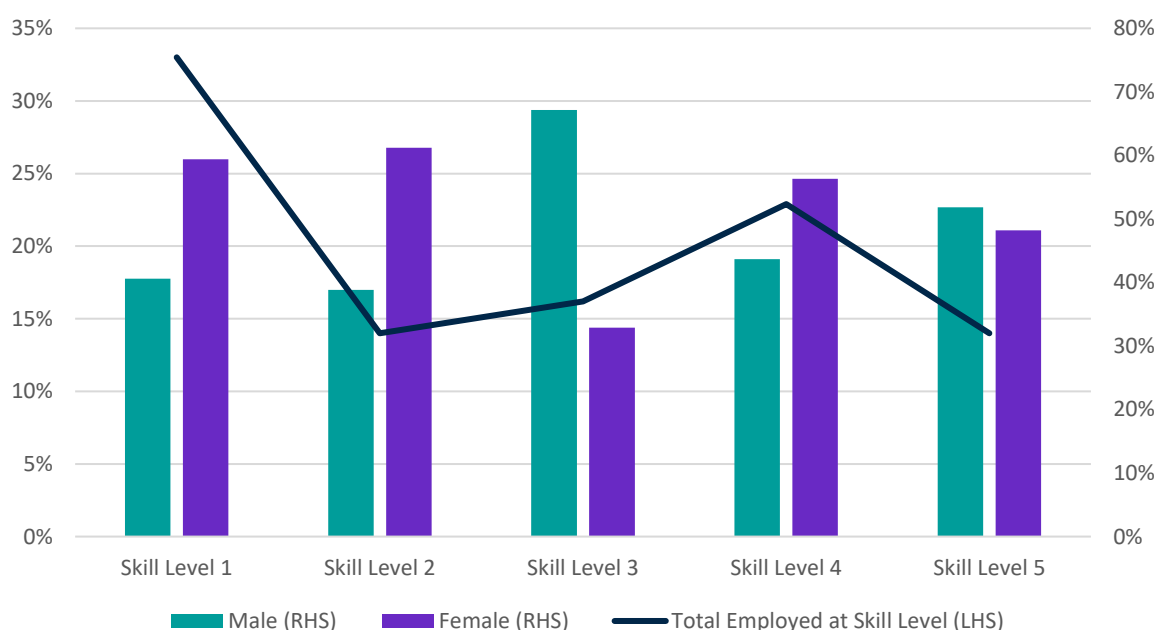
Figure 4: Share of total graduates and AQF level completions by gender (%)



Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

Three years post-completion the occupational outcomes of graduates also differ by gender. Figure 5 indicates that, broadly in-line with all AQF level completions, females are more likely than males to be working in Skill Level 1 occupations, the highest Skill Level of any occupation at 37%. The largest gap in gender ANZSCO Skill Level outcomes was at Skill Level 3, with males making up around two thirds of occupational outcomes at this level. Further analysis of graduate outcomes, including cohort specific insights, is provided in [Technical Paper 2](#).

Figure 5: Distribution of ANZSCO Skill Level in current occupation and share of ANZSCO Skill Level by Gender (%)



Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

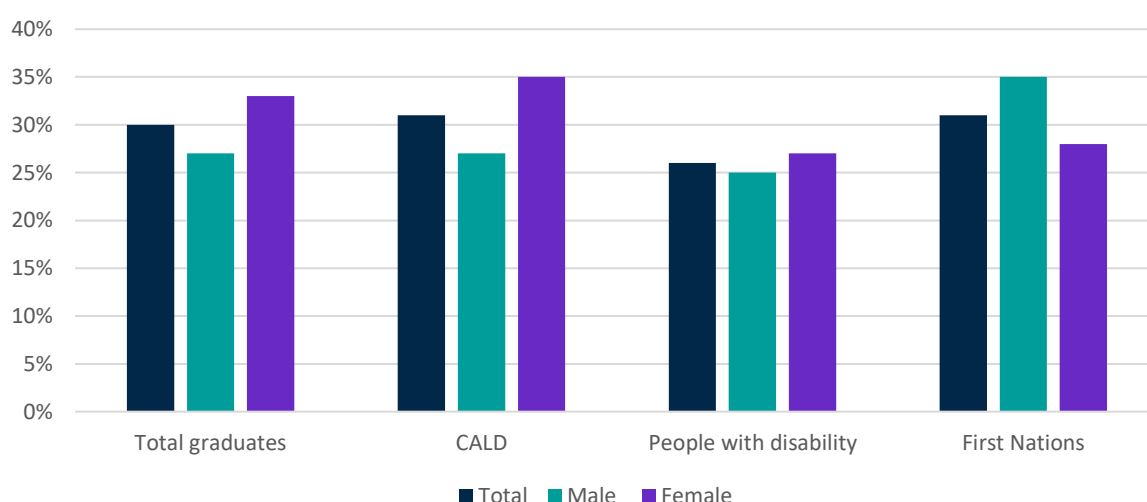
An intersectional snapshot of skills mismatches

An intersectional analysis of skills mismatch allows us to identify foundational insights into how many workers, and which types, are either fully utilising their skills or potentially underutilising in jobs below their qualification level. Through this analysis we can identify cohorts or fields of study for policy intervention or monitoring.

Our key findings from the intersectional skills mismatch analysis are that:

- Females are more likely to have a skills mismatch than males (33% compared to 27% males or 30% for total graduates).
 - Around one in three women (33%) were working in occupations below their skill potential compared to almost one in four men (27%).
- Overall, people with disability had the lowest skills mismatching rates across cohorts with little gendered differences between males and females. However, the data shows a large skew to higher qualification and Skill Level roles for this cohort, where we know skills matching is far more common.
- CALD and First Nations workers had similar rates of skills mismatching compared to total graduates (both 31% compared to total 30%) but gendered skills mismatching trends within cohorts was more apparent.
 - CALD females and First Nations males have the highest rate of mismatching at 35%.
 - Males with disability have the lowest rate of skills mismatching at 26%.
 - First Nations females have similarly lower skills mismatching rates at 28% (noting that the First Nations analysis used a slightly different skills matching structure due to data constraints—see [Technical Paper 2](#)).

Figure 6: Skills mismatching between AQF level and ANZSCO Skill Level by cohort and gender (%)



Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

Note: (see [Technical Paper 2](#))

The following analysis looks deeper at skills mismatches across different levels of education and occupations by gender and cohort including total graduates, CALD, people with disability and First Nations. The analysis found:

- For workers who completed an AQF 7+ qualification, we found similar skills mismatches for males and females.
- First Nations workers, CALD workers and workers with disability who completed a AQF 7+ qualification were slightly more likely than the general graduate population to be employed in ANZSCO Skill Level 1 occupations. This suggests lower stronger skills mismatches between qualification and job roles for these cohorts with the highest levels of tertiary qualifications.
- The most pronounced gender skills mismatches were seen at AQF 5 and AQF 6 (Diploma, Advanced Diploma and Associated Degree) across all cohorts.
 - Just under half of all females (49%) were mismatched compared to only 41% of males.
 - CALD females and females with disability skills mismatches were even worse—both at 55% for both.
 - First Nations females were the highest amongst females with a skills mismatch at 66%, but First Nations males were even higher at 82% at this AQF level.

However, it is important to note that at AQF 5 and 6, Skill Level appeared to be the most fluid, with individuals in both higher and lower Skill Level roles. However, due to data limitations, we were unable to track further study or upskilling that may have occurred within the three years following qualification or unpack the difference between VET and higher education outcomes which crossover at this level (See [Technical Paper 2](#)).

- For those who completed an AQF 4 qualification, the data reveals that around two-thirds of workers had a skills match. The cohort analysis shows that CALD workers and people with disability were more likely to be mismatched at this level compared to total graduates.
- Concerningly, at the most common levels of AQF 2 and 3 for the First Nations cohort, male First Nations workers were more likely to be mismatched (38%) than females (27%) and total graduates (25%).

Table 5: Share of total graduates AQF level to ANZSCO Skill Level mismatching, total and gender (%)

AQF Levels	ANZSCO Skill Level/s Match	Total Mismatch (%)	Male (%)	Female (%)
7+	1	27%	27%	26%
5 and 6	1 and 2	46%	41%	49%
4	1 to 3	34%	30%	39%
2 and 3	1 to 4	25%	24%	26%

Source: Person Level Integrated Data Asset (PLIDA), ABS DataLab. Findings based on use of PLIDA data

Table 6: Share of CALD AQF level to ANZSCO Skill Level skills mismatching, total and gender (%)

AQF Levels	ANZSCO Skill Level/s Match	Total Mismatch (%)	Male (%)	Female (%)
7+	1	23%	21%	24%
5 and 6	1 and 2	50%	41%	55%
4	1 to 3	39%	32%	45%
2 and 3	1 to 4	25%	23%	26%

Source: Person Level Integrated Data Asset (PLIDA), ABS DataLab. Findings based on use of PLIDA data

Table 7: Share of people with disability AQF level to ANZSCO Skill Level mismatching, total and gender (%)

AQF Levels	ANZSCO Skill Level/s Match	Total Mismatch (%)	Male (%)	Female (%)
7+	1	25%	25%	26%
5 and 6	1 and 2	51%	38%	55%
4	1 to 3	47%	39%	51%
2 and 3	1 to 4	29%	29%	30%

Source: Person Level Integrated Data Asset (PLIDA), ABS DataLab. Findings based on use of PLIDA data

Table 8: Share of First Nations AQF level to ANZSCO Skill Level mismatching, total and gender (%)

AQF Levels	ANZSCO Skill Level/s Match	Total Mismatch (%)	Male (%)	Female (%)
7+	1	20%	17%	21%
5 and 6	1 and 2	31%	18%	34%
4	1 to 3	37%	38%	36%
2 and 3	1 to 4	33%	38%	27%

Source: Person Level Integrated Data Asset (PLIDA), ABS DataLab. Findings based on use of PLIDA data

Note: First Nations mapping between AQF level and ANZSCO Skill Level was done at the higher ANZSCO 3-digit level while the mapping of the other cohorts was done at the ANZSCO 4-digit level. Please see [Technical Paper 2](#) for more information.

In summary, skill matching outcomes generally show strong alignment between qualifications and occupations, particularly at lower AQF 2 and 3 and higher AQF 7+ levels. However, gender and other cohort mismatches persist, particularly at AQF 4, 5 and 6 where females from CALD and First Nations backgrounds and those with disability, have lower skill match rates compared to males and are being potentially underutilised in the economy. Most notably, the highest skill mismatches were for female CALD and workers with disability at AQF 4 and AQF 5 and 6.

An intersectional snapshot of skills mismatches: Key Findings

- Females are more likely than males to be working in Skill Level 1 roles, the highest Skill Level of any occupation, but they are also more likely to be skills mismatched. Females' skill potential is more commonly underutilised in their occupation than males.
- Overall, people with disability had the lowest skills mismatching rates across cohorts with little gendered differences between males and females. Males with disability have the lowest rate of skills mismatching at 26%. However, the data does majorly skew to higher qualification and Skill Level roles for this cohort where we know skills matching is far more common.
- Across cohorts, CALD and First Nations workers had similar rates of skills mismatching compared to total graduates and females but gendered mismatching rates within cohorts paint a different picture.
 - CALD females and First Nations males have the highest skills mismatches at 35%.
 - First Nations females had lower skills mismatching rates at 28%.
- Skill matching outcomes generally show strong alignment between qualifications and occupations, particularly at lower AQF 2 and 3 (Skill Level 4) and higher AQF 7+ levels (Skill Level 1).
 - Across AQF 7+ (Bachelor Degree and above) qualifications, skills mismatches were low across all cohorts and between genders.
 - The most pronounced gender skills mismatches were seen at the AQF 5 and 6 (Diploma, Advanced Diploma and Associate Degree level) where just over half (51%) of females were employed in Skill Level 1 or 2 occupations, compared to almost two thirds of males (59% of males).
 - At AQF 5 and 6, gendered skills mismatches worsened within cohorts. Over half of CALD females and females with disability were skills mismatched and not being fully utilised in their role.

Spotlight on skills mismatches across the Top 10 areas of study

This section offers a deeper dive into skills mismatches across the top 10 areas of study outlines earlier in this section where people have the same level of education and the same occupational pathway.³

We also apply the GSIS to these top 10 FOEs using the gender splits of students to illustrate how it can be used for different measures, other than occupations (which was the focus in [Paper 1](#)), see Figure 7.

³ This analysis using fields of education did not include samples for First Nations as the counts were too low.

Figure 7: Gender Segregation Intensity Scale applied to Fields of Education

Segregation Intensity	Definition	Examples
Gender balanced	Less than 60%	Business and Management (55% female) Sport and Recreation (59% male)
Moderately female or male dominated	Between 60-75%	Sales and Marketing (62% female) Agriculture (71% male)
Highly female or male dominated	Between 75-90%	Nursing (89% female) Process and Resources Engineering (85% male)
Almost completely female or male dominated	90% and above	Other Education (96% female) Building (98% male)

Source: ABS, Person Level Integrated Data Asset (PLIDA), customised data. Gender splits based on all AQF levels for graduate completions from 2015, 2016 and 2017 (inclusive).

In doing so, we find that across the top 10 FOEs, which cover over half of all people studying in Australia, there are three gender balanced fields of education, one that is almost completely male dominated (Building), and six that are female dominated—either moderately, highly or almost completely female dominated. See Table 9 and Figure 8 below.

However, beyond the top 10 FOE, three almost completely male dominated FOEs and two highly male dominated FOEs form the top 15. In order of size, these are the two almost completely male dominated FOEs of Automotive Engineering and Technology, and Electrical and Electronic Engineering and Technology; the two highly male dominated FOEs of Other Society and Culture and Process and Resource Engineering; followed by another almost completely male dominated FOE of Mechanical and Industrial Engineering and Technology.

Three gender balanced and two moderately female dominated FOEs round out the top 20 FOEs across Australian graduates from 2015-2017. The gender balanced FOEs are

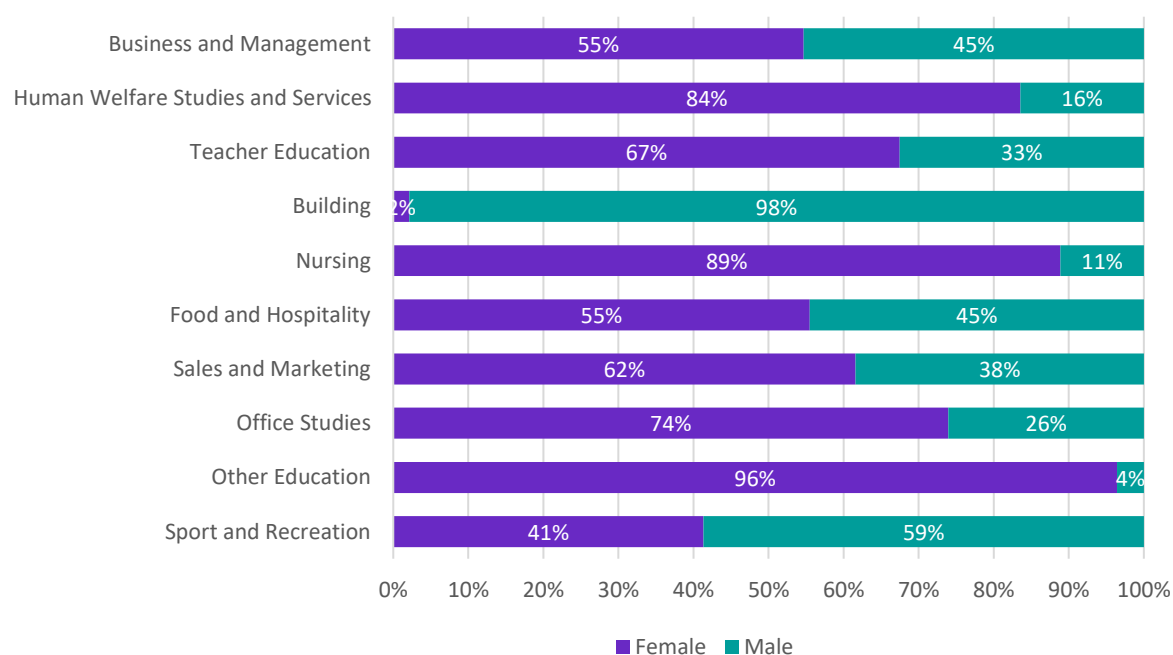
Banking, Finance and Related Fields, General Education Programmes and Public Health. Other Health and Accounting are the two moderately female dominated FOEs. Exploring how FOE segregation intensity has shifted over time using more recent enrolment and completion data is worthy of further research.

Table 9: Top 10 most common Fields of Education by gender segregation intensity

Field of Education	Segregation intensity
Business and Management	Gender balanced
Human Welfare Studies and Services	Highly female dominated
Teacher Education	Moderately female dominated
Building	Almost completely male dominated
Nursing	Highly female dominated
Food and Hospitality	Gender balanced
Sales and Marketing	Moderately female dominated
Office Studies	Moderately female dominated
Other Education	Almost completely female dominated
Sport and Recreation	Gender balanced

Source: ABS, Person Level Integrated Data Asset (PLIDA), customised data

Figure 8: Top 10 most common Fields of Education by gender (%)



Source: ABS, Person Level Integrated Data Asset (PLIDA), customised data

Exploring skill matching by FOE involves some data and analysis challenges, so we have focused on providing insights on the most common Skill Level occupational outcomes—Skill Level 1, which aligns with AQF 7+ (Bachelor or above qualifications) education level. This represents around one third of graduates.⁴

The key findings for graduates with AQF 7+ were:

- The three FOEs of Teacher Education, Nursing, and Rehabilitation Therapies, showed the strongest skill matching trends, with around 90% or more of graduates employed in a Skill Level 1 occupation three years post study.
- Law and Human Welfare Studies and Services had comparatively lower skill matching outcomes but skills matching trends were similar for males and females.
- For the remaining top 10 FOEs, Business and Management, Communication and Media Studies, Behavioural Science, Other Health, and Other Natural and Physical Sciences, skills matching trends were much lower, particularly for Other Health.
- Females had better skills matching in the fields of Communication and Media Studies, Behavioural Science, and Other Health, while males did better in Business and Management and Other Natural and Physical Sciences.

When looking at the top 10 FOEs for CALD graduates, we found that they shared six of the broader population's top 10 areas of study, namely: Business and Management, Nursing, Teacher Education, Law, Rehabilitation Therapies and Other Natural and Physical Sciences. Most of these shared FOEs are also female dominated, with the exception of Business and Management being gender balanced for both cohorts. The other four FOEs were Medical Studies, Accounting, Pharmacy and Management and Commerce, which reflects what was observed in [Paper 1](#) around the overrepresentation of CALD workers in these occupations.

In relation to skills mismatching trends for CALD graduates with AQF 7+ qualifications, we found that:

- CALD graduates skills matching for Rehabilitation Therapies and Other Natural and Physical Sciences were better than those for the total economy for both CALD males and females in terms of matching their AQF level with the skill level of their occupation.
- For the other shared FOEs, Teacher Education, Business and Management, Nursing, and Law, CALD males had similar or better skill matching outcomes than their all-male graduate counterparts, while CALD females had slightly higher skills mismatches and therefore potentially higher underutilisation of their skills.

When looking at the top 10 FOEs for graduates with disability, the majority of FOEs (eight) are shared with the total economy's top 10 FOEs in their respective CALD top 10 FOEs, with the exceptions being the Management and Commerce and Medical Studies FOEs. Again, a majority (seven of the eight shared FOEs) are skewed towards female dominated segregation across the GSIS, with the exception of Business and Management being gender balanced for both cohorts.

⁴ This is due to the high level of data disaggregation, which can affect how representative the data and inferences are. With FOE represented across both VET and higher education outcomes, we chose to examine FOE by the most common ANZSCO Skill Level occupational outcome, which was Skill Level 1 (Therefore for graduates with AQF 7+ or above qualifications).

In relation to skills mismatching trends for graduates with disability with AQF Level 7+ qualifications, we found that:

- People with disability had very similar matching outcomes for all eight of the shared FOEs compared with the total economy. Of particular note, were the FOEs of Medical Studies, Rehabilitation Therapies, Nursing and Teacher Education, which all had a very high proportion (90% and above) of males and females working in Skill Level 1 occupations three years after graduating.

Table 10: Top 10 FOEs gender share of AQF7+ Level graduates and percent of those working in ANZSCO Skill Level 1 jobs by GSIS—Total graduates

Top 10 FOEs by graduate count	Share of total AQF7+ graduates (%)	Share of total AQF7+ graduates male (%)	Share of total AQF7+ graduates female (%)	Occupation Skill Level 1 Male (%)	Occupation Skill Level 1 Female (%)	Segregation intensity of FOE
Teacher Education	14%	23%	77%	93%	89%	Highly female dominated
Business and Management	12%	50%	50%	63%	57%	Gender balanced
Nursing	10%	10%	90%	92%	93%	Highly female dominated
Law	4%	39%	61%	79%	78%	Moderately female dominated
Rehabilitation Therapies	3%	24%	76%	95%	95%	Highly female dominated
Communication and Media Studies	3%	35%	65%	51%	60%	Moderately female dominated
Behavioural Science	3%	20%	80%	61%	63%	Highly female dominated
Other Health	3%	38%	62%	29%	45%	Moderately female dominated
Human Welfare Studies and Services	3%	13%	87%	69%	72%	Highly female dominated
Other Natural and Physical Sciences	3%	44%	56%	60%	55%	Gender balanced

Findings Source: ABS, Person Level Integrated Data Asset (PLIDA), customised data

Table 11: Top 10 FOEs gender share of AQF7+ Level graduates and percent of those working in ANZSCO Skill Level 1 jobs by GSIS—CALD

Top 10 FOEs by graduate count	Share of total AQF7+ graduates (%)	Share of total AQF7+ graduates male (%)	Share of total AQF7+ graduates female (%)	Occupation Skill Level 1 Male (%)	Occupation Skill Level 1 Female (%)	Segregation intensity of FOE
Business and Management	15%	51%	49%	62%	55%	Gender balanced
Nursing	13%	17%	83%	93%	91%	Highly female dominated
Teacher Education	9%	18%	82%	100%	85%	Highly female dominated
Law	5%	38%	62%	79%	76%	Moderately female dominated
Management and Commerce	5%	42%	58%	74%	69%	Gender balanced
Medical Studies	4%	50%	50%	100%	98%	Gender balanced
Accounting	3%	40%	60%	72%	68%	Gender balanced
Pharmacy	3%	32%	68%	92%	94%	Moderately female dominated
Other Natural and Physical Sciences	3%	35%	65%	68%	59%	Moderately female dominated
Rehabilitation Therapies	2%	30%	70%	100%	98%	Moderately female dominated

Source: ABS, Person Level Integrated Data Asset (PLIDA), customised data

Table 12: Top 10 FOEs gender share of AQF7+ Level graduates and percent of those working in ANZSCO Skill Level 1 jobs by GSIS—People with disability

Top 10 FOEs by graduate count	Share of total AQF7+ graduates (%)	Share of total AQF7+ graduates male (%)	Share of total AQF7+ graduates female (%)	Occupation Skill Level 1 Male (%)	Occupation Skill Level 1 Female (%)	Segregation intensity of FOE
Teacher Education	13%	24%	76%	95%	90%	Highly female dominated
Business and Management	13%	50%	50%	63%	57%	Gender balanced
Nursing	10%	11%	89%	93%	94%	Highly female dominated
Law	5%	38%	62%	81%	78%	Moderately female dominated
Rehabilitation Therapies	4%	23%	77%	96%	95%	Highly female dominated
Communication and Media Studies	3%	32%	68%	58%	62%	Moderately female dominated
Management and Commerce	3%	50%	50%	71%	68%	Gender balanced
Behavioural Science	3%	19%	81%	63%	66%	Highly female dominated
Human Welfare Studies and Services	3%	13%	87%	70%	73%	Highly female dominated
Medical Studies	3%	46%	54%	100%	99%	Gender balanced

Source: ABS, Person Level Integrated Data Asset (PLIDA), customised data

Spotlight on skills mismatches across the Top 10 areas of study: Key findings

- There are only three gender balanced FOEs in the top 10: Business and Management, Food and Hospitality, and Sport and Recreation. Building is the only FOE that is male dominated and falls on the almost completely male dominated category on the GSIS. The remaining six were female dominated across different categories of the GSIS: Human Welfare Studies and Services, Teacher Education, Nursing, Sales and Marketing, Office Studies, Other Education.
- For AQF 7+ (Bachelor or above qualification) graduates, the strongest skill matching was in Teacher Education, Nursing and Rehabilitation Therapies—with around 90% or more of graduates employed in Skill Level 1 occupations three years post qualification.
- The highest Skill Level 1 mismatches were in Business Management, Communication and Media Studies, Behavioural Science, Other Health and Other Natural and Physical Sciences—with both genders reporting less than 70% skills matching rates across these FOEs.
- Female graduates had better skills matching outcomes in Communication and Media Studies, Behavioural Science, and Other Health. While male graduates had better skills matches in Business and Management and Other Natural and Physical Sciences.
- CALD graduates shared six of the top 10 FOEs with the broader population—these FOEs were mostly female dominated except Business and Management, which was gender balanced. CALD males had similar or better matching rates than their counterparts, while CALD females experienced slightly higher skill mismatches as per our broader findings.
- CALD males had better skills matching rates than all males only in the Other Natural and Physical Sciences, with 68% of CALD males in a Skill Level 1 occupation post this qualification compared to 60% of all males.
- People with disability have similar skills matching rates to the total economy, with high proportions (90% and above) of males and females with disability in Skill Level 1 occupations post study in the fields of Medical Studies, Rehabilitation Therapies, Nursing and Teaching Education.

Gendered divides across education and training outcomes

In this section, we explore gendered and other intersectional divides across education and training outcomes one, five and 10 years after training.

In the first section we provide an intersectional and decade-long snapshot of employment and median incomes from 2011 to 2021, focusing on how gender, age, First Nations status and migrant background compound to shape economic wellbeing over the life course.

We then explore how students with compounding forms of disadvantage fair across the Australia's VET skills system. We provide an intersectional snapshot of outcomes for students one year post-training after studying qualifications in the top 100 VET qualifications in Australia.

Lastly, we provide a spotlight on the VET qualifications where people with disability are securing good outcomes and identify the qualifications where these students need more support.

An intersectional and decade-long snapshot of employment and income outcomes

This section uses longitudinal analysis of Census data to explore the employment and earnings outcomes of different cohorts over time, from 2011 to 2021.⁵

We know that educational attainment and the level of qualification strongly impacts an individual's earning potential and that those with more advanced post-school qualifications, regardless of gender, typically earn more than those without. In this analysis we control for educational attainment to identify differences in employment outcomes and disparities in earnings by gender, age, First Nations status, and non-English speaking background.⁶

We analyse:

- the **employment outcomes** of females and males with different levels of education attainment aged 25-30 years in 2011 and follow them five (in the 2016 Census) and 10 years later (in the 2021 Census); and the
- **differences in income** between females and males across the total population, First Nations and migrant cohorts at age 25-30 years in 2011, and as they enter their early thirties in 2016 (30-35 years) and late thirties in 2021 (35-40 years).

We find that, despite similar education qualifications, women are consistently more likely to be out of the labour force and earn less than men, with income gaps widening over time. Even when workers have completed a Bachelor Degree or higher, there remains significant income disparity between males and females. These findings highlight the structural inequities in Australia's labour market and the need for inclusive policy interventions.

⁵ Longitudinal data from the ABS Census allows analysis at an individual level over regular time periods. In this instance, tracking labour market outcomes every 5 years for a specified age cohort (females and males in their mid-twenties/mid-thirties) in 2011 to their mid-thirties/early forties in 2021). For other analysis on income inequality by gender, age and First Nations status, including disparities across incomes not from wages see [A snapshot of inequality in Australia](#) (Productivity Commission 2024).

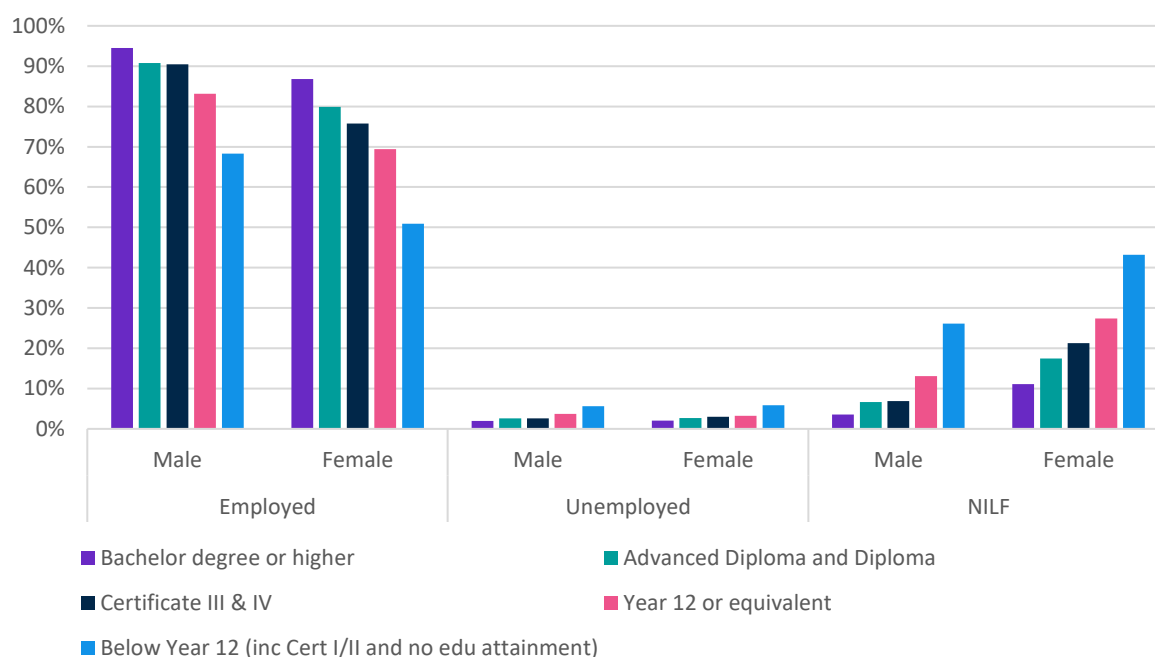
⁶ We provide insights on CALD people using a different method than the CALD proxy mainly used in the study. The proxy was not replicable for this longitudinal data set but points to how different approaches and datasets can be used to provide intersectional insights.

Gendered divides across employment outcomes over time

A snapshot of employment outcomes by level of education in 2021 shows that males have slightly better employment outcomes across all levels of education and this remains the case as workers age into their mid and late thirties.

There are very little gender differences for unemployed workers regardless of education level, but unemployment associated with lower levels of educational attainment. There are much larger gendered differences across for people who aren't in the labour force. Females make up a much larger percentage of people who aren't working at every educational attainment level, again increasing with lower levels of education. See Figure 9.

Figure 9: Labour force status in 2021 by gender and highest level of educational attainment 2021 (35-40 year olds in 2021, 25-30 year olds in 2011)



Source: ABS, Australian Census Longitudinal Data, 2011-2016-2021, TableBuilder

Note: NILF stands for not in labour force and is defined as persons aged 15 years and over who were neither employed nor unemployed

Our more detailed findings by level of education include:

- For those aged 25-30 years in 2011, with Certificate III or higher qualifications, females comparatively have far worse labour outcomes than their male counterparts, with females being over 4 times as likely to be not in the labour force (17% for females, compared with just 4% for males).
- This trend remains consistent even when tracking the outcomes of these individuals five and 10 years later, when both females and males enter their mid-thirties to early-forties (14% for females, compared with 5% for males in 2021 aged 35-40 years). While some of this disparity for women can be attributed to caring responsibilities, it by no means accounts for the entire disparity in employment outcomes.
- Employment outcomes for those aged 25-30 years in 2011 with a **Bachelor Degree or higher** are higher for males, with approximately 92% of males and 83% of females employed. This gap remains consistent 10 years later (now 35-40 year olds) with around 94% of males and 87% of females employed (see figure below).

Gendered divides across incomes over time

In contrast to employment outcomes, if we take a 2021 snapshot of gendered income disparities we find far more pronounced differences between males and females. Regardless of a worker's education attainment or qualification level, there is significant gendered economic inequality when looking at incomes, and this becomes more pronounced as people age.

Our headline finding on this is that **males are almost twice as likely to earn incomes over \$100,000 than females**. As Figure 10 below shows, in 2021, 36% of all males 35-40 years old earned annual incomes of \$104,000 or more, compared with only 19% of females the same age.

Figure 10: Distribution of annual income (ranges) by gender for 35-40 year olds in 2021 (25-30 year olds in 2011)



Source: Source: ABS, Australian Census Longitudinal Data, 2011-2016-2021, TableBuilder

When delving further into how this gendered economic inequality plays out at different levels of education, we found that as with employment outcomes, workers with more advanced post-school qualifications, regardless of gender, typically have higher incomes than those without. However, even when looking at all people who have completed a Bachelor Degree or higher qualification there remains significant gendered income disparities, and they worsen as workers age. We found that:

- In 2011, at age 25-30, employed males who had completed a Bachelor Degree or higher qualification were twice as likely as their female (11% to 5% respectively) counterparts to have an annual income at or above \$104,000.
- As these workers entered their early thirties (30-35 years) in 2016, this had increased to 31% for males and 15% for females.

- When these workers entered their late thirties (35-40 years) in 2021, gender economic inequality continued, with more than half of males (53%) earning more than \$104,000 annually but less than a third of females (30%).

These findings offer another example of how gender economic inequality accumulates and compounds over time, echoing the insights into accumulated 10-year gender pay gaps in [Paper 1](#).

Gendered divides across migrant incomes over time

When exploring divides across incomes for migrants arriving from countries with either English or Non-English speaking backgrounds we found significant disparities compared to the total population and even worse gendered income disparities.

We found that for all people with an advanced post-school qualification (Certificate III and above), employed males born overseas in a Main English-Speaking Background (MESC) are far more likely to have higher incomes than those born in Other Than Main English-Speaking Countries (OTMESC). We also found that these disparities worsen further when looking at gendered differences. For example, we found that:

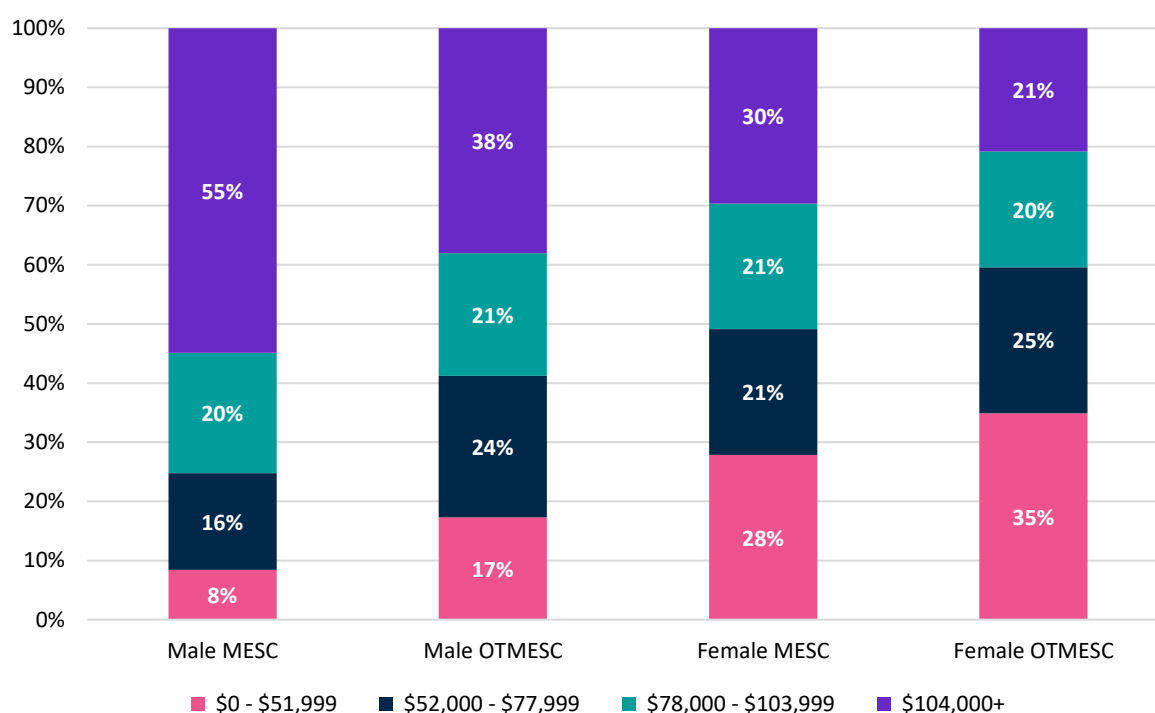
- For 25-44 year olds in 2011, 30% of employed males born in MESC had incomes over \$104,000 per year compared to only 14% of their OTMESC male counterparts. Despite the slightly different age brackets on the gendered divides above, both MESC and OTMESC males had lower earnings than all males.
- The figures were even lower for females, only 12% of employed females born in MESC earned over \$104,000 and only 6% of females born in OTMESC. This is significantly lower than for all females in Australia across the 30-35 and 35-40 year old age groups (15 and 30%).

Discouragingly, over time, as these workers age, the compounding effect of income disparities increases.

- By age 35-54 (10 years later) in 2021, 55% of employed males born in MESC had incomes above \$104,000 per year compared to 38% of those from OTMESC.
- Again, females had far lower shares of high-income earners, with 30% of employed females from MESC earning above \$104,000 compared to 21% of those from OTMESC.

The far lower shares of high-income earners for both OTMESC males and females further points to the factors highlighted in [Paper 1](#), including barriers and inequities that these workers face across workplaces and education and training settings, choices and outcomes.

Figure 11: Distribution of annual income (ranges) 35-54 year olds in 2021 by gender and Country of Birth (MESC/OTMESC) (employed people with Certificate III and above educational attainment)



Source: ABS, Australian Census Longitudinal Data, 2011-2016-2021, TableBuilder

Gendered divides across First Nations incomes over time

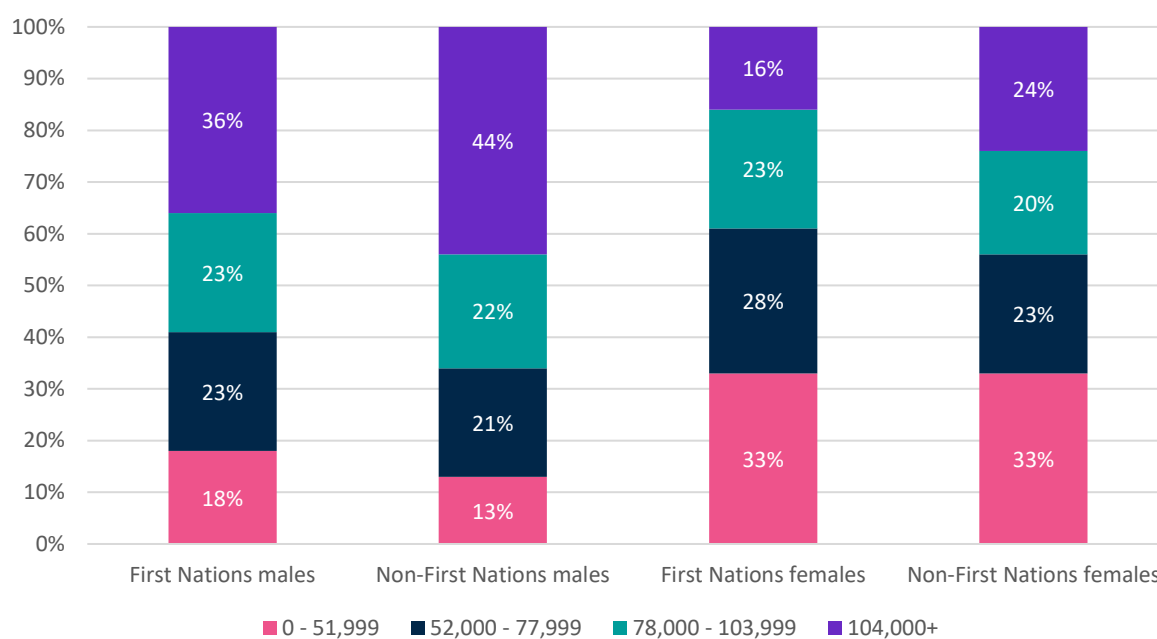
As in [Paper 1](#), our findings on gendered divides across incomes for First Nations people indicate significant income inequality and lower overall economic wellbeing for First Nations people. We found that:

- For 25-44 year olds in 2011, only 12% of First Nations employed males with advanced post school qualifications earned above \$104,000 per year, compared to 20% of all other males this age, or 7% of all other females this age.
- Discouragingly, the disparities were even worse for First Nations females, where only 4% earned above \$104,000 per year.

As with [Paper 1](#) findings, this income disparity compounds over time, particularly for females in their mid-thirties to fifties. First Nations males and females also have worse income disparity than their MESC and OTMESC counterparts. By age 35-54 years (10 years later) in 2021:

- Just over a third (36%) of First Nations males had income above \$104,000 per year compared to almost half of non-First Nations males (44%); and
- Only 16% of First Nations Females earned above \$104,000 per year compared to just under one quarter of non-First Nations females (24%).

Figure 12: Distribution of annual income (ranges) by First Nations and gender for 35-54 year olds in 2021 (employed people with Certificate III and above educational attainment)



Source: ABS, Australian Census Longitudinal Data, 2011-2016-2021

An Intersectional and decade long snapshot of employment and income outcomes: Key Findings

- Males have slightly better employment outcomes across all levels of education, and this remains the case as workers age into their mid and late thirties.
- There are few gender differences for unemployed workers regardless of education level but much larger gender disparities across workers who are not in the labour force, especially for women with lower levels of education.
- Regardless of a worker's education attainment or qualification level, there is significant gendered economic inequality when looking at incomes, and this becomes more pronounced as people age:
 - Males are almost twice as likely to earn incomes over \$100,000 than females at 35-40 years across all levels of education.
 - Even when workers have completed a Bachelor Degree or higher (AQF 7+), there remains significant income disparity between males and females. Over half of males (53%) at 35-40 years in 2021 earn more than \$100,000 annually compared to less than a third of females (30%).
- When exploring divides across incomes for First Nations people and migrants arriving from countries with either English or Non-English speaking backgrounds, we found significant disparities compared to the total population:
 - Employed males born overseas in a country with a Main English-Speaking Background (MESC) are far more likely to have higher incomes than those born in Other Than Main English-Speaking Countries (OTMESC). Both MESC and OTMESC males had lower earnings than all males.
- Disparities worsen further when looking at gendered differences within cohorts. For example, we found that:
 - For 25-44 year olds in 2011, 30% of employed males born in MESC had incomes over \$104,000 per year compared to only 14% of their OTMESC male counterparts. The figures were even lower for females, only 12% of employed females born in MESC earned over \$104,000 and only 6% of females born in OTMESC. This is significantly lower than for all females in Australia across the 30-35 and 35-40 year old age groups (15% and 30%).
 - For 25-44 year olds in 2011, only 12% of First Nations employed males with advanced post school qualifications earned above \$104,000 per year, compared to 20% of all other males this age, or 7% of all other females this age.
- As with [Paper 1](#) findings, this income disparity compounds over time, particularly for females in their mid-thirties to fifties. First Nations males and females also have worse income disparity than their MESC and OTMESC counterparts. By age 35-54 years (10 years later) in 2021:
 - Just over a third (36%) of First Nations males had income above \$104,000 per year compared to almost half of non-First Nations males (44%)
 - Only 16% of First Nations Females earned above \$104,000 per year compared to just under one quarter of non-First Nations females (24%).

An intersectional snapshot of outcomes across the top 100 VET qualifications

This section offers intersectional insights on VET employment and economic outcomes across the top 100 VET qualifications for students who completed studies in 2019-2020, one year after they completed this training.

We provide new perspectives and intersectional insights on the **gendered disparities across and within cohorts** to identify how compounding forms of disadvantage impacts VET outcomes. For example, comparing female First Nations and male First Nations outcomes. We also provide age cohort insights for all students to allow a life course perspective in the [Intersectional VET Outcomes Dashboard](#).

These insights are an extension of JSA's [Strong and Responsive VET Pathways | Jobs and Skills Australia](#) report which provides cohort insights as per Table 13 below.⁷

Table 13: 2019-20 Median Graduate VET Outcomes

Graduate outcomes	National median	National female median	First Nations median	People with disability median
Median income	\$48,500	\$41,900	\$43,100	\$26,100
Median change in income	\$11,800	\$11,400	\$13,000	\$9,100
Employment rate post training	84%	83%	79%	65%
Employment rate change	15%	17%	16%	14%
Income support exit rate	39%	36%	34%	22%
Progression to higher level VET study	16%	18%	20%	21%
Progression to higher education	8%	10%	5%	7%

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

Note: The average student outcomes are based on the top 500 VET qualifications while other insights in this section are limited to the top 100 VET qualifications.

In this paper, we focus our intersectional insights on the economic outcomes (median income and change in income) and employment outcomes in Certificate III and above qualifications across the top 100 VET qualifications to align with training pathways into highly gender segregated or in shortage occupations. This translates into insights on more than 80 of the top 100 qualifications.

In the [Intersectional VET Outcomes Dashboard](#) you can explore all outcomes listed in Table 13 above, across all qualifications and all cohorts. That is, breakdowns of the national student base by age cohort and gender to allow for life course insights, as well as gender

⁷ As the 2019-20 VNDA outcomes do not control for hours worked, findings on median income and employment rates may be influenced by cohorts with higher proportion of part-time work. The 2025 VNDA publication will address this existing limitation by capturing full-time and part-time employment splits which may help to uncover differences in outcomes between student groups. It will also include insights on CALD student outcomes for the first time. We encourage readers to refer to this report in conjunction with this Paper 2.

breakdowns for students with disability, First Nations, and CALD VET graduate cohorts. When reading the insights below, the headline figures for VET outcomes in Table 13 provide broader context.

Economic outcomes across female, CALD, First Nations and graduates with disability

Unsurprisingly, we found that females⁸ have relatively weaker economic outcomes across the top 100 VET qualifications and this is compounded when looking at CALD, First Nations, and females with disability.

- In 82% of the Certificate III and above qualifications, males⁹ earn higher median incomes one year post-training.¹⁰
- In the 14 qualifications where females earn higher median incomes, only three qualifications were above the national median income one year post-training headline figure of \$48,500. In other words, female graduates tend to earn higher incomes than their male counterparts in fields that are generally associated with lower overall earnings. There were also five other qualifications where the difference was less than \$1,000 so outcomes were roughly on par between females and males.
- As Table 14 shows, females earned slightly more in selected qualifications in Business and IT, among others, but notably they earned significantly more in qualifications pathways to almost completely male dominated Electrical and Mechanical Engineering Trades Worker occupations.

⁸ Females or females across the national student base refers to the total female cohort under the National Total filter in the [Intersectional VET Outcomes Dashboard](#), and not the separate age breakdowns of females.

⁹ Males or males across the national student base refers to the total male cohort under the National Total filter in the [Intersectional VET Outcomes Dashboard](#), and not the separate age breakdowns of males.

¹⁰ Note: Data for qualifications where a cohort has 30 or fewer participants has been excluded to ensure student privacy, statistical significance and sample size robustness. Data for all cohorts is not available for all qualifications.

Table 14: Top 100 VET qualifications where females earn higher median income than males nationally one year post training

Qualification	Female median Income (\$)	Male median income (\$)	Segregation intensity
Certificate III in Electrotechnology Electrician	\$94,900	\$77,600	Almost completely male dominated
Certificate III in Engineering - Mechanical Trade	\$105,200	\$91,600	Almost completely male dominated
Diploma of Screen and Media	\$26,400	\$21,000	Moderately male dominated
Diploma of Business	\$48,000	\$43,700	Highly female dominated
Certificate III in Information Technology	\$30,900	\$27,100	Highly male dominated
Certificate IV in Veterinary Nursing	\$48,400	\$45,200	Almost completely female dominated
Certificate III in Animal Care Services	\$28,000	\$25,100	Highly female dominated
Certificate IV in Allied Health Assistance	\$38,800	\$36,300	Highly female dominated
Diploma of Information Technology	\$40,500	\$38,600	Moderately male dominated
Certificate IV in Information Technology	\$40,700	\$39,100	Highly male dominated

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

CALD female graduates experience comparatively weaker economic outcomes post-training. Across the top 100 VET qualifications at Certificate III level and above, CALD females do not earn the highest median income or experience the largest increase in median income in any qualification. However, there are some positive findings in specific training pathways which we explore next when we apply the GSIS to our intersectional snapshot of VET outcomes.

Females and males with disability have the lowest median income outcomes across the most number of qualifications. Females with disability have only slightly worse outcomes than males with disability. This may however reflect the higher proportion of part-time employment by people with disability—both females and males—as outlined in the spotlight on VET graduates with disability and in [Technical Paper 2](#).¹¹

Among female graduate cohorts, including those across the national student base, females with disability, and CALD females—only First Nations females earned the highest median income or largest increase in income post training in a qualification. However, their median income outcomes varied widely. For instance, First Nations females have the highest

¹¹ Females with disability have the lowest median income in 24 Certificate III and above qualifications, while males with disability have the lowest median income in 20 qualifications.

median income in four qualifications outlined in Table 15, but the lowest in five other qualifications outlined in Table 16. In two cases where they earned the most, their income was still below the national median of \$48,500. That said, the Diploma of Counselling qualification outlined below shows a positive story for First Nations females.

Table 15: Top 100 VET qualifications¹² where First Nations females have the highest median income one year post training

Qualification	First Nations female median income (\$)	Qualification median income (\$)
Certificate III in Supply Chain Operations	\$56,000	\$47,100
Certificate IV in School Based Education Support	\$40,600	\$33,300
Certificate III in Dental Assisting	\$46,400	\$44,000
Diploma of Counselling	\$70,400	\$43,500

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

Table 16: Top 100 VET qualifications where First Nations females have the lowest median income one year post training

Qualification	First Nations female median income (\$)	Qualification median income (\$)
Certificate III in Food Processing	\$15,300	\$33,200
Certificate III in Security Operations	\$20,100	\$40,200
Certificate III in Health Services Assistance	\$25,100	\$37,700
Diploma of Beauty Therapy	\$26,300	\$33,400
Certificate III in Financial Services	\$44,900	\$53,200

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

When looking at economic outcomes for specific qualifications in more detail, we can see connections with the findings in [Paper 1](#), such as the increasing share of CALD males into occupations like Aged and Disabled Carer and the higher representation of First Nations males in community service occupations like Welfare Support Workers and Community Workers, which are moderately and highly female dominated respectively.

- CALD males earned higher median income than males across the national student base in aged care and disability support qualifications at both the Certificate III and Certificate IV levels. This includes the Certificate III in Individual Support, Certificate IV in Ageing Support, and Certificate IV in Disability Support. Similarly, CALD females earned higher median income than females across the national student base in the Certificate III in Individual Support and Certificate IV in Ageing Support.
- First Nations males earned higher median income than males across the national student base in Community Services qualifications. This includes the Certificate III in

¹² Top 100 VET qualifications refer to the qualifications with the highest number of completions. The following tables in the 'An intersectional snapshot of outcomes across the top 100 VET qualifications' section are ordered by the highest completing qualifications where applicable. The ranking of the top 100 VET qualifications can be found on the [VET National Data Asset](#) webpage.

Community Services, Certificate IV in Community Services and Diploma of Community Services.

- First Nations females earned the highest median income outcome in the Diploma of Counselling, earning \$70,400, compared to females across the national student base earning \$41,900.

Employment outcomes across female, CALD, and First Nations graduates

In contrast to the gendered differences across economic outcomes, females had better employment outcomes than males.

In nearly half (47%) of the Top 100 VET qualifications at Certificate III level or higher, females had better employment outcomes than males. Overall, the median employment rate nationally is 84% one year after training, and this rate is fairly consistent across most groups—except for people with disability and those aged 55 and over. CALD females were below the national headline figure for employment one year post-training in 84% of the qualifications they studied. For CALD males, this was lower but still high at 62%, indicating some disadvantage for CALD students and workers across the VET system. This contrasts with their strong economic and employment outcomes at the higher education level.

Positively, CALD females were likely to see a strong uplift in employment outcomes post-training, having the highest change in employment among cohorts analysed in 11 qualifications, with only males under the age of 24 more likely to see a stronger uplift in employment after completing their training.

Table 17: Top 100 VET qualifications where CALD females have the greatest increase in employment one year post training

Qualification	CALD Female change in employment post-training (pt)	Qualification median change in employment (pt)
Certificate III in Individual Support	45%	34%
Certificate IV in Training and Assessment	6%	3%
Certificate III in Early Childhood Education and Care	43%	34%
Diploma of Early Childhood Education and Care	29%	19%
Certificate III in School Based Education Support	32%	26%
Certificate III in Process Manufacturing	26%	16%
Certificate III in Health Services Assistance	34%	27%
Certificate III in Correctional Practice	13%	8%
Certificate IV in Community Services	21%	16%
Certificate IV in Finance and Mortgage Broking	7%	1%
Diploma of Finance and Mortgage Broking Management	4%	0%

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

Only two of the top 100 qualifications had First Nations females or males with the lowest employment rates one year post-training. Positively, in three of these four qualifications, their employment rate was still above the national employment rate headline figure of 84%.

First Nations females were the only group with employment rates below the headline employment figure of 84% after completing the Certificate III in Sport, Aquatics and Recreation. This qualification is a pathway into highly casualised occupations like Swimming Coaches and Instructors which could be driving these outcomes.

Table 18: Top 100 VET qualifications where First Nations females and males have the lowest employment rate one year post training

Qualification	First Nations female employment rate (%)	First Nations male employment rate (%)	Qualification median employment rate (%)
Certificate IV in Ageing Support	86%	N/A	92%
Certificate III in Engineering - Casting and Moulding Trade	N/A	95%	97%
Certificate III in Sport, Aquatics and Recreation	75%	N/A	91%
Certificate III in Heavy Commercial Vehicle Mechanical Technology	N/A	93%	97%

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

There are some gendered dynamics in the employment outcomes for First Nations graduates, which are explored below. However, for both First Nations females and males, a Certificate III in Hospitality has particularly good employment outcomes. First Nations females have a significant employment uplift in Certificate III in Hospitality compared to other demographic cohorts (33 percentage points). First Nations males also have a slightly higher employment uplift on completion of a Certificate III in Hospitality compared to males across the national student base (28 percentage points and 27 percentage points respectively).

For First Nations males, completing qualifications in male dominated trade areas often results in a larger employment uplift post qualification, compared with all males in the population and with all other cohorts. For example, First Nations males who complete a Certificate III in Landscape Construction, Certificate III in Painting and Decorating, and a Certificate III in Plumbing all have the largest increase in employment when compared to employment prior to commencement.

Additionally, First Nations males have the highest employment rates across all cohorts for the qualifications of Certificate III in Painting and Decorating (86% post qualification) and Certificate III in Plumbing (98%), coinciding with the increased share of First Nations workers in male dominated trades over time outlined in [Paper 1](#).

Table 19: Top 100 VET qualifications where First Nations males have an employment uplift post one year of training above the national average (15%)

Qualification	Change in employment rate for First Nations males (pt)	Qualification median change in employment rate (pt)
Certificate III in Hospitality	28%	25%
Certificate III in Landscape Construction	28%	9%
Certificate III in Plumbing	27%	18%
Certificate III in Heavy Commercial Vehicle Mechanical Technology	23%	14%
Certificate III in Information Technology	23%	17%
Certificate III in Fitness	22%	13%
Certificate III in Individual Support	20%	34%
Certificate III in Painting and Decorating	20%	10%
Certificate III in Cleaning Operations	19%	12%
Certificate III in Retail	19%	19%
Certificate III in Surface Extraction Operations	16%	10%
Certificate III in Business	16%	11%
Certificate III in Supply Chain Operations	16%	12%
Diploma of Project Management	16%	2%

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

In comparison, for First Nations females, completing qualifications in female dominated fields, such as health, education and beauty related industries, results in larger employment uplift post qualification. This aligns with findings from [Paper 1](#), which highlighted that the First Nations workforce was more likely to work in gender segregated occupations.

The high proportion of First Nations workers in the Education Aide and Child Carer occupations as discussed in [Paper 1](#) are reflected in First Nations females' employment rate being above the national median employment headline figure of 84% and female employment in the Certificate III in Early Childhood Education and Care, Certificate III in School Based Education Support, Certificate IV in School Based Education Support, and the Diploma of Early Childhood Education and Care. First Nations females also had the highest employment rate in the Certificate IV in School Based Education Support, at 95%.

Table 20: Top 100 VET qualifications where First Nations females have an increase in employment rate post one year of training above the national average (15%)

Qualification	Change in employment rate for First Nations females (pt)	Qualification median change in employment rate (pt)
Certificate III in Sports, Aquatics and Recreation	44%	42%
Certificate III in Hospitality	33%	25%
Certificate III in Pathology Collection	29%	19%
Certificate III in Hairdressing	28%	22%
Certificate III in Beauty Services	28%	18%
Certificate III in Cleaning Operations	26%	12%
Certificate III in Early Childhood Education and Care	26%	34%
Certificate III in School Based Education Support	26%	26%
Certificate III in Individual Support	26%	34%
Certificate III in Fitness	25%	13%
Certificate III in Health Services Assistance	25%	27%
Certificate III in Retail	25%	19%
Certificate III in Food Processing	24%	18%
Diploma of Nursing	21%	16%
Certificate IV in School Based Education Support	19%	22%
Certificate IV in Youth Work	19%	12%
Certificate III in Dental Assisting	19%	19%
Certificate III in Community Services	19%	18%
Certificate IV in Disability Support	18%	20%
Certificate III in Business	16%	11%

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

First Nations Top 100 VET Outcomes: Key findings

- Only two of the top 100 qualifications had First Nations females or males with the lowest employment rates one year post-training. Positively, in three of these four qualifications, their employment rate was still above the national employment rate headline figure of 84%.
- First Nations males earned higher median incomes than males across the national student base in the Certificate III in Community Services, Certificate IV in Community Services and Diploma of Community Services.
- First Nations females earned the highest median income outcome in the Diploma of Counselling, earning \$70,400, compared to females across the national student base earning \$41,900.
- There are gendered dynamics to employment uplift post qualifications for First Nations graduates. First Nations males have larger increases in employment after completing male dominated trade qualifications, while First Nations females have larger increases in employment after completing a qualification in female dominated areas such as health, education and beauty related industries.
- First Nations females appear to fare better in education and training pathways leading to gender balanced and female dominated occupations, while First Nations males' outcomes are better in training pathways leading to male dominated occupations, such as trades. For example:
 - First Nations females and males have positive employment and economic outcomes in selected gender balanced Real Estate and Commercial Cookery training pathways.
 - First Nations males are securing positive outcomes in male dominated trade training pathways such as Electrical, Carpentry and Mechanical Engineering trades.
 - Some pathways into mining occupations do show far lower median incomes so further research on what is working in which training pathways to support First Nations males is recommended.

Also see Part 2: A GSIS analysis of VET outcomes and training pathways into top growing occupations.

Spotlight on VET outcomes for people with disability

Previous research has explored the role of VET in the labour market outcomes for people with disability, investigating the impact of completing a VET qualification in obtaining and sustaining employment, and the improved conditions of employment including wage rates, the probability of full-time employment and job satisfaction. The research found that for people with disability, the completion of a VET qualification strongly improved the chances of attaining full-time employment from either being out of work or in a part-time job, compared to those with no post-school qualification. However, the completion of a VET qualification did

not necessarily lead to greater job satisfaction, job security, or hourly wage rates for people with disability (Polidano and Mavromaras 2010; Polidano and Vu 2011).

The [Strong and Responsive VET Pathways](#) report also found that graduates with disability had the lowest graduate median income outcomes of \$26,100, followed by female graduates at \$41,900, First Nations graduates at \$43,100, and male graduates at \$58,300. The lower incomes for graduates with disability may be associated with higher proportions of graduates with disability in lower AQF qualifications; their younger age; fewer hours worked or the challenges this cohort face in seeking work that reflects their needs (JSA 2024b).

The higher proportion of graduates with disability in lower AQF qualifications is reflected as within the top 10 qualifications completed by people with disability, five are at the Certificate II level of education. These 10 qualifications are outlined in [Technical Paper 2](#). Like CALD workers, who are overrepresented in some occupations and education and training pathways, students with disability are overrepresented in selected VET training pathways.

Overall, we found that females and males with disability were the cohort that generally had the lowest employment rate one year after training. Females with disability had the lowest employment rate in 12 qualifications, while males with disability had the lowest employment rate post training in 15 qualifications. See Table 21 and 22.

Table 21: Top 100 VET qualifications where females with disability have the lowest employment rate one year post training

Qualification	Employment rate for females with disability (%)	Qualification median employment rate (%)
Certificate IV in Disability Support	85%	93%
Certificate III in Supply Chain Operations	46%	75%
Certificate III in Food Processing	65%	80%
Diploma of Community Services	71%	90%
Certificate III in Process Manufacturing	74%	85%
Diploma of Business	67%	85%
Certificate III in Health Services Assistance	74%	86%
Certificate IV in Community Services	66%	80%
Certificate III in Dental Assisting	77%	95%
Certificate III in Animal Care Services	61%	82%
Certificate IV in Allied Health Assistance	75%	89%
Certificate IV in Mental Health	71%	89%

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

Table 22: Top 100 VET qualifications where males with disability have the lowest employment rate one year post training

Qualification	Employment rate for males with disability (%)	Qualification median employment rate (%)
Certificate III in Individual Support	80%	89%
Certificate IV in Real Estate Practice	73%	88%
Diploma of Nursing	93%	95%
Certificate IV in Work Health and Safety	85%	95%
Certificate IV in School Based Education Support	76%	89%
Diploma of Leadership and Management	72%	93%
Diploma of Project Management	77%	92%
Diploma of Screen and Media	43%	76%
Certificate IV in Information Technology	54%	73%
Certificate III in Civil Construction	67%	90%
Certificate III in Information Technology	42%	67%
Certificate IV in Entrepreneurship and New Business ¹³	34%	69%
Diploma of Information Technology	53%	72%
Certificate IV in Youth Work	75%	89%
Certificate III in Cleaning Operations	48%	83%

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

However, more positively, we found that females and males with disability had the strongest employment uplift in three and four qualifications respectively, with five qualifications having strong employment outcomes at or above the employment rate headline figure of 84%. See Table 23 and 24.

Table 23: Top 100 VET qualifications where females with disability have the greatest employment uplift one year post training

Qualification	Employment rate for females with disability (%)	Change in employment for females with disability (pt)	Qualification median change in employment (pt)
Certificate IV in Fitness	86%	15%	4%
Certificate IV in Youth Work	84%	21%	12%
Certificate IV in Allied Health Assistance	75%	24%	13%

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

¹³ The Certificate IV in Entrepreneurship and New Business is a likely pathway for graduates wanting to start a business which may lead to a change in the form of income (business income) and consequently their employment rate may not be captured fully in the VNDA data presently (JSA 2023). The 2025 VNDA publication will address this limitation by including business income data.

Table 24: Top 100 VET qualifications where males with disability have the greatest employment uplift one year post training

Qualification	Employment rate for males with disability (%)	Change in employment for males with disability (pt)	Qualification median change in employment (pt)
Certificate IV in Real Estate Practice	74%	15%	5%
Certificate III in Carpentry	91%	27%	10%
Certificate III in Commercial Cookery	92%	28%	14%
Certificate III in Cabinet Making and Timber Technology	90%	25%	15%

Source: Person Level Integrated Data Asset (PLIDA), 2002-22, VET National Data Asset, ABS DataLab. Findings based on use of PLIDA data.

More detailed qualification findings for females and males with disability include:

- Females with disability had the highest employment rate one year post training in the Certificate IV in Hospitality, and the Certificate IV in Veterinary Nursing, and above the headline employment figure and female employment post-training in the Diploma of Early Childhood Education and Care.
- Males with disability had the highest employment rate and employment uplift post training in the Certificate III in Carpentry, with an employment rate of 91%, increasing by 27 percentage points when compared to employment prior to commencement in the qualification.
- Additionally, males with disability had the highest employment rate in the Certificate III in Engineering—Mechanical Trade, a 100% employment rate, reflecting an improvement of 15 percentage points against their employment rate prior to commencement.
- Despite having a high proportion of completions among people with disability, the Certificate III in Information Technology and Certificate IV in Information Technology provide relatively poor median income, median income uplift, and employment rate for males with disability.
- The same trend of relatively poor median income and employment post study is seen for both females and males with disability in the Certificate III in Community Services and Certificate IV in Community Services, despite ranking in the top five qualifications for the proportion of completions by people with disability among the top 100 qualifications.
- There is significant disparity in median income between males with disability and males aged 40 to 54 in the Certificate III in Sport, Aquatics and Recreation. However, the qualification provides relatively equitable outcomes for females with disability with a median income that is only \$500 less than females more broadly.

Recent Australian scholarship data confirms that VET can be an effective springboard into work for people with disability, especially when programs embed work-integrated learning and strong employer partnerships; yet benefits are uneven across fields and qualification levels (for example school-based VET placements improve access but hinge on employer understanding and accommodations) (Boye 2024).

Longitudinal evidence on Australian apprentices and trainees shows graduates with disability do achieve employment, but hours and earnings vary by occupation and over time, underscoring that “employment gained” does not automatically translate to secure, well-paid work. These patterns align with research on female dominated care pathways: person-centred VET qualifications often channel graduates into highly casualised, lower-paid roles in aged care, disability support and community services, helping explain weaker post-training income and job-quality indicators despite high completion or employment rates in these courses (Thoresen et al 2021).

Complementary Australian studies on inclusive work-integrated learning highlight persistent access barriers (policy inconsistency, limited adjustments, discrimination), which dampen employment quality even when participation rises, again pointing to the need for targeted supports in specific courses and for specific cohorts (Boye 2024).

Consistent with this literature, national administrative data reports the lowest median earnings are for VET graduates with disability and a concentration of completions at lower AQF levels, reinforcing why some IT and community-services qualifications yield poorer income uplift than trades or selected Certificate IV/Diploma programs (JSA 2025c).

An intersectional snapshot of outcomes across the top 100 VET qualifications: Key Findings

- Males have better economic outcomes than females across the board; they achieve higher median incomes in an overwhelming majority of the top 100 VET qualifications at Certificate III level or above (82% of qualifications).
- Female graduates tend to earn higher incomes in fields that are generally associated with lower overall earnings.
- Females only earned slightly more in business, bookkeeping and IT qualifications but interestingly, females did earn significantly more in the qualifications that are pathways to the almost completely male dominated Electrician, and Mechanical Engineering Trades Worker occupations.
- Females had slightly better employment outcomes than males overall. In nearly half (47%) of the Top 100 VET qualifications at Certificate III and above, their employment rate was better than males' employment rate.
- CALD female graduates experience comparatively weaker economic outcomes post-training. Across the top 100 VET qualifications at Certificate III level and above, CALD females do not earn the highest median income, and they do not see the largest increase in median income in any qualification.
- People with disability had the highest volume of qualifications where they had the lowest median income, but gendered disparities across males and females in this cohort were minimal.
- People with disability had the lowest economic and employment outcomes overall but are securing good outcomes in several courses.
 - Females with disability had good employment outcomes in selected Hospitality, Veterinary Nursing, and Early Childhood Education and Care qualifications.
 - Males with disability had good employment outcomes in selected Carpentry, Mechanical Trade qualifications.
- Policymaker attention in VET training pathways in IT, community service, and sports and aquatics qualifications is needed to improve outcomes for students with disability.
- In analysing occupations discussed in [Paper 1](#), there are evident CALD trends in aged care and disability support qualifications, and trends in First Nation completions of education aide, early childhood education and care, and community services qualifications. See First Nations Top 100 VET Outcomes: Key Findings above and Part 2: A GSIS analysis of VET outcomes and training pathways into top growing occupations below for further detail.

Gender divides across higher education outcomes

While this Study primarily focuses on VET outcomes, we provide some preliminary analysis into how higher education economic outcomes differ for males and females by the top 50 largest fields of education here.

We found that after completing an **undergraduate degree**, economic outcomes one year post-completion (by median income) are greater for men in just over half of the fields of education (29 out of 50).

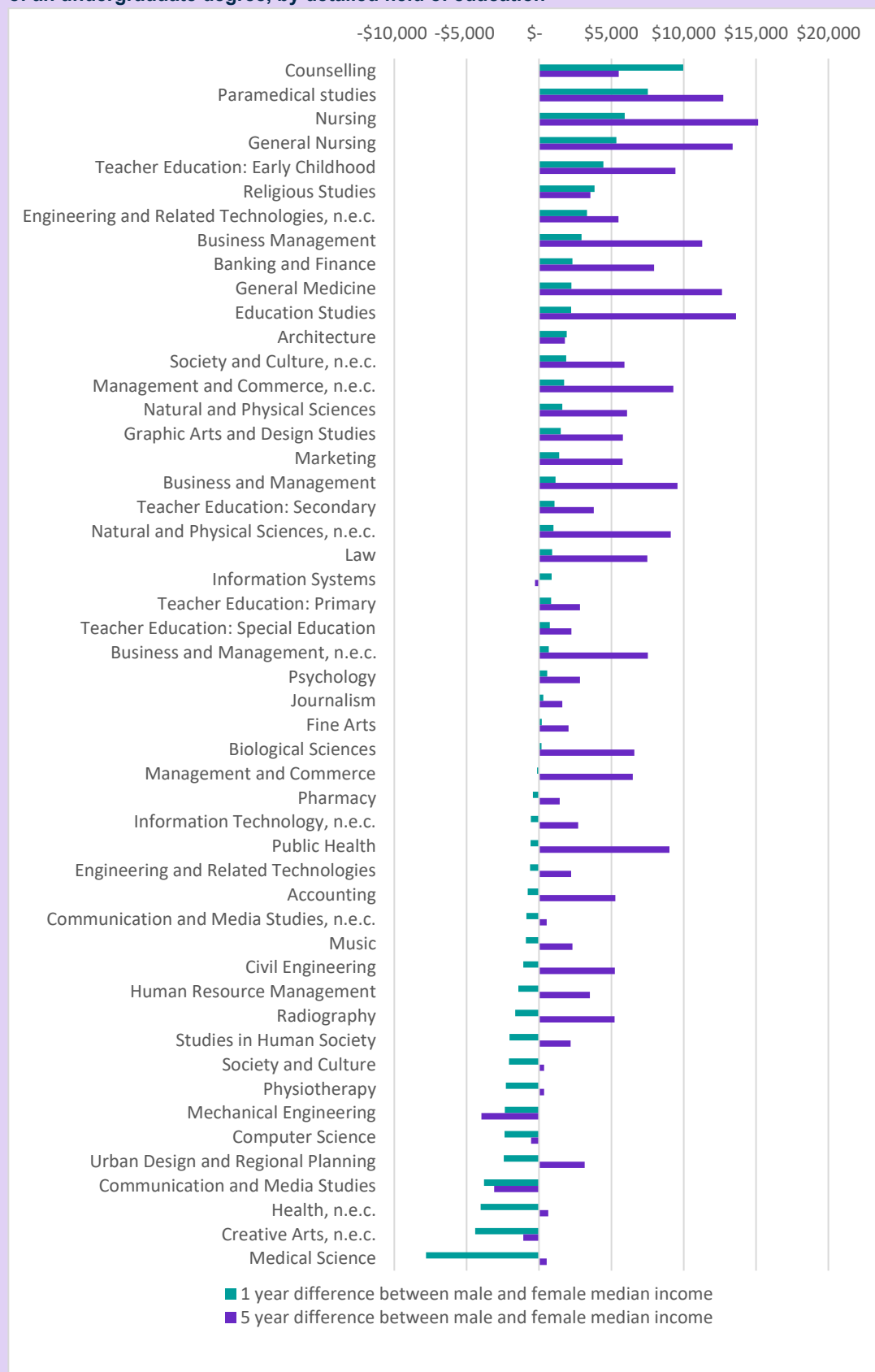
Moreover, when comparing median income one year and five years post-completion of an undergraduate degree, gender pay gaps widen across almost all fields of education, with economic outcomes now being in favour of men in 45 out of 50 fields of education. Only in the fields of Counselling, Religious Studies and Architecture do the gaps between males' and females' median income narrow 5 years post-graduation. In the case of Information Systems and Mechanical Engineering, females' median income is actually higher than males' median income when comparing income 5 years post-graduation.

Men who complete **postgraduate** studies also had higher incomes than women with postgraduate qualifications across most fields of education. The differences between undergraduate and postgraduate median earnings were compared 5 years following completion. The postgraduate study earnings difference for males and females by detailed field of education are shown in Figure 14 below.

Examples of areas of study where there are notable insights include:

- Education Studies is a field where the returns of post-graduate study are high for both males and females.
- Males have far better outcomes than females five years post-completion in Business and Management, Public Health and Banking and Finance.
- Radiology is another FOE where males outearn females five years post-completion, which aligns with the second highest occupational pay gaps in Australia being Diagnostic and Interventional Radiologists, as highlighted in [Paper 1](#).

Figure 13: Comparison of male and female median income post one year and five year completion of an undergraduate degree, by detailed field of education

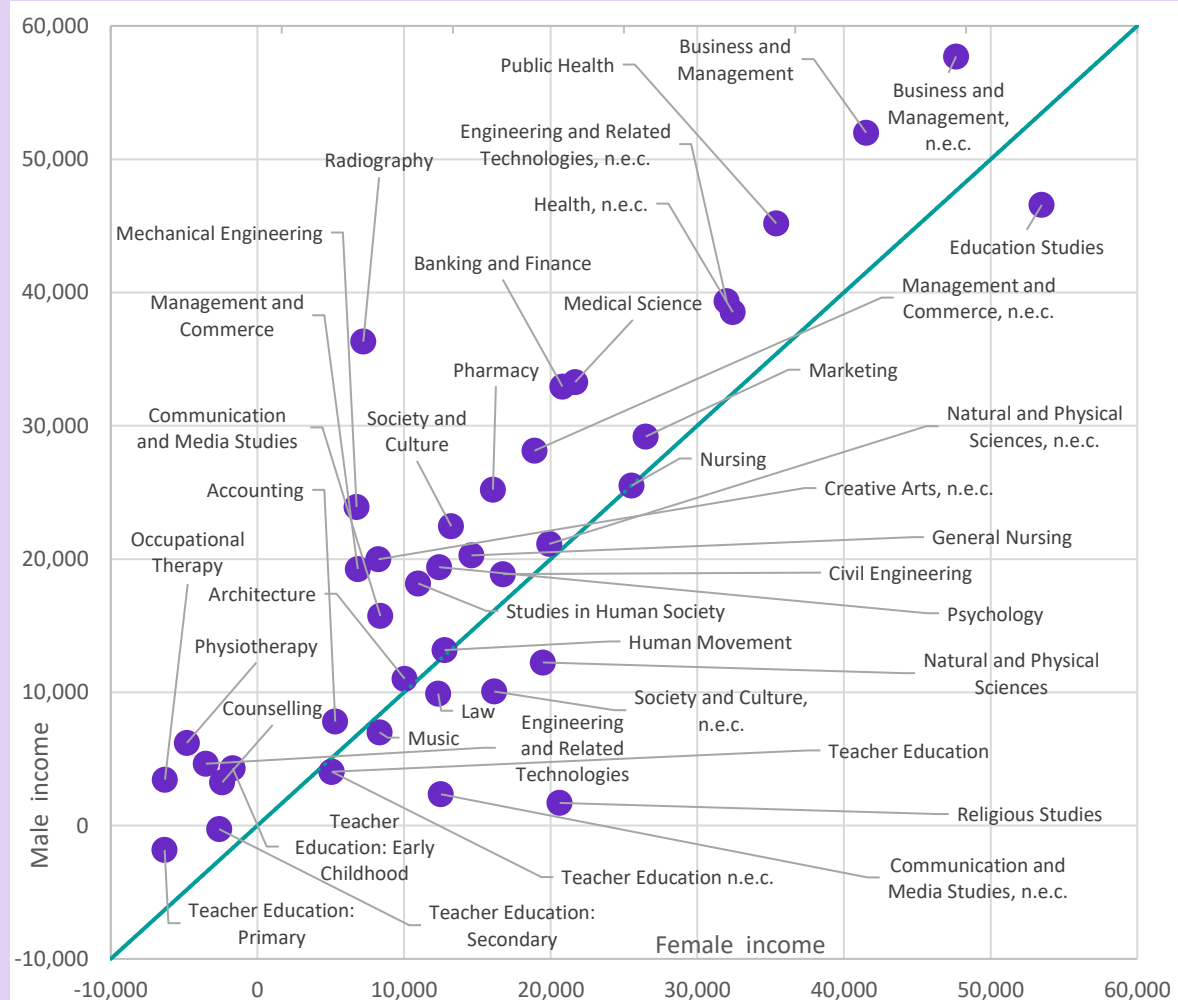


Source: Australian Bureau of Statistics, Person Level Integrated Data Asset (PLIDA).

Note: the PLIDA dataset does not contain a measure of hours worked, so it is expected that part-time will contribute to some of these income differences.

The findings below show what can be explored using linked and longitudinal administrative data for higher education graduates. The power of the data and depth of insights will increase as more years of data become available. This offers a rich source of data to examine career trajectories, job mobility, labour supply, economic outcomes and structural barriers or bias impacting all these trends. JSA recommends future research in this area, including expanding analysis to intersectional insights.

Figure 14: Five year median male and female postgraduate earning difference by detailed field of education



Source: Australia Bureau of Statistics, Person Level Integrated Data Asset (PLIDA).

Note: Sample only includes people who have received Commonwealth support for their studies, and so postgraduate students are underrepresented.

Part 2: Gendered divides across highly gendered training and occupation pathways

A GSIS analysis of VET outcomes and training pathways into top growing occupations

This section explores qualifications that have a direct training pathway into occupations across the different categories of the GSIS. We provide intersectional insights on the VET outcomes of training pathways into top growing occupations of differing gender segregation intensity.

We focus on training pathways and occupations that had large student enrolments and employment including five occupations in national shortage that have different segregation intensities across the GSIS: Cooks, Electricians, Aged and Disabled Carer, Child Care Workers, and Security Officer. We include insights on the outcomes in the qualifications and segregation intensities of:

- Certificate IV in Real Estate Practice—Gender balanced → Real Estate Sales Agent
- Certificate III in Commercial Cookery—Gender balanced → Cook
- Certificate IV in Ageing Support—Highly female dominated → Aged and Disabled Carer
- Certificate III in Security Operations—Highly male dominated → Security Officer
- Certificate III in Electrotechnology Electrician—Almost completely male dominated → Electrician
- Certificate III in Early Childhood Education and Care—Almost completely female dominated → Child Care Worker

You can explore more insights on occupational pathways across differing gender segregation intensities using the Study's [Intersectional VET Outcomes Dashboard](#). Updating and replicating this research in future could inform future evaluations of existing Government efforts into highly gendered training pathways as noted earlier in the paper.¹⁴

Certificate IV in Real Estate Practice

The Certificate IV in Real Estate Practice offers a training pathway into the gender balanced Real Estate Sale Agents occupation. In this qualification, the difference in the median income is \$11,400, one year after training (\$58,400 compared to \$69,800).

This gap in median income one year post training could indicate a difference in employment status or working hours, although it does align with the gender pay gap analysis explored in [Paper 1](#) where Real Estate Agents had a general occupational median gender pay gap of 25.6%. The forthcoming 2025 VNDA report (updated version of [Strong and Responsive VET](#)

¹⁴ For further details on the methodology used to map the gender segregation intensity of occupational pathways, please see [Technical Paper 2](#).

[Pathways](#)) will include part-time and full-time employment splits which will provide further clarity on these insights.

The importance of being able to analyse outcomes of different cohorts is highlighted when looking at the economic outcomes of First Nations and females with disability in this qualification. First Nations females earn a higher median income than females across the national student base in this qualification, while First Nations males earn a higher median income than males across the national student base. Conversely, females with disability earn lower than the national \$48,500 headline figure at \$42,300.

When comparing employment outcomes, First Nations females and males also both have above average employment rates of 95% and 99%, with First Nations males' employment rate the highest among all cohorts analysed.

"There's a lot more younger girls coming through now, but it's still very male orientated. I do a lot of mentoring with the girls that are starting. I work with them, show them how to act and how to behave. You don't put yourself in a position where you could be harassed. When you're young, it's very difficult. You're scared. You don't have a voice when you're 17 and it takes a lot of years to get the confidence to speak up."

— Female focus group participant aged 55+, Property Consultant

Certificate III in Commercial Cookery

Another training pathway into a gender balanced occupation is the Certificate III in Commercial Cookery to the Cook occupation. One year post qualification, the median earnings difference between males and females is \$7,000 in favour of males (\$43,500 and \$50,500). This is slightly lower than the occupational pay gap for all Cooks presented in [Paper 1](#), irrespective of when they completed their qualification, which was an earning difference of \$9,740 in favour of males.

Economic outcomes for First Nations females with this qualification are better than for females across the national student base, with a slightly higher median income of \$45,000. Additionally, First Nations females have one of the highest employment rates after completing training compared to other demographic cohorts, having a similar employment rate to males across the national student base (93%).

Certificate IV in Ageing Support

In contrast to the Certificate IV in Real Estate Practice, the training pathway of Certificate IV in Ageing Support into the highly female dominated top growing occupation of Aged and Disabled Carer shows smaller gender differences in median income outcomes post training. Females earn \$48,400 compared to males who earned \$54,100.

Additionally, in the Certificate IV in Ageing Support, CALD males had the second highest median income, earning \$58,000 one year post training. This may reflect the higher share of CALD males in the workforce compared to the share of all males in the Aged and Disabled Carer occupation outlined in [Paper 1](#).

"I've learnt a lot from working with women...I've taken onboard the compassion and care they display to clients. [Support work] is not just a job, but it's care you give someone that affects them, their day and their life. When I've seen these women display such a genuine level of care, it's inspiring and makes you want to take it on and do it yourself. It doesn't worry me that I work in a female dominated industry...it wouldn't even worry me to be the only male at a company."

— Male focus group participant aged 30-44 years, Disability and Aged Care Support Worker

"It was strange at the start, and I was worried about getting teased for doing a woman's job. I was tense when I told friends—they were shocked and didn't say anything."

— Male focus group participant aged 45-54 years, Aged Care Support Worker

Certificate III in Security Operations

The Certificate III in Security Operations is a training pathway into the highly male dominated occupation of Security Officer. Males have a median income of \$41,800, while females have a median income of \$33,100 one year post qualification, a median earnings difference of \$8,700.

While this job is highly casualised, there are little gendered differences in hours worked between males and females (3% hours worked gap, which is equivalent to less than two hours difference), so hours worked difference does not solely explain differences in income post training.

Males with disability have closer economic outcomes to other demographic cohorts one year after completing this qualification, compared with most other qualifications, having a median income of \$34,000. This was marginally higher than the median income of First Nations males at \$32,900. In contrast, First Nations females have the lowest median income at \$20,100.

Along with the relatively weaker median income outcomes, First Nations females also have the second lowest employment rate following this qualification, at 74% or well below the national headline figure at 84%.

Certificate III in Early Childhood Education and Care

The Certificate III in Early Childhood Education and Care presents training pathway into the almost completely female dominated occupation of Child Care Worker or in the more updated gender-neutral language of OSCA, Early Childhood Educator.

This is also an occupation in shortage, and as identified in [Paper 1](#), the Child Carers ANZSCO 4-digit occupation sits within the top 10 employing occupations across the total Australian workforce, CALD and First Nations workforces. This ANZSCO 4-digit group will become Early Childhood Educators, Child Carers and Education Assistants under OSCA.

Like the Certificate IV in Real Estate, median income outcomes for First Nations females are better than females nationally, with First Nations females having the second highest median income of all female graduate cohorts of this qualification, at \$37,300. First Nations females also have a slightly higher employment rate post study than the qualification median, at 90% compared to 87%.

As [Paper 1](#) identified, this is also a large CALD employing occupation, and one year post training CALD males have a higher median income than their female counterparts (\$39,500 compared to \$32,000). This earnings difference between CALD males and CALD females is wider than it is for males and females overall, with males earning a median income of \$36,900 one year post training and females earning \$35,900. The Study's forthcoming intersectional gender pay gap dashboard will allow for further exploration on CALD occupational pay gaps beyond one year post training.

Certificate III in Electrotechnology Electrician

In contrast, the Certificate III in Electrotechnology Electrician presents a training pathway to the almost completely male dominated occupation of Electrician (General). One year post training, females—and females aged 25 to 39—earn the highest median income overall compared to their male and other demographic counterparts.

Females earn a median income of \$94,900, compared to \$77,600 for males. This results in a one year post training earning difference of \$17,300 in favour of females. This links back to [Paper 1](#), with the general Electrician occupation having a pay gap of 12.4%, lower than the national median occupational pay gap of 16.8%, despite being an almost completely male dominated occupation and having a small median hours worked gap between males and females (4%, equivalent to less than 2 hours).

The post training pay gap being in favour of females could be linked to the broader lower occupational pay gaps in this occupation, but further research is needed. This qualification and occupation are key to Australia's Net Zero transition and is in high demand and national shortage.

For further gendered context on this important VET qualification, it is important to note that, in most states and territories, it is only available as an apprenticeship. Apprenticeship-level completion rates for males and females are broadly similar (67% female, 69% male) and much higher than the all-trade average, where there is a larger gender-gap (50% and 59%). Since 2014, the number of females undertaking this apprenticeship has increased five-fold, and they now comprise 7.3% of commencements, compared to just 2% of the Electrical (General) workforce. (NCVER 2025).

First Nations males are outearning males post this qualification, earning a median income of \$87,300. First Nation males also have the strongest post-completion rates among cohorts.

Males with disability earn the lowest of all cohorts, with a median income of \$69,600. They also have lower post-study employment rates in this qualification than the qualification median employment rate after completing training (91% compared to 96%).

Positive shifts in enrolments and median income outcomes for females and First Nations males could be indications of the positive impact of current and recent policy levers such as Free TAFE, Women in Trades and various programs to support women and First Nations workers in apprenticeships but further research is needed. VET outcomes do also reflect broader labour market dynamics and workplace conditions unique to occupations. As noted in [Paper 1](#), systematic and ongoing evaluation of Government efforts to intervene in highly gendered training pathways with the aim of shifting stubborn occupational segregation patterns in male dominated trades is needed. We need to better understand what is working and what isn't and study recommendations in Paper 3 will focus on this. Continued application of the GSIS in assessing gendered education and training divides is also key.

In other trades such as Carpentry where, First Nations males are becoming an increasing part of the workforce, there are also positive outcomes. For this qualification, the median income earnings are only slightly below all males (\$54,900 compared to \$56,400), but the employment rate is higher for First Nations males at 89% compared to 85% for all males.

There are similar positive outcomes in the Certificate III in Engineering—Mechanical Trade where First Nations males median income one year post training is \$90,500 compared to \$91,600 for males and a very high employment rate of 95%, albeit lower than 98% employment rate for males across the national student base. However, in the Certificate III in Surface Extraction Operations which leads to the highly male dominated Miner occupation, First Nations males' median income is almost \$20,000 lower and—while the employment rate is still high at 87%—this is lower than the 95% rate for males.

This is an example of how our data findings can point to where Government efforts and policy programmes may be making more or less of a difference. We encourage policymakers to explore more intersectional insights across the top 100 VET qualifications by gender segregation intensity in the [Intersectional VET Outcomes Dashboard](#). We have included the GSIS for all qualifications that have a direct training pathway into an occupation to allow for this analysis.

A GSIS analysis of VET outcomes and training pathways into top growing occupations: Key Findings

- Males generally have better economic outcomes in qualifications, regardless of the gender segregation intensity occupation the training pathway leads into. This is even the case for large employing female dominated training pathways into early learning and aged care roles that are in shortage.
- First Nations females and males have positive employment and economic outcomes in selected gender balanced Real Estate and Commercial Cookery training pathways.
- First Nations males are securing positive outcomes in male dominated trade training pathways such as Electrical, Carpentry and Mechanical Engineering trades. Some pathways into mining occupations do show far lower median incomes so further research on what is working in which training pathways to support First Nations males is recommended.
- Females are earning the highest median incomes in the training pathway into the in shortage and almost completely male dominated occupation of Electrician.
- First Nations males are also securing better economic and employment outcomes in this Electrician training pathway, but policymaker attention should be drawn to how we can better support males with disability studying this important qualification for Australia's Net Zero Transition.
- Positive shifts in enrolments and median income outcomes for females and First Nations males could be indications of the positive impact of current and recent policy levers such as Free TAFE, Women in Trades and various programs to support women and First Nations workers in apprenticeships but further research is needed.

An intersectional snapshot of occupation pathways and economic outcomes across different areas of study

This section explores how student occupational pathways and economic outcomes differ three years post-completion in four different areas of study: Human Welfare Studies and Service, Law, Computer Science and Information Systems.

We provide insights on the gendered differences across these occupational pathways (including the most common pathways) and median income outcomes across all students and CALD students. These three areas of study also have clear occupational pathways and destinations into female dominated, gender balanced and male dominated jobs respectively, so we also provide GSIS insights.

As we controlled for educational attainment in the intersectional snapshot of longitudinal income and employment outcomes, here we control for both level of education and occupational pathway to identify disparities in income and infer different return on investments for education for different types of students.

Human Welfare Studies and Services

The three most common occupation pathways for Human Welfare Studies and Services regardless of AQF level are Aged and Disabled Carers, Welfare Support Workers and Nursing Support and Personal Care Workers. Well over a third (39%) of students studying in this area have occupational pathways to these three jobs.

For females, who make up 84% of people studying in this field overall, the three most common occupational pathways differ slightly to Welfare Support Worker, Aged and Disabled Carer, and Social Worker.

When looking at the large employing, in shortage occupations at the AQF 3 (Certificate III) level only, the most common occupation pathways expand to Early Learning not just Health.

The top occupations at this level of education for the FOE are Aged and Disabled Carer, Child Carer and Nursing Support or Personal Support Care Worker.

All these common occupation pathways are into female dominated occupations across every category of the GSIS and when applying the GSIS to the area of study itself it is highly female dominated with 84% of graduates across 2015, 2016, 2017 being female. See Table 25 for an overview of this, as well as the share of male and female graduates across all and CALD graduates in these occupation pathways.

Overall, the occupational pathway trends are that:

- At the AQF 7+ (Bachelor Degree or higher), there are no gendered differences in the top occupational pathways to become a Social Worker but a higher proportion of male graduates than female graduates become Welfare Support Workers. Notably, CALD males are far more likely to become Welfare Support Workers (30%) compared to all male graduates in this field (21%). Around 10% of all AQF 7 + graduates in Human Welfare Studies and Services graduates become Counsellors, regardless of gender and CALD status.
- At AQF 5 and 6 (At Diploma and Advanced Diploma level) and AQF 4 (Certificate IV) in Human Welfare Studies and Services the same trend for all male and CALD male graduates more likely to become Welfare Support Workers than females continues. This is notable because this occupation is higher paid than the common occupation pathway into Aged and Disabled Carer for this FOE below AQF 7+.
- Over half of CALD male graduates in this FOE also become Welfare Support Workers at AQF 5 and 6 and are more likely than all other cohorts to become Aged and Disabled Carers.
- Likewise, the most common occupation pathway for females at AQF 4 is to Aged and Disabled Carers.
- For graduates at AQF 3, females and males are most likely—and equally likely—to become Aged and Disabled Carers. Beyond that, females are far more likely than males to become Child Carers. CALD females are also slightly more likely to become Nursing and Personal Support Workers than their CALD male counterparts.

- Overall, CALD workers are more concentrated in the most common occupations across females for the FOE—Welfare Support Worker, Aged and Disabled Carer and Social Worker—at various AQF levels, reiterating our [Paper 1](#) findings that CALD workers are taking up opportunities in these high-demand and in shortage female dominated occupations in Health and Care.

Table 25: Top occupation pathways for graduates in Human Welfare Studies and Services field of education by AQF level.

AQF	Occupation	Segregation Intensity	Share of male graduates (%)	Share of female graduate (%)	Share of male CALD graduates (%)	Share of female CALD graduate (%)
7+	Social Worker	Highly female dominated	44%	44%	44%	46%
7+	Welfare Support Worker	Moderately female dominated	21%	13%	30%	15%
7+	Counsellor	Highly female dominated	12%	9%	11%	10%
5 and 6	Welfare Support Worker	Moderately female dominated	37%	24%	55%	27%
5 and 6	Aged and Disabled Carer	Highly female dominated	8%	8%	16%	13%
5 and 6	Social Worker	Highly female dominated	8%	6%	11%	7%
4	Aged and Disabled Carer	Highly female dominated	18%	24%	26%	31%
4	Welfare Support Worker	Moderately female dominated	29%	17%	32%	12%
4	Nursing Support and Personal Care Worker	Highly female dominated	6%	11%	13%	20%
3	Aged and Disabled Carer	Highly female dominated	24%	22%	25%	22%
3	Child Carer	Almost completely female dominated	3%	14%	1%	13%
3	Nursing Support and Personal Care Worker	Highly female dominated	11%	11%	14%	15%

Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS

These occupation pathways also have different economic outcomes across gender and CALD status. We found that even among the top three most common occupation pathways for females in this area of study, males have higher median incomes three years post-completion in all three occupations of Welfare Support Worker, Aged or Disabled Carer and Social Worker. Males also are paid more when they are in the same occupation. For example:

- Males who become Welfare Support Workers at AQF 7+ have a median income that is almost \$12,000 higher than the females.
- Likewise, for those with an AQF 4, CALD males who become Welfare Support Workers have a median income of \$85,590 compared to \$61,680 for CALD females.
- However, the largest gendered difference in income is for male graduates at the AQF 5 and 6 who become Aged and Disabled Carers, as they earn a median income that is about \$20,000 more than their female counterparts, 3 years post study.
- Females are more concentrated in lower AQF and more intensely female dominated roles like Child Carers, which also corresponds with lower median incomes.

Table 26 below offers further comparisons of median income earned in this area of study when the level of education and occupational pathway are the same.

Table 26: Annual median income of top occupations for graduates in Human Welfare Studies and Services field of education by AQF level

AQF	Occupation	Segregation Intensity	Male median income	Female median income	Male CALD median income	Female CALD median income
7+	Social Worker	Highly female dominated	\$88,890	\$83,950	\$92,440	\$83,750
7+	Welfare Support Worker	Moderately female dominated	\$82,440	\$74,690	\$88,270	\$76,530
7+	Counsellor	Highly female dominated	\$77,560	\$72,310	\$71,520	\$77,860
5 and 6	Welfare Support Worker	Moderately female dominated	\$75,170	\$66,530	\$81,850	\$63,980
5 and 6	Aged and Disabled Carer	Highly female dominated	\$74,150	\$54,680	\$68,700	\$59,320
5 and 6	Social Worker	Highly female dominated	\$79,360	\$76,570	\$76,050	\$72,280
4	Aged and Disabled Carer	Highly female dominated	\$66,460	\$53,490	\$73,400	\$59,820
4	Welfare Support Worker	Moderately female dominated	\$74,140	\$60,450	\$85,590	\$61,680
4	Nursing Support and Personal Care Worker	Highly female dominated	\$61,260	\$53,160	\$65,280	\$60,540
3	Aged and Disabled Carer	Highly female dominated	\$53,520	\$44,460	\$61,640	\$50,260
3	Child Carer	Almost completely female dominated	\$41,350	\$35,340	\$45,420	\$34,020
3	Nursing Support and Personal Care Worker	Highly female dominated	\$55,790	\$46,320	\$61,130	\$52,680

Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS

Law

The most common occupation pathways for all students studying law at AQF 7+ is the gender balanced occupation of Solicitor, with more than half of graduates following this career trajectory. However, when applying the GSIS to the area of study itself it is moderately female dominated with 62% of graduates across 2015, 2016, 2017 being female. Separate to this, occupational pathways for this field of study are diverse. This is also the case in fields of study like Business Management.

For law, more than a third of all graduates are spread across approximately 70 additional occupational pathways. However, smaller share of students in this field of study do have occupational pathways into more female skewed occupations such as Court and Legal Clerks, and Contract, Program and Project Administrators.

Table 27: Top occupations pathways for Law field of education at AQF 7+ Level

Occupation	Segregation Intensity (all economy)	Share of male graduates (%)	Share of female graduate (%)	Share of male CALD graduates (%)	Share of female CALD graduate (%)
Solicitors	Gender balanced	50%	56%	39%	50%
Court and Legal Clerks	Highly female dominated	4%	4%	4%	4%
Contract, Program and Project Administrators	Gender balanced	3%	5%	4%	4%
Accountants	Moderately female dominated	5%	3%	9%	6%
Intelligence and Policy Analysts	Moderately Female dominated	2%	3%	2%	2%

Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS

Key insights for this moderately female dominated area of study are:

- Females law graduates are more likely to become Solicitors (56% overall, compared to 50% of males overall and 39% of CALD males). However, females and CALD females who become solicitors have a lower median income than males and CALD males (who are on par). In [Paper 1](#) we identified a 13.9% gender pay gap in this occupation with a hours worked difference of 8% between males and females. CALD females have the lowest median incomes across all four cohorts.
- Nine percent of CALD males studying law become accountants and earn the highest median incomes across all four cohorts three years post training. CALD females have the lowest incomes in this occupational pathway which is a concern considering our [Paper 1](#) findings on their high concentration in this occupation.
- Across all four cohorts, and the top five most common occupational pathways Intelligence and Policy Analysts offer the highest median incomes three years post-training, more than the most common occupation pathway of Solicitors. This is also the

highest median income for females across all top occupational pathways. CALD males have the highest median income (\$110,390) for this occupation.

Table 28: Annual median income of top occupations for Law field of education at AQF 7+ Level

Occupation	Segregation Intensity	Male median income	Female median income	Male CALD median income	Female CALD median income
Solicitors	Gender balanced	\$89,880	\$ 87,510	\$89,320	\$85,040
Court and Legal Clerks	Highly female dominated	\$87,020	\$80,950	\$87,670	\$76,040
Contract, Program and Project Administrators	Gender balanced	\$92,180	\$87,520	\$92,260	\$80,540
Accountants	Gender balanced	\$90,300	\$82,710	\$103,980	\$81,450
Intelligence and Policy Analysts	Moderately female dominated	\$105,400	\$97,030	\$110,390	\$93,770

Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS

Computer Science and Information Systems

Insights on occupational pathways and median income outcomes three years post study in the two IT related Fields of Education—Computer Science, and Information Systems provide interesting insights. When applying the GSIS to Computer Science it is almost completely male dominated with 93% of graduates across 2015, 2016, 2017 being male. Information Systems is highly male dominated with 77% of graduates across being male across the same time period.

The most common occupation pathway for all Computer Science graduates at AQF 7+ is the highly male dominated occupation of Software and Applications Programmers. For Information Systems at AQF 7+, the occupation pathways are more diverse. Software and Applications Programmers is still a common pathway, but females are more likely to pursue occupation pathways into the moderately male dominated occupation of ICT Business and Systems Analysts or the gender balanced occupation of Management and Organisation Analysts.

This is also the case for CALD females, but they are also as a share more likely to become Software and Applications Programmers than all females, males or CALD males when studying Information Systems.

The most common three occupation pathways for male graduates in both Computer Science and Information Systems at AQF 7+ are similar.

- For Computer Science they are Software and Applications Programmers, ICT Support Technician and Computer Network Professionals.
- For Information Systems they are Software and Applications Programmers, ICT Business and Systems Analyst, and ICT Support Technicians.

Although there are more male students studying in these two IT areas of study, in Computer Science, females tend to have better FOE to occupation matches in their occupational pathway to Software and Applications Programmer roles.

Around two-thirds (65%) of female graduates follow this pathway compared to only half (50%) of males. This is also the case for CALD females in the IT related FOE—Other Information Technology—where the most common occupation pathway for graduates across all cohorts is Software and Application Programmer, with over a third of CALD females following this pathway (36%) compared to 26% for all males, 24% for CALD males and 21% for all females. Using the GSIS, Other Information Technology is a highly male dominated FOE with 85% of graduates across 2015, 2016, 2017 being male.

It is also notable that under OSCA, the 6-digit occupation of Software Engineer under the 4-digit Software and Applications Programmer unit group has been disaggregated to include Data Architect, and Data Engineer but both these occupations remain highly male dominated.

The 6-digit ICT Business Analyst under the 4-digit ICT Business and Systems Analysts unit group has been disaggregated to three new 6-digit occupations to Enterprise Architect, Solution Architect, and Cloud Architect and all three shift to the almost completely male dominated intensity on the GSIS.

The increasing gender segregation intensity of these occupations—visible with greater disaggregation under OSCA—combined with the female and CALD female occupational pathways in this area of study is worth future research.

Table 29: Top occupations pathways for Computer Science field of education at AQF 7+ Level

Occupation	Segregation Intensity	Share of male graduates (%)	Share of female graduate (%)	Share of male CALD graduates (%)	Share of female CALD graduate (%)
Software and Applications Programmers	Moderately male dominated	50%	65%	49%	N/A
ICT Support Technician	Moderately male dominated	6%	5%	8%	N/A
Computer Network Professionals	Almost completely male dominated	6%	N/A	N/A	N/A

Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS.
 Note: Values are suppressed (shown as N/A) where the sample size is fewer than 100 individuals. This threshold is applied to ensure statistical reliability. See [Technical Paper 2](#) for more information.

Table 30: Top occupation pathways for Information Systems field of education at AQF 7+ Level

Occupation	Segregation Intensity	Share of male graduates (%)	Share of female graduate (%)	Share of male CALD graduates (%)	Share of female CALD graduate (%)
Software and Applications Programmers	Highly male dominated	20%	14%	20%	27%
ICT Business and Systems Analysts	Moderately male dominated	13%	26%	20%	33%
Management and Organisation Analysts	Gender balanced	7%	17%	8%	20%
ICT Support Technicians	Highly male dominated	8%	6%	10%	7%
ICT Managers	Highly male dominated	8%	6%	8%	7%

Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS

There are also equally informative insights in economic outcomes across these two IT areas of study. Key insights for Computer Science are:

- Female students who studied Computer Science are more likely to become Software and Application Programmers (65% compared to 50% in males) and have the highest median incomes across all four cohorts at over \$95,000 three years post training. This is over \$7,000 more than all males but less than \$5,000) more than CALD males.
- Like in law, CALD females with the same occupational pathways and level of education have the lowest incomes.
- Male CALD graduates are slightly more likely to become ICT Business and Systems Analysts, or ICT Support Technicians than all males and females.

Table 31: Annual median income of top occupations for Computer Science field of education at AQF 7+ Level

Occupation	Segregation Intensity	Male median income	Female median income	Male CALD median income	Female CALD median income
Software and Applications Programmers	Moderately male dominated	\$87,720	\$95,070	\$90,790	N/A
Computer Network Professionals	Almost completely male dominated	\$92,260	N/A	N/A	N/A

Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS
 Note: Values are suppressed (shown as N/A) where the sample size is fewer than 100 individuals. This threshold is applied to ensure statistical reliability. This is also why IT Support Technicians is not shown. See [Technical Paper 2](#) for more information.

When considering Information Systems graduates at the AQF 7+ level, CALD females have the highest or equal highest median incomes three years post-completion in all occupational pathways except for ICT Support Technicians and ICT Business or Systems Analysts. CALD males also have higher median incomes in the Software and Applications Programmers occupation pathway than all male and all female graduates. However, females studying in the Other Information Technology FOE who become Software and Applications Programmers have higher median incomes than all males and CALD males, like the trend for Information Systems.

Notably, CALD females and all females also have the highest median incomes in ICT Manager roles three years post-completion indicating a strong return on investment for this field of study, at least early in women's careers. However, qualitative findings from the study offers a more complex picture of both gender, age and race discrimination in this industry, including the impact on career trajectories and promotions due to having and caring for children in these more male dominated occupation pathways. JSA suggests further research on these occupational pathways and median income outcomes after five and 10 years post-training (or longer as data assets age) to continue to identify inequities, barriers or success stories for policymakers to consider further.

Table 32: Annual median income of top occupations for Information Systems field of education at AQF 7+ Level

Occupation	Segregation Intensity	Male median income	Female median income	Male CALD median income	Female CALD median income
Software and Applications Programmers	Highly male dominated	\$92,920	\$88,780	\$95,000	\$97,310
ICT Business and Systems Analysts	Moderately male dominated	\$87,840	\$94,560	\$85,820	\$90,000
Management and Organisation Analysts	Gender balanced	\$95,730	\$97,490	\$95,900	\$97,490
ICT Support Technicians	Highly male dominated	\$66,060	\$63,260	\$63,770	\$51,350
ICT Managers	Highly male dominated	\$108,520	\$112,490	\$95,220	\$123,540

Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS

"Sometimes recommendations I have are more accepted and respected when coming from a man. The male business partners would not want to hear the numbers from a female, so it became an obligatory thing as part of the contract that for women to present the other person with them had to be any male in the team from anywhere."

— Female focus group participant aged 30-44 years, IT Business Analyst

"I wouldn't share any life changes, like getting married or planning to have kids, with the male partners because it may affect my career progression. I try not to wear anything too revealing these days because I don't want the attention of men...Because I'm female and Asian they take advantage of it, they assume I am more compliant and won't speak out."

— Female focus group participant aged 18-29 years, Software Engineer

"When being considered for promotions in management roles, my gender at this age definitely comes into it and about me having children soon...The mindset in my industry is that men are able to give more commitment and have more time for those responsibilities, even when they are thinking of having a family."

— CALD female focus group participant aged 30-44 years, Software Platform Engineer

"Equal recognition is not just equal pay, but it's also equality of appreciation and other opportunities. It's verbal appreciation, while also being given other opportunities, like being assigned to projects or taking the lead. It helps you prove your worth, allows you to grow and gives you the respect you deserve."

— Female focus group participant aged 18-29 years, IT Analyst

An intersectional snapshot of occupation pathways and economic outcomes across different areas of study: Key Findings

- In Human Welfare Studies and Service at the highest Bachelor qualified level of education, there are no gendered differences in the top occupational pathway to become a Social Worker. However, male and CALD male graduates are more likely to become Welfare Support Workers at various levels of education than females. This is a higher paid job than common occupational pathways for female graduates into Aged and Disabled Carer, Child Carers and Nursing Support Workers.
- Even among the top three most common occupation pathways for Human Welfare Studies and Service females in this area of study, males have higher median incomes three years post-completion in all three occupations of Welfare Support Worker, Aged and Disabled Carer and Social Worker. Males also are paid more when they are in the same occupation.
- The largest gendered differences in income is for male graduates who become Aged and Disabled Carers, who earn \$20,000 more than females', three years post study.
- Female law graduates are more likely to become Solicitors (58% compared to 50% of males and 39% of CALD males) but they earn slightly less three years post-completion in this gender balanced occupation.
- Female and CALD male law graduates that follow occupational pathways into more female dominated occupations like Intelligence and Policy Analyst roles have higher incomes three years post-training than when they become Solicitors.
- CALD male law graduates also have high median incomes when entering the gender balanced occupation of Accountants, but CALD females have the lowest incomes in this occupational pathway which is a concern considering our [Paper 1](#) findings on their high concentration in this occupation.
- In IT related fields of study, females and CALD females are generally securing the best economic outcomes:
 - In Computer Science, females earn the highest median incomes when becoming Software and Applications Programmers, earning between \$5,000-\$7,000 above all and CALD males.
 - When studying Information Systems, CALD females have the highest median incomes three years post-completion in all occupational pathways except for ICT Support Technician.
 - CALD females and all females also have the highest median incomes in ICT Manager roles three years post-completion indicating a strong return on investment for this field of study, at least early in women's careers.
- Females studying Computer Science also tend to have better field of study—occupation matches when becoming Software and Applications Programmers whereas CALD male Computer Science graduates have high median incomes when following occupational pathways ICT Support Technician roles.

Gendered divides in time in job and the leaky pipeline post-training

This section explored new data on the average length of time workers stay in the same job across a decade to begin exploring gendered trends in retention, time in job, turnover and the 'leaky pipeline' post-training.¹⁵

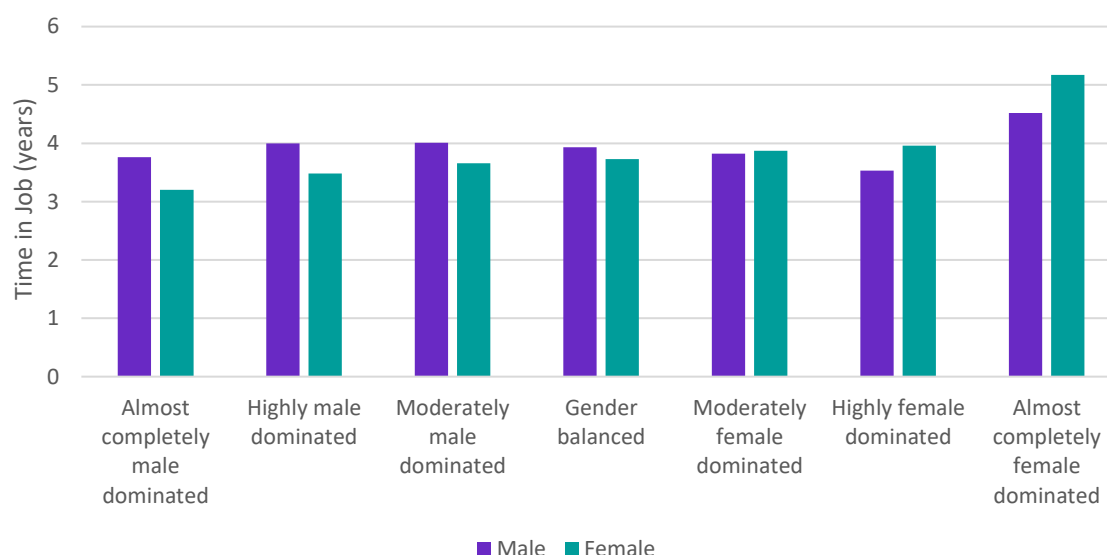
We use the GSIS to frame our analysis and further reveal the relationship between these trends, segregation intensity, occupation shortages, and skill level. The aim is to better identify the pain-points and barriers different workers, occupations or industries face to develop more effective policy solutions. For example, barriers to women across engineering and construction occupations are well documented and range from structural barriers such as inflexible working policies, to cultures of discrimination and harassment (Sharma et al. 2019; Holdsworth et al. 2023).

Many of these barriers contribute to the leaky pipeline post-training for women in male dominated occupations but there are evidence gaps on men's experiences in female dominated occupations as well as time in jobs, retention and turnover patterns in occupations of other gender segregation intensity.

GSIS insights into gendered differences in time in job

Our findings indicate that like the links between occupational shortages and gender segregation, there are links between the average number of years a worker stays in a job, their gender and the gender segregation of the occupation itself. As Figure 15 below shows males and females stay longer in occupations that are dominated by their own gender across the GSIS.

Figure 15: Average time in job (years) by gender segregation intensity



¹⁵ We look at the average length of time in years males and females stay in the same job across 280 ANZSCO 4-Digit occupations for the decade from 2010-11 to 2021-22. Across the 280 occupations we have between 75 and 99 occupations for the first three segregation intensities on the GSIS scale but only 10 occupations at the highest almost completely segregated intensity with only two almost completely female dominated occupations. This somewhat limits our analysis for this category. See [Technical Paper 2](#).

Among the **almost completely male dominated occupations**, males spent on average an extra seven months in jobs than females compared to two months on average in gendered balanced occupations but the time differences in individual occupations are far longer. For example, in occupations like Precision Metal Trades Workers and Air Transport Professionals the gender difference was over or equal to one and half years. JSA suggests applying the GSIS to larger sample of time in job data in the future.

In **highly male dominated occupations**, males spent on average six months longer at this GSIS. At this segregation intensity, males spent longer in occupations like Surgeons, Production Managers, Train and Tram Drivers, and Telecommunications Technical Specialists. Whereas females stay longer in labour intensive and lower skilled jobs such as Garden and Nursery Labourers, Product Assemblers, Other Cleaners and Other Factory Process Workers. Both genders have similar time spent in jobs like Security Officers and Guards, and Couriers and Postal Deliverers.

In **moderately male dominated occupations**, males spent on average an extra four months in jobs than females. At this segregation intensity, males stayed longer in jobs such as Livestock Farmers, Crop Farmer, and Chefs whereas females stay longer in jobs such as Shelf Fillers. For professional roles like Economists, ICT Agricultural Technicians, Police and other arts related roles like Music Professionals, and Film, Television, Radio and Stage Directors there are similar time in job patterns for both females and males.

This trend is also apparent in **gender balanced occupations** where occupations like Solicitors, Accountants, Auditors, Company Secretaries and Corporate Treasurers have similar time in job patterns across males and females. Males only spent on average an extra two months in these occupations. These findings reiterate existing research in the field. Females tend to stay longer in lower skilled roles like Kitchenhands, Cooks, and Packers at this more gender balanced segregation intensity and this lines up with [Paper 1](#) findings some lower skilled jobs such as Kitchenhands, and Cooks become increasingly female dominated as workers enter middle age.

Likewise, the high gender pay gaps found in the finance industry could be correlated with the longer time males are in jobs in occupations like Finance Managers, despite it being a gender balanced occupation. Workplace culture in more professional male dominated occupations has also often been raised as an issue by women in this sector.

"Very silently, men in our organisation are still being favoured over women who have more work experience, and it is very demotivating to women. You are expected to dress up more. If you have a male counterpart in the same role, there is just less expectation on him in terms of presentation. Whatever he wears, a man is going to be met with less resistance and more respect."

— LGBTQIA+ focus group participant, Finance Manager

There are only two occupations that are **almost completely female dominated** and both are higher skilled professional jobs: Occupational Therapists, and Nurse Educators and Researchers. The same trend as above is evident across these two occupations where

females and males spend similar time in jobs. In these two jobs females only worked 5-10 months longer than males over the decade.

Likewise, in professional **highly female dominated** jobs such as Interior Designers, Psychologists, and Librarians, the time in job is the same for males and females or has less than four months difference across health and education professions in nursing and teaching. Males spent longer time in jobs like Practice Managers, and Nursing Support and Personal Care Worker whereas females stayed more than a year longer in lower skilled jobs such as Education Aides, and Keyboard Operators. At this category of the GSIS on average, females spent an extra five months in the job than males whereas at the moderately female dominated intensity it was only one month, compared to four months on the male side.

For **moderately female dominated occupations**, males worked slightly longer in Judicial and Other Legal Professionals, and School Principals whereas females worked longer as Physiotherapists. In other professional roles such as Human Resource Professionals, Medical Imaging Professionals, and Secondary School Teaching, there were no gendered difference in time in job.

Table 33 offers a snapshot of the relationship between time in job, segregation intensity and skill level in various technician roles across the three different industries of ICT, Health, and building and construction.

Table 33: Average time in job in engineering, technician and ICT occupations

Occupations	Segregation intensity	Skill level	Average time in job, male (years)	Average time in job, female (years)	Time in job difference, female versus male (%)
Performing Arts Technicians	Moderately male dominated	3	4.34	3.25	-25%
Architectural, Building and Surveying Technicians	Highly male dominated	2	4.30	3.77	-12%
Other Engineering Professionals	Highly male dominated	1	4.59	4.08	-11%
Civil Engineering Professionals	Highly male dominated	1	5.16	4.69	-9%
Civil Engineering Draftspersons and Technicians	Highly male dominated	2	4.43	4.02	-9%
ICT Sales Professionals	Moderately male dominated	1	3.43	3.14	-8%
ICT Managers	Highly male dominated	1	4.09	3.81	-7%
ICT Support Technicians	Highly male dominated	2	3.08	2.88	-6%
ICT Support and Test Engineers	Moderately male dominated	1	3.15	2.96	-6%
ICT Business and Systems Analysts	Moderately male dominated	1	4.07	3.83	-6%
Telecommunications Engineering Professionals	Highly male dominated	1	4.17	3.93	-6%
Agricultural Technicians	Moderately male dominated	2	3.18	3.08	-3%
Other Miscellaneous Technicians and Trades Workers	Gender balanced	3	3.64	3.53	-3%
ICT Sales Assistants	Moderately male dominated	5	2.37	2.34	-1%
Science Technicians	Gender balanced	2	3.47	3.64	5%
ICT Trainers	Gender balanced	1	3.11	3.36	8%
Medical Technicians	Highly female dominated	2	3.87	4.26	10%
Gallery, Library and Museum Technicians	Highly female dominated	2	4.50	5.04	12%

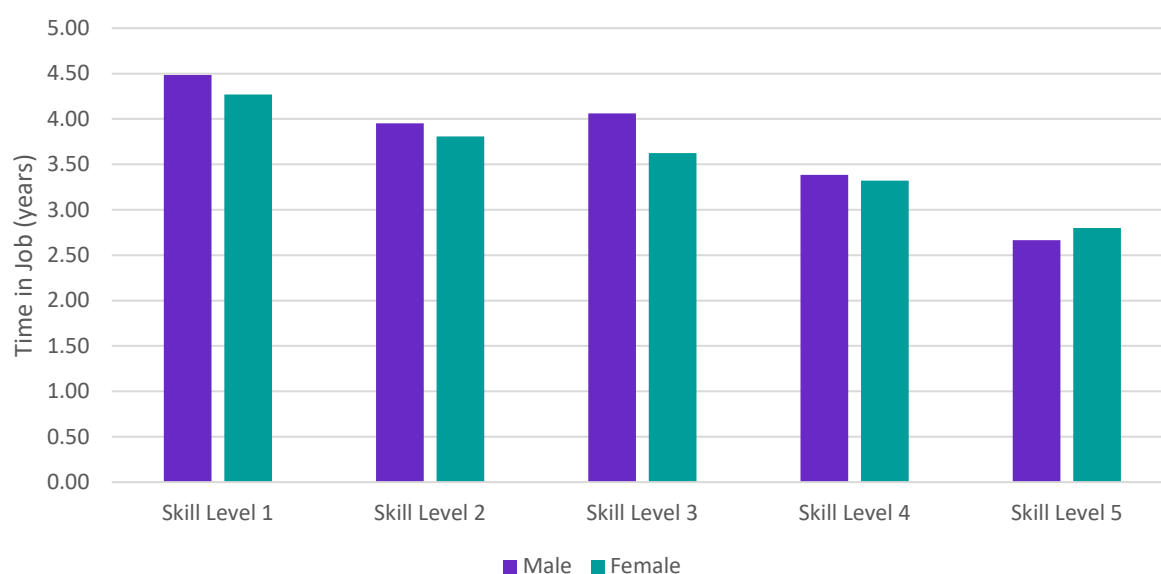
Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS

Gendered time in job trends across Skill Level

From a Skill Level perspective, our findings reiterate existing research on time in job, highlighting that workers stay in lower skill level jobs for shorter periods and longer in higher skill jobs. Unlike skill shortages, time in job is more closely tied to Skill Level than gender segregation intensity.

Moreover, the largest gendered differences in time in job between females and males is at Skill Level 3 which is mostly made up of male dominated occupations in shortage as found in [Paper 1](#) (see Figure 16). Both males and females stay less than three years in Skill Level 5 occupations but stay over four years in Skill Level 1 occupations.

Figure 16: Average time in job by gender and Skill Level



Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS

Some of the occupations at Skill Level 3 with the largest gendered differences in time in job are Auctioneers, and Stock and Station Agents, and Fire and Emergency Workers, in which males stay on average more than two years longer than females. This was also the case in selected male dominated trades such as Precision Metal Trades Workers where males stay more than one and a half years longer than females or in the case of Bakers and Pastrycooks, males stay one year longer. Large employing male dominated trade occupations such as Plumbers and Electricians had too few females to be included in this analysis. However, we know from other research into the leaky pipeline that time in job, turnover and retention is a major issue in these occupations.

If we look deeper into top growing Skill Level 1 professions that are also on the 2024 Occupation Shortage List, we find that males stay longer in most of these occupations, even in gender balanced and some female dominated.

Females generally stay longer in jobs in health, education and social work. However, the largest time in job gaps between males and females in this category of occupations are Surgeons, Specialist Physicians, and Psychiatrists where males stay approximately a year longer than females. Again, these are occupations where we found higher gender pay gaps in [Paper 1](#).

Across some of the Skill Level 1 occupations with high CALD representation such as Pharmacists, Veterinarians, Accountants, and Other Medical or Dental Practitioners, males and females have similar time in job patterns.

Table 34: Average time in job across top growing Skill Level 1 professional roles by segregation intensity

Occupation	Segregation intensity	Average time in job, male (years)	Average time in job, female (years)	Time in job difference, female versus male (%)
Surgeons	Highly male dominated	5.54	4.51	-19%
Specialist Physicians	Gender balanced	5.88	4.96	-16%
Psychiatrists	Gender balanced	6.36	5.45	-14%
Advertising, Public Relations and Sales Managers	Gender balanced	4.92	4.29	-13%
Other Engineering Professionals	Highly male dominated	4.59	4.08	-11%
Software and Applications Programmers	Highly male dominated	4.36	3.93	-10%
Mining Engineers	Highly male dominated	4.80	4.33	-10%
Civil Engineering Professionals	Highly male dominated	5.16	4.69	-9%
Other Medical Practitioners	Gender balanced	4.91	4.52	-8%
Dental Practitioners	Gender balanced	5.45	5.03	-8%
Anaesthetists	Moderately male dominated	6.45	5.96	-8%
Optometrists and Orthoptists	Moderately female dominated	6.57	6.09	-7%
Veterinarians	Moderately female dominated	6.37	6.11	-4%
Urban and Regional Planners	Gender balanced	6.15	5.98	-3%
Chemical and Materials Engineers	Highly male dominated	4.75	4.68	-1%
Pharmacists	Moderately female dominated	5.35	5.28	-1%
Medical Imaging Professionals	Moderately female dominated	6.60	6.56	-1%
Psychologists	Highly female dominated	4.61	4.59	0%
Auditors, Company Secretaries and Corporate Treasurers	Gender balanced	3.77	3.77	0%

Occupation	Segregation intensity	Average time in job, male (years)	Average time in job, female (years)	Time in job difference, female versus male (%)
Solicitors	Gender balanced	5.77	5.96	3%
Podiatrists	Gender balanced	5.54	5.75	4%
Registered Nurses	Highly female dominated	4.21	4.52	7%
Nurse Educators and Researchers	Almost completely female dominated	3.82	4.26	12%
Special Education Teachers	Highly female dominated	4.09	4.61	13%
Physiotherapists	Moderately female dominated	5.51	6.22	13%
Occupational Therapists	Almost completely female dominated	5.21	6.07	17%
Social Workers	Highly female dominated	4.55	5.32	17%

Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS

Gendered time in job trends across top growing occupations

Among the top growing occupations across the total workforce in 2006-2021 which aren't Skill Level 1 roles we found that females stayed longer in health and care roles than males as Table 35 shows. Males stayed longer in jobs like Chefs, and Ambulance Officers and Paramedics.

Table 35: Top growing occupations (ANZSCO 4-digit with Skill Level 2 and 4)

Occupation	Segregation intensity	Skill Level	Average time in job, male (years)	Average time in job, female (years)	% difference females versus males
Aged and Disabled Carers	Highly female dominated	4	3.397	3.82	12%
Enrolled and Mothercraft Nurses	Highly female dominated	2	3.448	3.862	12%
Nursing Support and Personal Care Workers	Highly female dominated	4	3.789	3.465	-9%
Chefs	Moderately male dominated	2	4.283	3.747	-13%
Ambulance Officers and Paramedics	Gender balanced	2	7.059	5.808	-18%

Source: Census of Population and Housing, 2021 ANZSCO 4-digit, Person Level Integrated Data Asset (PLIDA), ABS

Gendered divides in time in job and the leaky pipeline post-training: Key Findings

- Males and females stay longer in occupations that are dominated by their own gender across the GSIS.
- Females stay much shorter in male dominated occupations across the GSIS.
- Unlike skill shortages, time in job is more closely tied to Skill Level than gender segregation intensity.
 - Workers stay in lower skill level jobs for shorter periods and longer in higher skill jobs.
 - Males and females generally stay similar lengths of time in higher skilled professional jobs regardless of gender segregation intensity.
 - Across Skill Level 1 occupations with high CALD representation such as Pharmacists, Veterinarians, Accountants, and Other Medical or Dental Practitioners, males and females also have similar time in job patterns.
 - Females do stay longer than in lower skilled gender balanced roles like Kitchenhands, Cooks, and Packers and this lines up with [Paper 1](#) findings that in some lower skilled jobs like these become increasingly female dominated as workers enter middle age.
- In top growing occupations, females stayed longer in health and care roles and males stayed longer in jobs like Chefs, and Ambulance Officers and Paramedics.
- In most top growing, in shortage Skill Level 1 professions males stay longer, even in gender balanced and some female dominated occupations.
- Some of the occupations at Skill Level 3 with the largest gendered differences in time in job are Auctioneers, and Stock and Station Agents, and Fire and Emergency Workers, in which males stay on average more than two years longer than females. This was also the case in selected male dominated trades such as Precision Metal Trades Workers.
- Females generally stay longer in jobs in health, education and social work. However, the largest time in job gaps between males and females in this category of occupations are occupations with high gender pay gaps such as Surgeons, Specialist Physicians, and Psychiatrists. Males stay approximately a year longer than females. Again, these are occupations where we found higher gender pay gaps in [Paper 1](#).

Part 3: New perspectives on describing jobs and recognising skills

"Data is not just a neutral tool for making decisions—it carries with it the potential to either reinforce or challenge existing power structures."

(Vicars and Arantes 2024)

The way we measure and describe the labour market and the broader economy has traditionally been gendered, with a greater focus on capturing the activity of men. While there are a range of global initiatives to address this, including through measuring and valuing the contribution of unpaid care,¹⁶ there is still a clear imbalance.

This has also been true for how we identify, measure and describe jobs through occupational classifications, where historical gender bias in these classifications has contributed to historical gender bias in evidence, analysis, reporting and decision making. This is because occupation classification systems (International Classification of Occupations (ISCO) at the international level, and ANZSCO/OSCA in Australia) have traditionally identified and described male dominated jobs in far more granular detail.¹⁷

Female dominated jobs, on the other hand, have been less visible and more aggregated in occupation classifications. This has translated into less recognition and understanding of female dominated jobs including around pay data, settings and inequities. There is also less understanding of the specific pathways that females take across skills and jobs, which are important to understand when tackling broader labour market and skills challenges such as occupation shortages.

While this is a shared challenge across the world, the ABS's work on OSCA has been important in addressing some of the limitations here in Australia. In addition, the ABS has collaborated with JSA through this Study to use early OSCA-coded 2021 Census data to demonstrate the gendered improvements in the new classification. The ABS is progressively coding 2021 Census data to OSCA, made possible through funding and collaboration with JSA, and it is expected this will be available in the Census TableBuilder product by mid-2026. Given the gender analysis in this section draws on a high proportion of Census records—but not all Census data—we present the analysis as percentages, rather than counts.

Our analysis is timely given OSCA enables us to measure segregation in a more detailed way than ANZSCO, as it separately identifies and describes more female dominated jobs, some for the first time in Australia's history, and therefore sharpens our understanding of the occupational segregation policy challenge.

¹⁶ On June 2025, the ABS released an [Information paper](#) expanding the model of unpaid care to include adult care and a time series, and modelling of sex and age dimensions in the Labour Account. In 2026, the ABS will provide a further update on measuring unpaid care, and incorporate sex and age modelling with the quarterly Labour Account.

¹⁷ Previous National Skills Commission (JSA's previous name) research identified that ANZSCO had gendered imbalances in the number of codes used to describe male and female dominated occupations. Women's jobs were being identified in less detail, with female dominated occupations (classified as moderately female dominated, highly female dominated or almost completely female dominated in the GSIS) described by less than half of the number of ANZSCO codes used for male dominated occupations (JSA 2021). This gender bias is partly what drove the reform of ANZSCO and the transition to OSCA.

In the following sections, we demonstrate how OSCA adds even further value to the new JSA approaches of measuring gendered work, jobs and pay, through the GSIS and PLIDA gender pay gap data, presented in [Paper 1](#). We also show how all three can be adopted for future consistent and comprehensive monitoring of Australian labour market and skills system trends, including progress towards gender economic inequality itself.

How does OSCA improve our understanding of gendered jobs and skills?

OSCA has replaced ANZSCO as Australia's official occupation classification and will be used to categorise data in the ABS Census and Labour Force Survey from 2026. This means we will soon see important improvements in how we identify, describe and analyse the jobs people work in, and train for, across the economy.

OSCA increases our understanding of occupation segregation and other labour market and skills trends and challenges in new ways. OSCA has:

- **improved the gendered language of ANZSCO**, which is important for tackling persistent gendered norms that play a role in perpetuating occupational gender segregation.
- **improved the recognition of leadership roles (and invisible skills) within female dominated occupations.**
- **increased identification of vertical segregation in workforces** with the addition of new occupations.
- **significantly improved the identification and recognition of female dominated jobs**, and therefore also women's skills across Australia.
- **moved towards the recognition and valuation of cultural skills** through the further identification of First Nations occupations.

As well as increasing our understanding of labour market and skills trends and challenges, OSCA also offers several positive policy implications. For example, an improved ability to identify and research more female dominated or highly CALD segregated care work in occupations like Aged and Disabled Carers; options on how we might increase diversity in male dominated occupations by better understanding the career pathways or specialisations women pursue; how more gender neutral and inclusive occupation descriptions could impact education and training choices at an early age; and how more disaggregated occupational classifications could also add to more refined gender pay gap findings and therefore action to manage them. Submissions to the Gender Economic Equality Study highlighted these and we will expand on these in Paper 3.

"Expanded occupations and data will help us to track the kinds of engineering roles women are attracted to. It might also allow us to identify and advocate for more inclusive descriptions that appeal to all genders to increase diversity in engineering."

—Engineers Australia (Consultation Paper submission, 2025)

"OSCA provides an opportunity to improve how we see and study jobs primarily done by women, including CALD women. It is important that OSCA accurately classifies [care industry] roles and values them appropriately, recognising the skills and responsibilities involved."

—Australian Multicultural Women's Alliance (Consultation Paper submission, 2025)

"The introduction of OSCA provides an opportunity to capture a more nuanced picture of gender representation within occupations. The reclassification of roles within social enterprise, disability support and digital industries may allow for better recognition of feminised roles and new pathways into STEM. OSCA should be leveraged to refine gender pay gap analyses and inform more targeted workforce interventions."

—Youth Projects (Consultation Paper submission, 2025)

Building on the above, OSCA also has positive implications for delivering gender equitable policy. OSCA:

- Enables improved visibility of diverse career trajectories and invisible skills
- Provides an opportunity to better identify transferable skills, which may be beneficial for women wanting to transition into higher-paying male dominated jobs
- Enables better design of workforce interventions
- Is important to the awards system as almost completely female dominated occupations are often award dependent which has implications for pay equity settings and reforms (Cortis et al. 2023)
- Allows for a strong evidence base to inform Government funding and investment.

While OSCA has made great progress in the above areas, there is **still a remaining gender bias** in it, which then translates into bias in workforce counts and statistics, with more male dominated occupations. For example, under OSCA there are 13 individual occupations for the female dominated Nursing workforce of almost 250,000, compared to seven individual occupations for the male dominated surgeon workforce of just under 3,500. Continuing gender bias in data systems and structures contributes to continued gender bias in labour market analysis and the policy process.

Australia's first labour market analysis using OSCA

In this section, we apply our GSIS to OSCA to identify the progress it has made in recognising women's skills, jobs and pathways across the Australian economy. We have a particular focus on the increasing recognition of women's skills and expand on the relationships between Skill Level and gender segregation intensity in the Study's first paper.

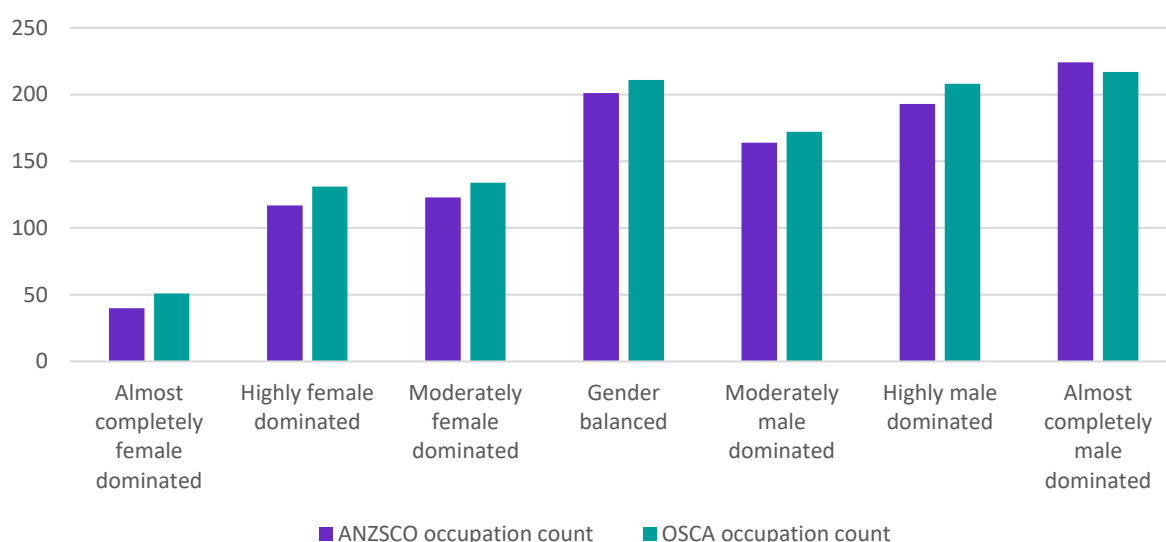
This section presents the first insights from the partially coded 2021 Census data. This data has been able to support the first analysis on what these new categories may mean for

Australia's workforce **from a gendered lens**. However, this section cannot explore OSCA from a gender and an intersectional perspective (e.g. for First Nations females and males), until the fully coded 2021 Census data are released next year.

The data shows that while there has been an increase in the number of occupations that are highly female dominated that are now identified in OSCA, there continues to be a bias towards highly male dominated roles.¹⁸

When comparing the GSIS of occupations in ANZSCO to OSCA, there are 210 instances where an occupation has shifted segregation intensity across the GSIS due to the disaggregation, aggregation or creation of a new occupation in OSCA. For example, Outdoor Adventure Leader or Guide is a new gender balanced occupation under OSCA emerging from the aggregation of three almost completely male dominated occupations: Bungy Jump Master, Fishing Guide and Whitewater Rafting Guide. Exploring the shifts across the GSIS once the full coding of OSCA data is released in 2026 will provide further insights on occupational gender segregation.

Figure 17: Count of ANZSCO and OSCA occupations, by gender segregation intensity



Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

New OSCA occupations across the GSIS

There are 249 new 6-digit occupations in OSCA for which gender splits were available for our analysis. The accompanying [Technical Paper 2](#) outlines how new occupations were defined.

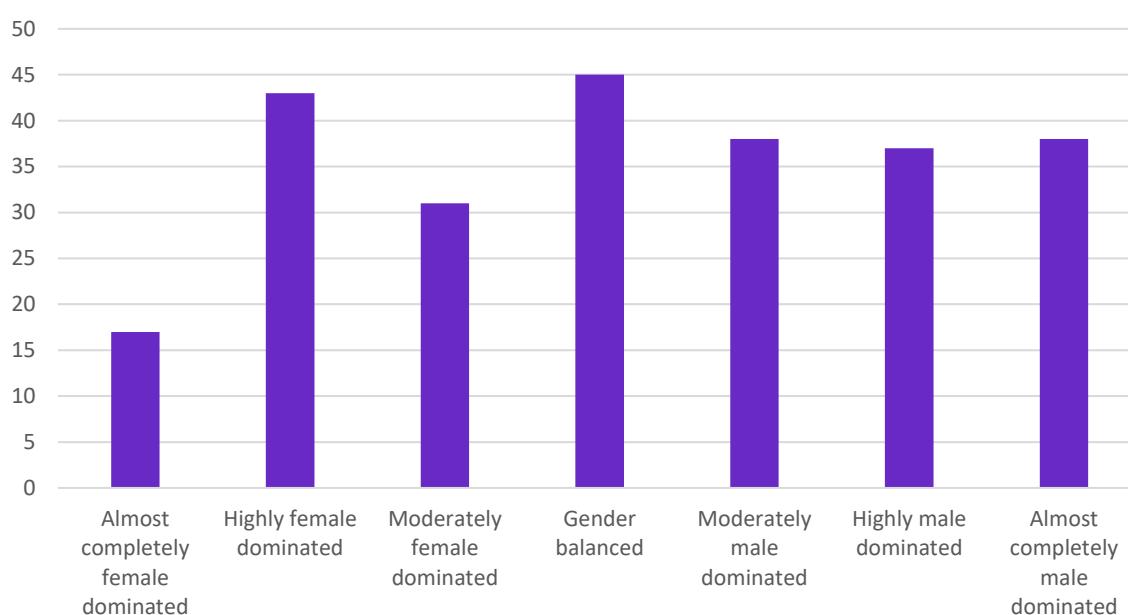
Of these new occupations introduced in OSCA, the majority are male dominated occupations, as shown in Figure 18 below, continuing the trend of male dominated occupations being described in more detail overall. Examples of new almost completely male dominated occupations include the disaggregation of the ICT Business Analyst occupation in ANZSCO to three additional 6-digit occupations of: Enterprise Architect, Solution Architect, and Cloud Architect. More information on male dominated construction

¹⁸ This analysis only presents occupation counts under OSCA, not workforce counts. This is due to the partial coding of the ABS 2021 Census to OSCA capturing approximately 85% of the workforce, but not the entirety of it. Further details on this approach can be found in [Technical Paper 2](#).

occupations are also captured in OSCA, with the Home Improvement Installer being disaggregated into four new 6-digit occupations: Window Furnishing Installer, Swimming Pool and Spa Builder, Garage Door Installer, and Shed Builder, as well as a new not elsewhere classified/'nec' occupation.

However, when looking at the GSIS, new highly female dominated occupations account for 17% of newly identified occupations, which is greater than their overall share of occupations (11%). For example, some of these new highly female dominated occupations include Aged Care Managers, Aboriginal and Torres Strait Islander Health Practitioners, and Adult Literacy/Numeracy Teachers—capturing more detail on female dominated occupations in the health and education industries. OSCA's efforts to capture more detail on almost completely female dominated occupations and the positive implications for progressing gender economic inequality are explored in the following sections.

Figure 18: Count of new OSCA occupations across the GSIS



Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

There are 35 newly identified occupations that have increased in Skill Level. The below tables outline what new occupations have increased in Skill Level across female dominated, male dominated and gender balanced occupations.

Table 36: New occupations in OSCA that have increased in Skill Level for female dominated occupations

ANZSCO occupation name	OSCA occupation name	ANZSCO Skill Level	OSCA Skill Level	Segregation intensity
Life Science Technician	Veterinary Technologist	2	1	Highly female dominated
Animal Attendants and Trainers nec	Animal Trainers and Zookeepers nec	4	3	Moderately female dominated
Child Care Worker	Early Childhood Education Room Leader	3	2	Almost completely female dominated
Family Day Care Worker	Family Day Care Coordinator	4	2	N/A
Aged or Disabled Carer	Aged Care Team Leader	4	3	Highly female dominated
Aged or Disabled Carer	Disability Team Leader	4	3	Moderately female dominated
Cafe Worker	Cafe or Restaurant Supervisor	5	3	Moderately female dominated
Fitness Instructor	Pilates Instructor	4	3	Almost completely female dominated
Payroll Clerk	Payroll Manager	4	2	Highly female dominated
Money Market Clerk	Investment Administrator	4	2	Moderately female dominated
Money Market Clerk	Paraplanner	4	2	Moderately female dominated
Law Clerk	Judge's Associate	3	1	Highly female dominated
Production Assistant (Film, Television, Radio or Stage)	Production Coordinator (Audio, Screen or Live Performance)	4	3	Moderately female dominated
Checkout Operator; Vending Machine Attendant	Gaming Attendant	5	4	Moderately female dominated
Retail Buyer	Merchandise Planner	3	2	Moderately female dominated

Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

Note: Family Day Care Coordinator did not have adequate level of males reported in the ABS 2021 Census to assign a gender segregation intensity, however due to the high level of females in this occupation it has been classified as a female dominated occupation for this analysis.

Table 37: New occupations in OSCA that have increased in Skill Level for male dominated occupations

ANZSCO occupation name	OSCA occupation name	ANZSCO Skill Level	OSCA Skill Level	Segregation intensity
Building Inspector	Building Surveyor	2	1	Highly male dominated
Aircraft Maintenance Engineer (Avionics)	Licensed Aircraft Maintenance Engineer	3	2	Almost completely male dominated
Waiter	Sommelier	4	3	Moderately male dominated
Detective	Specialist Police Officer	2	1	Moderately male dominated
Courier	Delivery Person	5	4	Highly male dominated
Import-Export Clerk	Customs Broker	4	2	Moderately male dominated
Train Driver	Freight Train Driver	4	3	Highly male dominated
Train Driver	Passenger Train Driver	4	3	Highly male dominated
Truck Driver (General)	Articulated Truck Driver	4	3	Highly male dominated
Storeperson	Warehouse Supervisor	4	3	Highly male dominated
Labourers nec	Swimming Pool or Spa Technician	5	4	Almost completely male dominated
Builder's Labourer	Asbestos Removalist	5	4	Almost completely male dominated
Builder's Labourer	Demolition Labourer	5	4	Almost completely male dominated
Builder's Labourer	Pipe Layer	5	4	N/A
Building Installation Installer	Waterproofer	4	3	Almost completely male dominated
Home Improvement Installer	Swimming Pool and Spa Builder	4	3	Almost completely male dominated
Forestry and Garden Workers nec	Bush Regenerator	5	4	Moderately male dominated

Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

Note: Pipe Layer did not have adequate level of females reported in the ABS 2021 Census to assign a gender segregation intensity, however due to the high level of males in this occupation it has been classified as a male dominated occupation for this analysis.

Table 38: New occupations in OSCA that have increased in Skill Level for gender balanced occupations

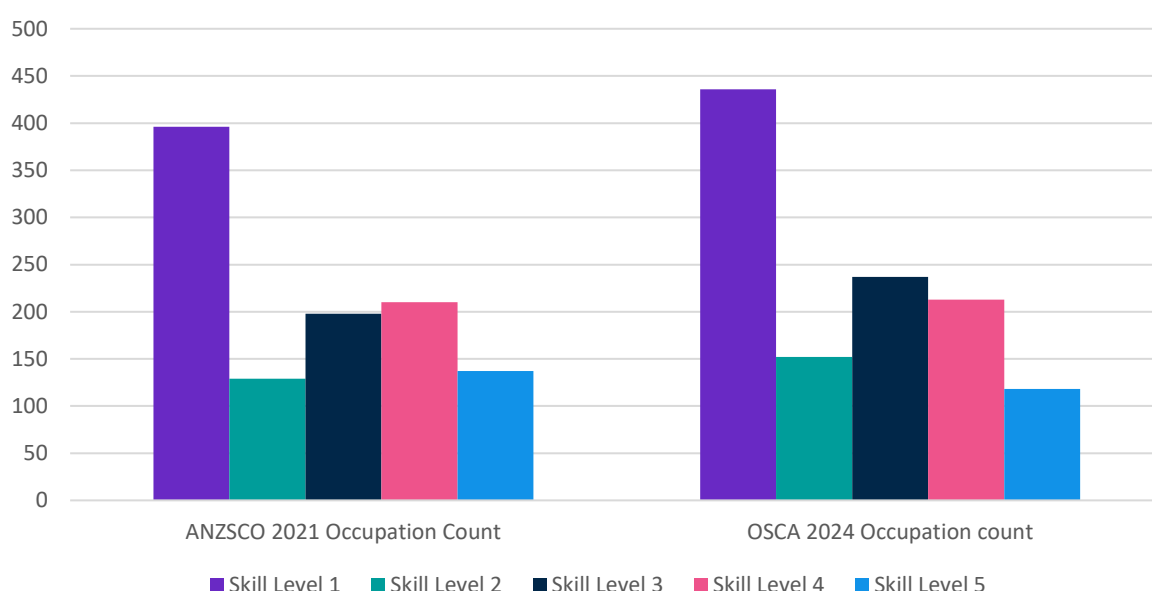
ANZSCO occupation name	OSCA occupation name	ANZSCO Skill Level	OSCA Skill Level	Segregation intensity
Bar Attendant	Bar Supervisor	4	3	Gender balanced
Gaming Worker	Gaming Supervisor	4	3	Gender balanced
Property Manager	Strata Manager	3	2	Gender balanced

Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

Increasing recognition of skills

Overall, OSCA captures more detail on higher skilled occupations than ANZSCO. When comparing occupation counts across all five Skill Levels between ANZSCO 2021 and OSCA 2024, OSCA has more Skill Level 1 occupations and a smaller number of lower skilled occupations.

Figure 19: Number of occupations by Skill Level, ANZSCO and OSCA



Source: ABS, ANZSCO - Australian and New Zealand Standard Classification of Occupations, 2021 Australian Update; OSCA - Occupational Standard Classification for Australia, 2024, version 1.0

When we look at these changes across JSA's GSIS, gendered trends emerge. For example, when looking at which ANZSCO 6-digit occupations are being disaggregated to create new occupations in OSCA this is primarily happening at Skill Level 1 but occurring at the same rate for both female and male dominated roles. Of the 59 Skill Level 1 ANZSCO occupations being disaggregated, 36% of these occupations are female dominated (i.e. moderately female dominated and above in the GSIS) and 36% are male dominated.

Allied Health Professional roles are one example of where disaggregation has increased the recognition of women's skills. The highly female dominated **Complementary Health Therapists nec** occupation with a 78.2% female workforce was disaggregated to the almost completely female dominated **Arts Therapist** (94.9% female), **Music Therapist** (75.7% female), and **Allied Health Physical and Sensory Therapy Professionals nec** (45.6% female).

Recognising more highly skilled female dominated occupations in OSCA

An example of OSCA capturing more detail on highly skilled female dominated occupations is the new **Teacher Librarian** 6-digit occupation. Previously in ANZSCO, this workforce was recorded in the Primary School Teacher and Secondary School Teacher workforces. Partial coding of the ABS 2021 Census to this new OSCA occupation shows that the Teacher Librarian workforce is almost completely female dominated, with 94% females, and is a new Skill Level 1 occupation now being recorded.

Another example is the new **Early Childhood Education Room Leader**, which was separated out from the Child Care Worker occupation. This new almost completely female dominated 6-digit occupation is higher skilled, classified in OSCA at Skill Level 2, than the much larger occupation it was previously included within (Skill Level 3). This is not only an example of capturing detail on more female dominated highly skilled occupations in OSCA but reinforces that OSCA is better identifying more highly skilled female dominated leadership roles.

As occupations have been aggregated and disaggregated from ANZSCO classification to OSCA, the Skill Level of some of these occupations has changed. There is a clear gendered trend in these Skill Level changes, with newly identified female dominated occupations accounting for two-thirds of the 21 occupations where their Skill Level is lower than the occupation they were previously grouped into. For example, **Welfare Worker**, a highly female dominated Skill Level 1 occupation in ANZSCO, has been disaggregated into four new OSCA 6-digit occupations, which are now at a lower Skill Level 2: **Child Protection Practitioner**, **Family Violence Practitioner**, **Financial Counsellor (Community)**, and **Mental Health Worker**.

Pharmacy Technician, a highly female dominated Skill Level 2 occupation in ANZSCO, has been disaggregated into two new Skill Level 3 **Community Pharmacy Technician**, and **Hospital Pharmacy Technician** occupations in OSCA, both remaining in the highly female dominated gender segregation intensity.

Other examples of disaggregated occupations in OSCA that have decreased in Skill Level are shown in Table 39 below.

Table 39: New OSCA occupations that have decreased in Skill Level, by gender segregation intensity

ANZSCO Occupation Name	OSCA Occupation Name	ANZSCO Skill Level	OSCA Skill Level	Segregation Intensity
Specialist Managers nec	Security Manager (Non-ICT)	1	2	Highly male dominated
Recruitment Consultant	Employment Consultant	1	3	Highly female dominated
Workplace Relations Adviser	Union Organiser	1	3	Gender balanced
Landscape Architect	Landscape Designer	1	2	Gender balanced
Welfare Worker	Child Protection Practitioner	1	2	Highly female dominated
Welfare Worker	Family Violence Practitioner	1	2	Almost completely female dominated
Welfare Worker	Financial Counsellor (Community)	1	2	Moderately female dominated
Welfare Worker	Mental Health Worker	1	2	Moderately female dominated
Pharmacy Technician	Community Pharmacy Technician	2	3	Highly female dominated
Pharmacy Technician	Hospital Pharmacy Technician	2	3	Highly female dominated
Building Associate	Civil Construction Leading Hand	2	3	Almost completely male dominated
Architectural, Building and Surveying Technicians nec	Energy Assessor	2	3	Gender balanced
Ambulance Officer	Patient Transport Officer	2	4	Moderately male dominated
Aboriginal and Torres Strait Islander Health Worker	Aboriginal and Torres Strait Islander Health Practitioner	2	3	Highly female dominated
Community Worker	Aged Care Coordinator	2	3	Almost completely female dominated
Community Worker	Volunteer Coordinator	2	3	Highly female dominated
Hotel Service Manager	Front Office Supervisor (Accommodation)	2	3	Moderately female dominated

ANZSCO Occupation Name	OSCA Occupation Name	ANZSCO Skill Level	OSCA Skill Level	Segregation Intensity
Hotel Service Manager	Housekeeping Supervisor	2	3	Highly female dominated
Personal Service Workers nec	Dog Walker	4	5	Moderately female dominated
Inspectors and Regulatory Officers nec	Transport Revenue Officer	4	5	Moderately male dominated
Other Sales Support Worker	Personal Shopper	4	5	Highly female dominated

Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

Areas for further improvement in OSCA: Beauticians and Beauty Therapists

OSCA expands our understanding of the female dominated **Beauty Therapist** occupation by adding a new 6-digit occupation of Dermal Therapists. However, the Beauty Therapists occupation, an occupation that is 96.9% female in the 2021 Census, still lacks detail on the Skill Level for this workforce.

As it stands, **Beauticians** are not classified separately from Beauty Therapists, despite these two occupations requiring different Skill Levels. While Beauty Therapists hold Diploma-level qualifications (Skill Level 2), Beauticians are typically trained at Certificate III and IV (Skill Level 3).

Aggregating these two occupations means Skill Levels are not adequately recognised in this industry. So, while OSCA has made progress in identifying higher skilled female dominated roles, there is still room for further improvement.

Improved recognition of leadership roles in female dominated occupations

OSCA has improved recognition of leadership within female dominated occupations. This can be seen in the number of occupation titles with key leadership terms and the increase in skill levels between the ANZSCO and OSCA models. See the accompanying [Technical Paper 2](#) for how key leadership occupations were identified.

Overall, the number of these leadership occupations in the highly female dominated or almost completely female dominated segregation intensity has increased substantially, rising from 11% of leadership occupations in ANZSCO to 17% in OSCA. This results in the new OSCA classification capturing more detail on highly female dominated leadership occupations.

An example of this is the disaggregation of the **Practice Managers nec** (not elsewhere classified) occupation into new OSCA 6-digit occupations of Legal Practice Manager and Veterinary Practice Manager. These two occupations are highly female dominated and almost completely female dominated, with females making up 87.5% and 93.5% of these workforces respectively.

Table 40: Count of occupations mentioning key leadership terms in ANZSCO 2021 and OSCA classification models, by gender segregation intensity.

Segregation intensity	Count of ANZSCO 2021 occupations with key leadership terms	Count of OSCA occupations with key leadership terms
Almost completely female dominated	2	6
Highly female dominated	8	15
Moderately female dominated	14	17
Gender balanced	33	39
Moderately male dominated	11	19
Highly male dominated	18	23
Almost completely male dominated	2	2
Total count	88	121

Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

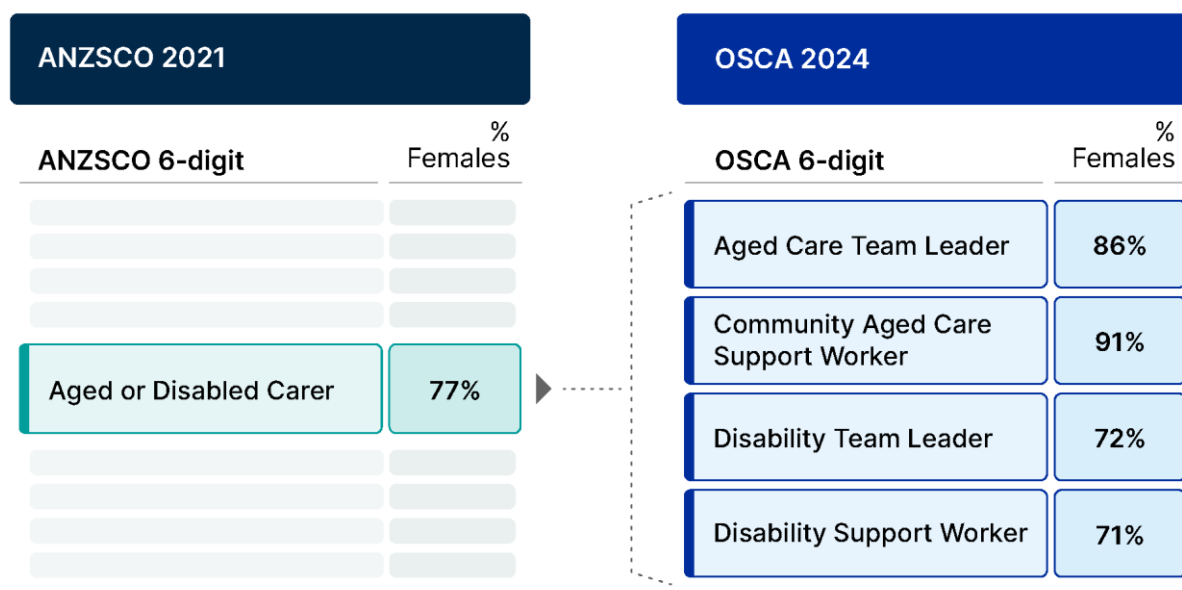
Note: The accompanying [Technical Paper 2](#) outlines how key leadership terms were defined. Occupations classified as 'nfd' have been removed from analysis. Due to suppression of low cell counts, the gender segregation intensity of some occupations may not be available.

Another key example of this is in the **Aged or Disabled Carer** workforce, a large employing occupation that accounted for 1.9% of employed people in the 2021 Census and one of the fastest growing occupations as identified in [Paper 1](#). Previously, this occupation did not capture the diversity and leadership of the more than 227,000 employees (of whom 76.7% are females) under ANZSCO. However, OSCA has disaggregated it into four new 6-digit occupations, two of which are new leadership roles of Aged Care Team Leader, and Disability Team Leaders. The four new occupations are Aged Care Team Leader, Community Aged Care Support Worker, Disability Support Worker, and Disability Team Leader.

Using the partially coded Census data, we can see that the disaggregation of this highly female dominated workforce shows some key gendered insights. The aged care workforce is more highly female dominated than the disability carer workforce, and the new **Community Aged Care Support Worker** occupation is almost completely female dominated, compared to the new Disability Support Worker, which is only moderately female dominated.

The new leadership roles also demonstrate the lower representation of females in these occupations, with **Aged Care Team Leaders** having lower female shares than Community Aged Care Support Workers (85.9% and 91.2% respectively). This is just one example of how OSCA now captures the vertical segregation of workforces, and this also supports a greater understanding in differences in wages and other important labour market factors, between the aged care and disability workforces, as outlined in the former National Skills Commission's [Care Workforce Labour Market Study](#).

Figure 20: Disaggregation of Aged or Disabled Carer workforce in OSCA to capture more female dominated leadership roles



Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

Another example of the vertical segregation in the aged care workforce is the disaggregation of the **Community Worker** occupation (79.7% female) to the new **Aged Care Coordinator** occupation. Aged Care Coordinators have a higher female representation and are an almost completely female dominated occupation at 91.1% female. The Aged Care Coordinator occupation has also a lower Skill Level in OSCA, again reflecting the lower valuation of skills in female dominated occupations.

New almost completely female dominated occupations

Not only is OSCA capturing more leadership roles in female dominated occupations but using the GSIS we can see that there is more detail on almost completely female dominated occupations.

As outlined earlier, there were 224 almost completely male dominated occupations and only 40 almost completely female dominated occupations across the GSIS under ANZSCO 6-digit level.

Under OSCA, this has shifted to 51 almost completely female dominated occupations and 217 almost completely male dominated occupations demonstrating a better understanding of the most gendered jobs across the economy. Table 41 lists all the new almost completely female dominated occupations captured in OSCA, alongside what workforce in ANZSCO they have been disaggregated from. The segregation intensity of those occupations, using the partially coded Census data, is also shown.

As the above section outlined, a lot of these new almost completely female dominated occupations are leadership roles, including managers, coordinators or directors. However, there are also new female dominated occupations being captured in OSCA outside of leadership positions, such as the four new ANZSCO 6-digit occupations under Welfare Worker:

- Family Violence Practitioner, which is almost completely female dominated with a 93.4% female workforce
- Child Protection Practitioner, which is highly female dominated with an 86.9% female workforce
- Mental Health Worker, a moderately female dominated occupation with 70.7% females
- Financial Counsellor (Community), which is a moderately female dominated workforce with 72.1% females.

This is a good example of how a female dominated occupation that also has a higher concentration of First Nations workers can be better understood under OSCA.

Table 41: New almost completely female dominated occupations in OSCA and their disaggregated ANZSCO titles

Disaggregated ANZSCO 2021 Occupation	New OSCA 2024 Occupation	Females (%)
Aged or Disabled Carer	Community Aged Care Support Worker	91.2%
Child Care Worker	Early Childhood Education Room Leader	97.0%
Child Care Worker	Early Childhood Educator	96.9%
Clothing Trades Workers nec	Garment Technician	90.7%
Community Worker	Aged Care Coordinator	91.1%
Complementary Health Therapists nec	Arts Therapist	94.9%
Diversional Therapist	Lifestyle Coordinator	91.0%
Child Care Centre Manager	Children's Education and Care Service Director	92.2%
Family Day Care Worker	Family Day Care Educator	97.9%
Fitness Instructor	Yoga Instructor	90.8%
Fitness Instructor	Pilates Instructor	95.2%
Health Promotion Officer	Diabetes Educator	94.4%
Industrial Designer	Textile Designer	95.1%
Practice Managers nec	Veterinary Practice Manager	93.5%
Primary and Secondary School Teachers	Teacher Librarian	94.2%
Visual Merchandiser	Fashion Stylist	94.5%
Welfare Worker	Family Violence Practitioner	93.4%

Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

Identifying vertical segregation in more detail across the workforce

Additional detail on female dominated workforces also assists in identifying instances of vertical segregation, where females are underrepresented in the most senior leadership positions. A prime example of this is the disaggregation of the **School Principal** workforce.

In ANZSCO, the School Principal occupation was a moderately female dominated workforce with 65.3% females. In OSCA, this workforce has been disaggregated to include a new 6-digit occupation of **Assistant School Principal**. Preliminary coding of OSCA shows that the new Assistant School Principal workforce remains moderately female dominated, with 71.6% females, but the School Principal workforce has a lower female representation and is gender balanced (58.6% females). This shows a slight bias towards males in the most senior leadership position within a highly female dominated workforce.

"Like most teachers are women, but predominantly most principals are men, and above that in state departments it's almost all male dominated. I wonder if that is down to a lot of women putting their careers on hold."

— Female focus group participant aged 45-55 years, Teacher

The highly female dominated **Librarian** workforce also improves identification of management skills, with the disaggregation to **Library Services Manager**. The data reveals a similar highly female dominated workforce, with a marginal increase from 83.8% females to 85.6% females in the Librarian Services Manager occupation.

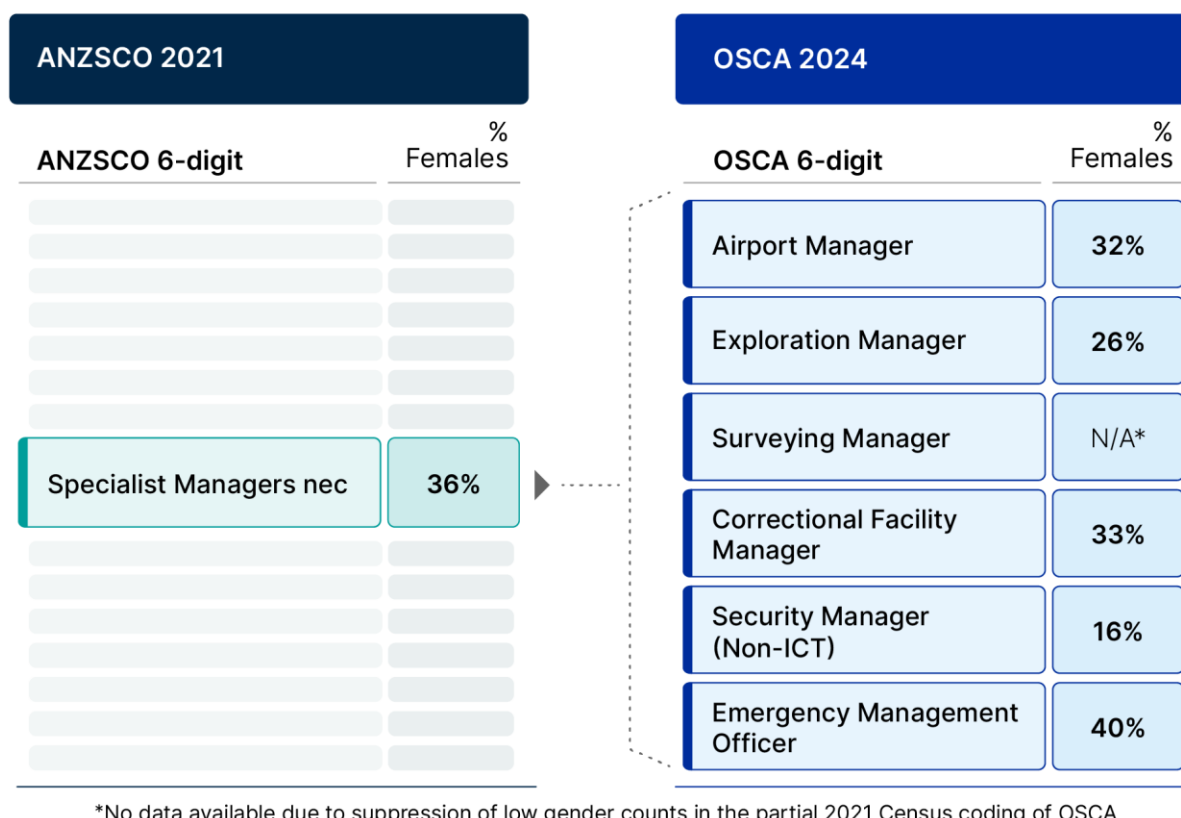
The disaggregation of the moderately male dominated **Chef** occupation into the leadership role of **Senior Chef** shows vertical segregation in that workforce. This is particularly important, as discussed in [Paper 1](#), as the Chef occupation has been in national shortage for the last four years and there is a high reliance on CALD workers (60% of all workers in the Chef occupation). It is also one of the fastest growing occupations as identified in [Paper 1](#). The new Senior Chef occupation has a higher share of males (81.2%) compared with Chef (72.4%), potentially exacerbating the shortage due to the lower female representation in these senior roles.

A similar story of vertical segregation is present in the **Cafe Worker** occupation, which has been disaggregated to include the leadership role of **Cafe or Restaurant Supervisor**. Our analysis shows that the Cafe Worker occupation is highly female dominated (83.1% female), while the Cafe or Restaurant Supervisor is only moderately female dominated (66.1%).

The disaggregation of **Hotel Service Managers** also reflects the differing gendered roles in the hotel industry. The moderately female dominated **Hotel Service Manager** in ANZSCO (65.4% female) has been disaggregated into occupations of varying gender segregation intensity: the highly female dominated **Housekeeping Supervisor** (85.9% female), moderately female dominated **Front Office Supervisor (Accommodation)** at 66.4% female, and the gender balanced **Accommodation Service Manager** (58.4% female). Similar to other Skill Level changes, the female dominated Housekeeping Supervisor and Front Officer Supervisor (Accommodation) both have a lower Skill Level in OSCA.

There has been a significant effort under OSCA to provide further recognition into the **Specialist Managers** sub-major group, with several new disaggregated occupations. However, most of these occupations provide greater detail into male dominated occupations.

Figure 21: Disaggregation of Specialist Managers nec workforce in OSCA to capture more male dominated leadership roles



Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

The increasingly female dominated **Human Resource Manager** (62.2% female) was disaggregated to include the moderately male dominated **Work Health and Safety Manager** (68.8% male).

The **Health and Welfare Services Manager nec** occupation (73.2% female) also saw a shift in gender segregation intensity, upon disaggregation to the moderately male dominated **Paramedic Manager** occupation (64.7% male).

Additionally, the **Ambulance Officer** occupation (45.1% female) was disaggregated further to include a new **Patient Transport Officer** occupation, which is moderately male dominated with a 61.0% male workforce.

Greater recognition of the ICT management workforce has also been revealed in OSCA, with the ICT Managers nec workforce disaggregated into **ICT Operations Manager**, and **ICT Service Delivery Manager** occupations. There is only a small difference in gender segregation intensity for these smaller workforces, with a shift from 76.9% male to 81.3% and 75.0% male workforces respectively.

As outlined in [Paper 1](#), the disaggregation of **Property Manager** to separately identify the **Strata Manager** provides greater clarity on the real estate industry and the relatively large gender pay gaps of Real Estate Agents, particularly at the prime working age of 25-39. The disaggregation to Strata Manager shows a more gender balanced workforce in that occupation (going from 66.8% female to 59.0% female). For further intersectional analysis of the real estate industry, the Certificate IV in Real Estate Practice training pathway can be explored on the [Intersectional VET Outcomes Dashboard](#).

Addressing gender bias in occupation names and descriptions

While the above sections focused on newly disaggregated or aggregated occupations in OSCA compared to ANZSCO, language changes in occupation titles also occurred between the two classifications. Many of the language changes were to specialisations or descriptions under the 6-digit occupation code. Specialisations indicate what specialised skills or jobs are encompassed by the 6-digit occupation.

An area of progress in OSCA has been the removal of unnecessary gendered language in occupation titles. For example, in ANZSCO the Crane Chaser had a specialisation of Dogman/woman, which has now been changed to a Dogger occupation in OSCA, removing the need for a gendered classification of this role.

Other language changes included updating occupations to better reflect an occupation's industry terminology. For example, Child Care Centre Manager changed to Children's Education and Care Service Director. This updated occupation title reflects the increased understanding of the role of early childhood educators in supporting early learning and development.

Though progress has been made in OSCA, there are still occupations where gendered language remains. For example, some occupations still continue to use 'man' compounded with specialisation titles, such as Aircrewman and Rifleman.

"The adoption of gender-neutral language in OSCA's classifications is a crucial step towards reducing implicit biases in job roles and fostering greater workforce diversity. Traditional occupational classifications have often reinforced gendered assumptions about work, subtly discouraging individuals from entering non-traditional fields. Inclusive, neutral terminology can help reshape societal perceptions of certain professions and encourage broader participation across all genders."

—Youth Projects (Consultation Paper submission, 2025)

Moving towards recognition and valuation of cultural skills

Cultural skills are not well identified and acknowledged, including in occupation identification. The breadth and complexity of cultural skills are well recognised, including the added complexity of enacting these skills in contexts which can be hostile to First Nations people, such as the health and welfare industry (Topp et al. 2021).

First Nations women have reported experiencing a 'cultural load' in their workplace, where they are expected to draw upon knowledge, skills and connections to their community, without this work being recognised or factored into their remuneration (Klein et al. 2023; Cortis et al. 2023). Studies on the undervaluation of Aboriginal and Torres Strait Islanders work and skills have pointed to a lack of detail in ANZSCO occupations and inconsistent data sets as a limitation (Young et al. 2024). ANZSCO classifications have also been noted as containing insufficient detail for the community service industry specifically, an industry where both feminised and cultural skills can be left unrecognised (Cortis et al. 2023).

OSCA has improved identification of First Nations occupations with the introduction of new 6-digit First Nations specific occupations. These include:

- **Aboriginal and Torres Strait Islander Education Officer** (73.7% female)
- **Aboriginal and Torres Strait Islander Health Practitioner** (76.3% female)
- **Aboriginal and Torres Strait Islander Health Worker** (74.1% female)
- **Aboriginal and Torres Strait Islander Land and Sea Ranger** (23.3% female)

Given this Study used partially coded Census data for this OSCA analysis, it was yet not possible to explore it through an intersectional lens, in terms of the improved insights for First Nations female and male workforces. This will be important to explore when the fully coded 2021 Census data, on an OSCA basis, becomes available in 2026.

What's next for OSCA?

Though considerable progress has been made in recognising female dominated occupations in OSCA, compared with ANZSCO and ISCO, gender bias remains. It still describes male dominated occupations in more detail, based on the relative workforce sizes.

Additionally, in disaggregating some occupations, other occupations needed to be combined or aggregated up. When looking at what occupations will no longer be separately identified in OSCA, the number of highly male dominated occupations no longer being separately identified is greater than the number of highly female dominated occupations.

However, when looking at how many employees are counted within these occupations, the size of the almost completely female dominated and highly female dominated workforces are over double that of the almost completely male dominated and highly male dominated workforces respectively, meaning that less detail is being recorded at the occupational level for women in the workforce.

Table 42: Count and size of occupations being aggregated up in new OSCA model, by gender segregation intensity

ANZSCO occupation segregation intensity	Segregation intensity share of ALL workforce (%)	Count of occupations in ANZSCO	Count of employees in occupations being aggregated up
Almost completely female dominated	4%	40	77,680
Highly female dominated	11%	117	249,491
Moderately female dominated	12%	123	16,570
Gender balanced	19%	201	54,420
Moderately male dominated	15%	164	42,537
Highly male dominated	18%	193	93,764
Almost completely male dominated	21%	224	26,441
Total	100%	1,062	560,909

Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

Note: The Hunting Guide occupation in ANZSCO had no females reported in the ABS 2021 Census and so was not assigned a gender segregation intensity.

The lack of detail for some parts of the female dominated workforce becomes even more obvious when comparing to the detail that is engrained in how male occupations are classified. A key example of this in the finance sector, a highly male dominated workforce, that in OSCA is further disaggregated to capture even more detail.

For example, **Financial Dealers nec** in ANZSCO has been disaggregated to capture new OSCA 6-digit occupations of **Investment Analyst** and **Credit Risk Manager**, both of which are moderately male dominated occupations according to the 2021 Census partial coding to OSCA (71.2% and 67.5% males respectively). Additionally, relatively small finance occupations have been disaggregated further to capture even more detail on these roles, with **Stockbroking Dealer** being disaggregated to **Stockbroker** and **Capital Markets Specialist**, both highly male dominated occupations (86.4% and 79.3% males respectively).

This tendency to capture more detail on male dominated occupations is seen in other industries, beyond the finance industry, as the following case study on surgeons and nurses shows.

In ANZSCO, the **Registered Nurse** workforce included 12 detailed nursing 6-digit occupations with diverse specialisations. In the new OSCA model these 6-digit occupations have been aggregated, reducing this detail down to four occupations areas of expertise for registered nurses.

In particular, the aggregation of six ANZSCO 6-digit nursing occupations to just one new OSCA nursing occupation of "Registered Nurse (Acute Care)" captures over 126,000 people, the majority of whom are women.

Table 43: Aggregation of ANZSCO 6-digit Nursing occupations in OSCA

ANZSCO 6-digit occupation	Total workforce size	Females (%)	OSCA 6-digit occupation
Registered Nurse (Critical Care and Emergency)	42,072	86%	Registered Nurse (Acute Care)
Registered Nurse (Disability and Rehabilitation)	5,275	86%	Registered Nurse (Acute Care)
Registered Nurse (Medical)	25,569	89%	Registered Nurse (Acute Care)
Registered Nurse (Paediatrics)	7,114	96%	Registered Nurse (Acute Care)
Registered Nurse (Perioperative)	26,743	89%	Registered Nurse (Acute Care)
Registered Nurse (Surgical)	19,494	91%	Registered Nurse (Acute Care)
Registered Nurse (Aged Care)	38,432	88%	Registered Nurse (Aged Care)
Registered Nurse (Mental Health)	18,181	72%	Registered Nurse (Mental Health)
Registered Nurse (Child and Family Health)	5,476	99%	Registered Nurse (Primary Health Care)
Registered Nurse (Community Health)	16,038	91%	Registered Nurse (Primary Health Care)
Registered Nurse (Developmental Disability)	28	82%	Registered Nurse (Primary Health Care)
Registered Nurse (Medical Practice)	11,720	96%	Registered Nurse (Primary Health Care)

Source: ABS, Census of Population and Housing, 2021; OSCA - Occupational Standard Classification for Australia, 2024, version 1.0

This is in contrast to the highly male dominated workforce of **Surgeons**. Similarly to the registered nursing workforce, this occupation also had detailed specialisations at the 6-digit occupation level in the ANZSCO model. However, these remain unchanged in the OSCA model and capture a much smaller sized workforce.

Table 44: Surgeon workforce that remains unchanged from ANZSCO to OSCA

ANZSCO 6-digit occupation	ALL Workforce	Female (%)
Orthopaedic Surgeon	1,514	10%
Cardiothoracic Surgeon	171	11%
Neurosurgeon	284	18%
Vascular Surgeon	183	19%
Plastic and Reconstructive Surgeon	474	25%
Surgeon (General)	726	27%
Paediatric Surgeon	125	37%

Source: ABS, Census of Population and Housing, 2021; OSCA - Occupational Standard Classification for Australia, 2024, version 1.0

Other examples include disaggregation of almost completely male dominated trade occupations and labouring jobs such as Gasfitter, Plumber, Concreter, Motor Mechanic, Carpenter and Joiner, Home Improvement Installer, Electrician, Cabinetmaker, Mobile Plant Operators nec, Automotive Electrician, Truck Driver (General), and Surveyor.

However, in the majority of these cases, the disaggregation to include new OSCA occupations relates to Skill Level changes or occupations in shortage, which increases our understanding of occupational segregation. There are some almost completely male dominated occupations that have been disaggregated despite no change in Skill Level and no classification of shortage as outlined in Table 45 below, although seven of the occupations relate to increased understanding of occupations that were previously 'not elsewhere classified' in ANZSCO.

Table 45: New almost completely male dominated occupations with no change in Skill Level and not in shortage that have been disaggregated in OSCA, by workforce count and Skill Level

ANZSCO Occupation Name	OSCA Occupation Name	Skill Level	ANZSCO Workforce Count
Building Associate	Construction Site Supervisor	2	38,659
Building and Engineering Technicians nec	Biomedical Technician	2	5,111
Building and Engineering Technicians nec	Engineering Technicians nec	2	5,111
Metal Fitters and Machinists nec	Agricultural Mechanic	3	3,330
Mobile Plant Operators nec	Tunnel Constructor	4	1,416
Automobile Drivers nec	Oversize Load Pilot Escort	4	20,126
Automobile Drivers nec	Rideshare Driver	4	20,126
Home Improvement Installer	Window Furnishing Installer	4	12,658
Home Improvement Installer	Garage Door Installer	4	12,658
Home Improvement Installer	Home Improvement and Insulation Installers nec	4	12,658
Home Improvement Installer	Shed Builder	4	12,658

Source: ABS, Census of Population and Housing, 2021, partial coding to OSCA.

ABS leadership and consultation efforts

The ABS is developing a maintenance strategy for OSCA which will involve ongoing consultation with stakeholders and has been very receptive and responsive to feedback on improvements, including in addressing gender bias. Its leadership in this space, in stewarding the changes from ANZSCO to OSCA, along with its approach to maintaining the classification, should be commended.

Further consultation is expected in early 2026, as the ABS looks at further updates to the occupational classification in 2027 and beyond. In addition to the occupation classification, the industry classification (ANZSIC) will also be updated in the future (ABS 2022), and this provides an opportunity to address some of its inherent gender bias, in line with the ABS's recent efforts and progress with OSCA.

Jobs and Skills Australia will continue to collaborate closely with the ABS, to share its gender-related insights into occupations and how they are classified.

OSCA analysis: Key findings

- OSCA improves our understanding of occupations in the labour market, relative to ANZSCO, in the following ways:
 - Improved the gendered language
 - An increased understanding of female dominated occupations overall, with more detail on almost completely female dominated occupations.
 - Improving recognition of leadership and higher skilled female dominated occupations
 - Identifies vertical segregation in workforces to assist in understanding occupational gender segregation.
- There are 249 new occupations identified under OSCA. The majority of new occupations identified are male dominated, however, positively there has been significant progress in recognising more highly skilled female dominated occupations, and improved recognition of leadership roles in female dominated occupations.
- While OSCA has significantly improved the identifying and recognition of female dominated jobs, and women's skills across Australia, there is still gender bias in how we describe female dominated occupations compared with male dominated occupations, which should be considered in future updates.
- There are also 41 new occupations in OSCA that have increased in Skill Level, and most of these are male dominated occupations, inferring again some ongoing gender bias.
- There are 210 instances where an occupation has shifted segregation intensity across the GSIS due to the disaggregation, aggregation or creation of a new occupation in OSCA.
- Exploring the shifts across the GSIS once the full coding of OSCA data is released in 2026 will provide further insights on occupational gender segregation.

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