Pearson

Lost in Transition:

Fixing Australia's $104 billion 'learn-to-earn' skills gap

Introduction

Poor transitions from school to work, and between work roles, are a well-known drag on the Australian economy.

New research from Pearson, the world's lifelong learning company, has finally put a dollar cost on transition delays and disruptions.

Our analysis shows that transition gaps cost the economy AU$104 bn annually, or 3.8% of gross domestic product (GDP).

While government, think tanks, and enterprises focus on tariffs, taxation, and cutting red tape to boost Australian productivity, the report highlights a new and urgent reform priority.

Closing the transition gap would not only be a boon to the Australian economy, but it would also save individuals the personal toll of investing in the wrong skills for future work, plus mitigate the emotional, and financial impact of long-term unemployment.

As a trusted partner to education providers, businesses, and Australian governments, Pearson provides data, insights, and tools to help lift productivity and ensure all Australians live the life they imagine through learning.

From a Skills Gap to a Skills Chasm

Australia's education and employment systems are evolving to meet the demands of a changing world. Two forces make this transformation urgent:

- Our ageing population. By 2050, over 22% of Australians will be aged 60+, up from 16% in 2020. Retiring workers create 'talent cliffs', which refer to sharp declines in workforce availability, as experienced professionals exit the labour market. At the same time, fewer young Australians are entering critical sectors, such as healthcare, education, and trades.
- Generative AI and automation are reshaping jobs. Roles in retail, finance, and media are among the most disrupted. By 2030, 65% of the skills required for jobs will change, prompting organisations and individuals to both upskill and reskill to remain competitive.

Australia's response is grounded in a shared commitment to preparing people for the future of work. The challenge is not a lack of effort, but the scale and speed of change.

Transition Losses in Australia

Pearson estimates the following annual transition losses:

Transition point	Annual loss (AU$ bn)	Percentage of losses in GDP
Education to work	12.5	0.5%
Involuntary job exits	15.4	0.6%
Automation disruption	75.7	2.7%
Total	103.6	3.8%

These figures reflect forgone earnings due to delayed employment, redundancy, and reskilling gaps. Behind the numbers are real people—facing lost income, job insecurity, and diminished wellbeing.

Ineffective transitions in education and the workplace are holding the developed world back. Pearson US and UK analysis shows Australia's losses are proportionally on par with global peers at 3.8%. With US$1.1 trillion lost annually (4.2% of GDP) and the UK with £96 billion (4% of GDP).

Global transition losses:
AU$104 billion (3.8%)
US$1.1 trillion (4.2%)
UK£96 billion (4%)

What's at Stake – Education and Work Readiness

Australia's education pipeline is strong, but under pressure:

- **Early Learning:** There is growing recognition of the importance of early childhood education in shaping lifelong outcomes.
- **Higher Education:** Universities are expanding work-integrated learning and micro credentials (i.e., short targeted courses designed to build specialised, industry-relevant skills). However, many graduates still face delays in employment and underemployment.
- **Work Readiness:** Employers continue to report gaps in essential skills, including foundational abilities (e.g., literacy and numeracy), digital competencies, and interpersonal skills (e.g., communication and teamwork). Young Australians need clearer career pathways and better support to navigate the transition from education into the workforce.

Turning Losses into Opportunity

Australia is well-positioned to address these challenges. The education sector is embracing innovation, employers are investing in skills, and communities are calling for more inclusive pathways.

- Reducing the education-to-work transition time from 24 to 18 weeks could add AU$5 billion to annual earnings.
- Cutting reskilling time by 20% could recover AU$15 billion.

There are two clear areas for action: making learning more effective, and developing clear skilling pathways that enable people to move into future careers faster than ever before.

Learn to Earn

Pearson's modelling shows that helping people 'learn how to earn' can deliver significant economic gains. The intersection of rapid demographic change with an ever-ageing population, plus the saturation of AI impacting each generation differently, is leaving the current and future workforce unprepared.

While we can't predict all the skills that will be in demand in the Australian workforce 10, 20 or 50 years from now, we know one skill will remain essential: learning agility. This ability to adapt, absorb new information, and apply it in unfamiliar situations will surpass technical expertise. Skills such as critical thinking, collaboration, flexibility, and problem-solving not only prepare Australians for their current jobs, but also equip them for jobs that have yet to be invented.

These skills are essential, not only in the workplace, but throughout every stage of education and career development. At Pearson, we apply the science of learning to embed these capabilities into our products and services—ensuring they are delivered in ways that are both affordable and accessible.

Clear Skilling Pathways

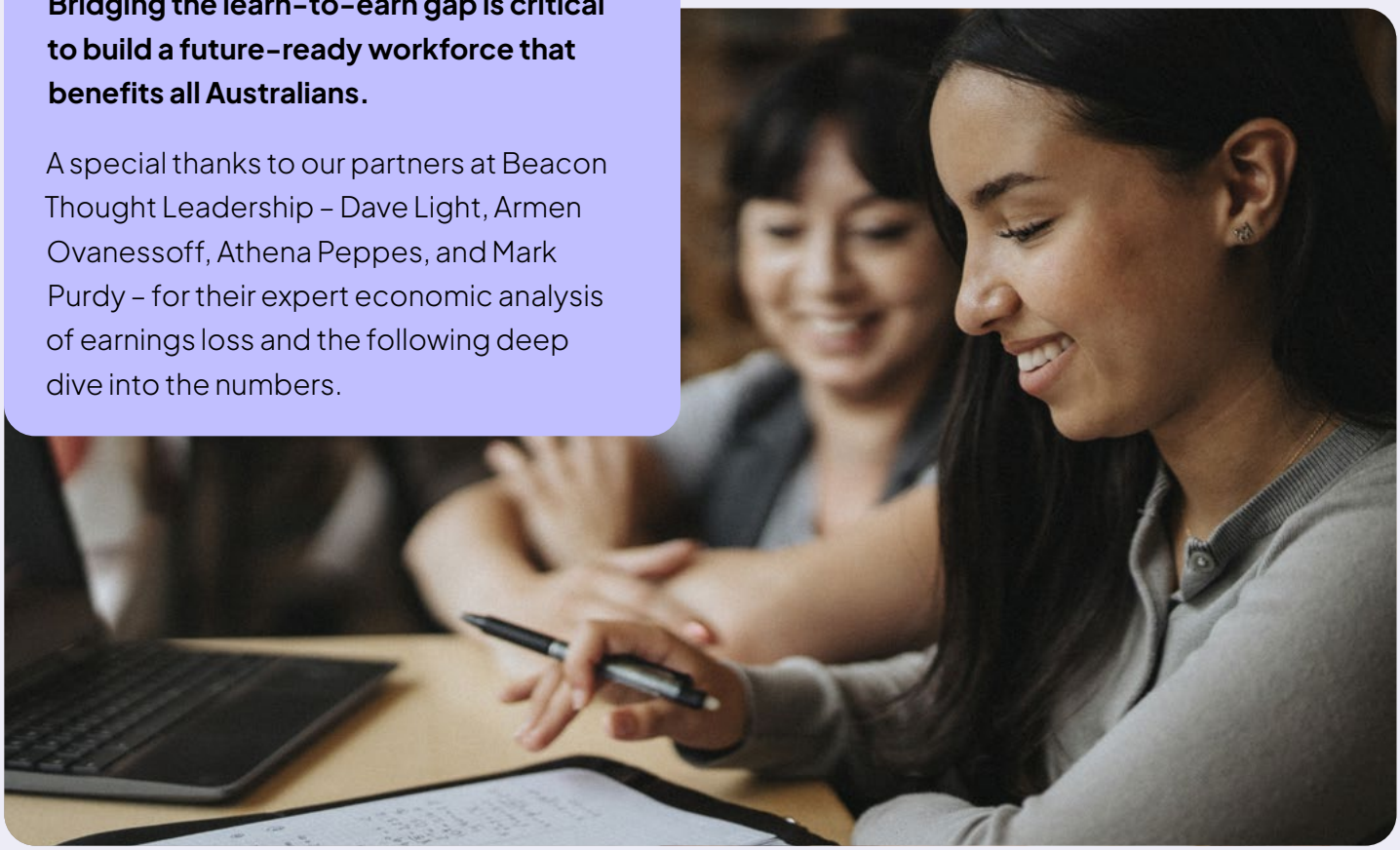
The traditional idea of a single, linear path from school to lifelong career is no longer realistic. Today's workforce demands flexible and diverse career pathways, including practical training for specific careers, learning opportunities embedded in real work environments, and flexible education options that people can access throughout their lives.

Our Faethm by Pearson AI Skills ontology helps us understand what skills are required for which jobs. We then incorporate these skill insights into our courseware and content, which we deliver to learners of all ages and contexts. This enables the creation of skilling and career pathways that help people secure fulfilling jobs that match today's workforce needs.

Making learning more effective	Developing clear skilling pathways
Make learning to earn a priority objective	Define a common language for skills
Embed learning science in teacher & manager training	Align skilling pathways with careers of the future
Foster opportunities to teach & apply learning to learn	Ensure personalised learning opportunities that adapt & flex to a lifelong learning journey
Assess an individual's approach to learning	Leverage data to build trust & demonstrate value

Bridging the learn-to-earn gap is critical to build a future-ready workforce that benefits all Australians.

A special thanks to our partners at Beacon Thought Leadership – Dave Light, Armen Ovanessoff, Athena Peppes, and Mark Purdy – for their expert economic analysis of earnings loss and the following deep dive into the numbers.



The Transition Points

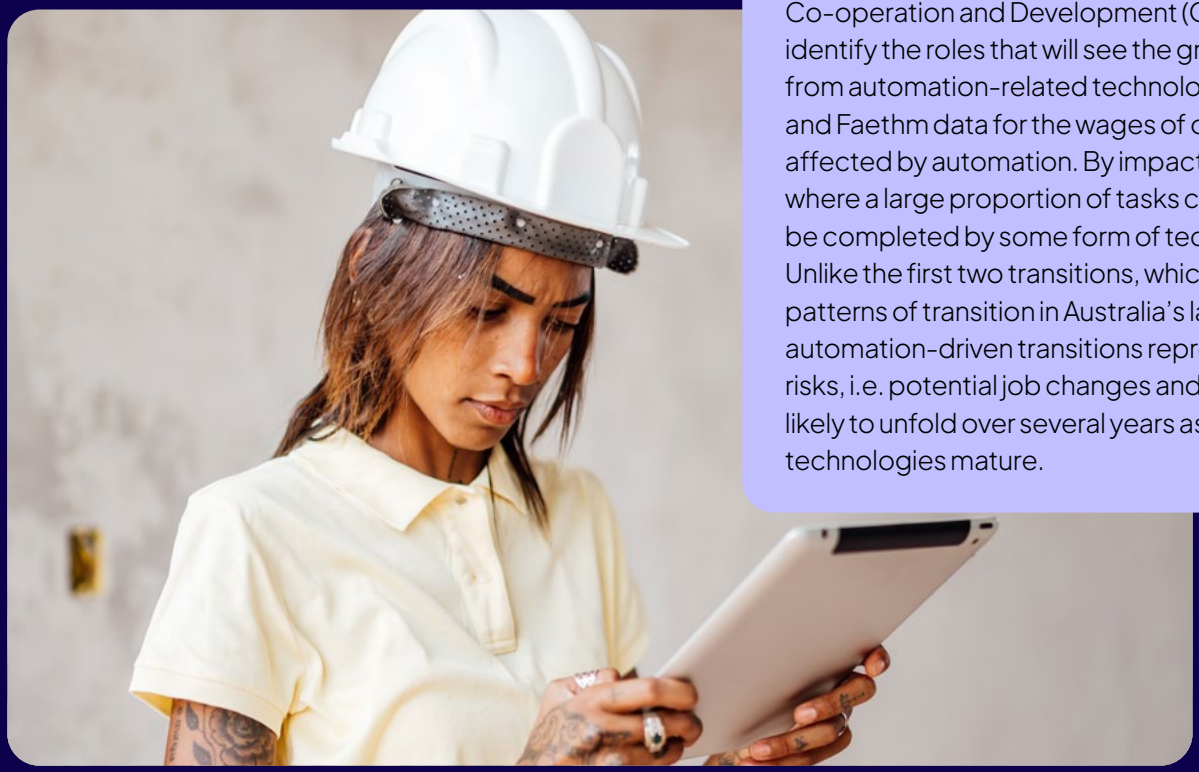
To estimate the potential earnings losses from gaps in learning paths in Australia, we focused on three of the major transition points in an individual's work cycle: 1. The move from education to work; 2. unemployment due to redundancy; and 3. displacement caused by new technologies.

Having identified these three key transition points, we estimated the number of affected workers, the average duration of job search, and the average wages for each group. Based on these data points, we estimated the earnings loss at each transition point. Due to limited outcome data and the wide variation in course types and durations, the TAFE pathway was excluded from this analysis. For Australia, we drew on publicly available national and state datasets, including those produced by the Australian Bureau of Statistics, the Reserve Bank of Australia, and the Australian Department of Education.

1. The transition from education to work
Students in Australia can undergo the transition from education to work at various stages: after completing high school and directly entering the workforce, or later on in life when graduating from university or other third-level institutions. In addition, some students transition into full-time employment before completing year 12, often through vocational training, apprenticeships, or other alternative pathways.

2. The transition from one job to another
We focused on involuntary job changes, such as redundancies, where individuals are often least prepared for their next role. These transitions are typically unexpected and not initiated by the employee, making it harder to plan ahead, or upskill in advance.

3. The transition due to automation disruption
This measure looks at the potential future reskilling cost, as individuals need to find another role because a significant portion of their tasks have been automated. We use a methodology developed by the Organisation for Economic Co-operation and Development (OECD) to identify the roles that will see the greatest impact from automation-related technology in the future, and Faethm data for the wages of occupations affected by automation. By impact, we mean jobs where a large proportion of tasks could potentially be completed by some form of technology. Unlike the first two transitions, which reflect current patterns of transition in Australia's labour market, automation-driven transitions represent future risks, i.e. potential job changes and skill shifts likely to unfold over several years as automation technologies mature.



Key Findings

Based on this approach, we estimate potential annual transition losses of circa AU$104 billion for Australia's economy, representing about 3.8% of Australia's annual GDP in 2024 (See Figure 1 for a breakdown of the transition losses by transition point).

AU$104 billion
annual transition losses

Automation disruption represents the most important area of transition losses, accounting for just under three quarters of the potential total annual losses. Automation technologies—such as robotic process automation, large language-model chatbots, agentic AI models, and autonomous mobile robotics—require individuals to reskill for completely new or changed tasks. Australia's share of employment at high risk of automation is 26%, mainly driven by its share of employment in construction (9%) and manufacturing (6%), industries particularly vulnerable to automation (see Figure 2).

Figure 1: Breakdown of potential transition-path earnings losses for Australia's economy, by transition point (AU$ bn)

Figure 2: Annual industry transition losses caused by automation disruption in Australia

Key Findings

To contextualise our findings, we reviewed other major estimates of the impact of automation on employment. These vary widely depending on methodology:

- We estimate 26% of jobs are at high risk without upskilling and embracing AI. This is in line with estimates published by Faethm by Pearson for the Australian Computer Society (2020), which predicts that by 2034 automation will displace 21% of the workforce.[1]
- It is our view that AI will also create new jobs. As automation increases, there will be growing need for individuals who can guide how AI is used, organise workflows, and ensure the resuts are useful, accurate, and aligned with business goals. This shift will increase the value of creative thinking, sound judgement, and human oversight.

The other two transition points—education to work and job-to-job movement following redundancy—are estimated to result in earnings losses of broadly similar magnitude to one another.

In the job-to-job transition, a key concern emerging from the literature is the increasing prevalence of long-term unemployment in Australia. Research from the Reserve Bank of Australia (2020) shows that, in the decade leading up to the pandemic, both the incidence and duration of long-term unemployment rose steadily, with the average time out of work approaching one year.[2] These effects were more pronounced among men, older workers, and those without a university degree.[3] This may reflect a number of factors, including previous employment in declining or highly automatable industries, limited access to retraining opportunities, and systemic barriers such as age-related bias or lower educational attainment—all of which can make it harder to transition into new roles or re-enter the workforce.

While the mean duration of job search is 44 weeks, the median is significantly lower at 13 weeks, a figure that conceals the experience of those facing prolonged unemployment. Notably, around 11% of unemployed Australians have been seeking work for over two years, with an average job search duration of 251 weeks.[4]

This is particularly concerning, as extended periods of unemployment is associated with skill erosion and declining chances of re-employment, especially as labour market demands evolve.

While the education-to-work transition accounts for the smallest share of earnings losses among the three pathways, it remains significant. Across education levels, those without degrees often face long delays in securing suitable employment. This may reflect inefficiencies in the transition system and potential mismatches between the skills that education providers deliver and the capabilities that employers require.

Our analysis can illustrate the potential boost to earnings from measures that improve learning paths for students and workers in Australia. For instance, reducing the reskilling time for workers affected by automation disruption by 20%, would yield additional employee earnings of AU$15 billion.

Further Considerations

In addition to the three core transition points, there are broader labour-market dynamics that may contribute to unmeasured or underestimated economic losses. These include:

1. Demographic and sectoral shifts in job demand: Australia's ageing population is reshaping the demand for labour, particularly in care-related industries. Over the past five years, more than half (55%) of net job growth has occurred in the "non-market" sector (this includes healthcare and social assistance, education and training, and public administration).[5] While these sectors are growing, the skills needed often differ from those held by workers displaced from other areas such as manufacturing or construction. This shift suggests emerging gaps between where jobs are being created and where workers are coming from, which would likely increase transition losses in the future.

2. Skills mismatches and misallocation of talent: Tight labour markets, especially in lower-skill roles (i.e., those requiring fewer qualifications), mask deeper mismatches. Around 7% of the labour force remains unmatched to available jobs due to skill or qualification misalignment.[6] Meanwhile, between 2016 and 2023 about 30% of high-skill workers (i.e., those who possess specialised expertise, advanced qualifications, or extensive professional experience in their field), were employed in occupations classified as middle and low-skill, displacing less-qualified workers and signalling underemployment.[7] These inefficiencies in job matching contribute to slower transitions and lost productivity across the system. Again, these skills mismatches suggest that our measured transition losses are likely to be at the conservative end of the scale.

3. Regional inequalities in job access: Labour market conditions are notably weaker in regional and remote areas, where job opportunities are scarcer, mobility is more limited, and employer access to skilled candidates is constrained. These geographic disparities act as a drag on both worker transitions and local economic resilience, compounding the challenges faced in national workforce planning.

4. Youth disengagement from work and education: Many studies have shown that young people face significant challenges when transitioning from education to employment, with several risk factors (e.g., low socioeconomic status, limited work experience, lack of career guidance) linked to unsuccessful entry into the workforce. Currently, the youth unemployment rate stands at 9%, more than double the national average of 4%, and the number of young people classified as NEET (not in employment, education, or training) continues to rise.[8] These figures point to a transition that is becoming increasingly difficult for Australia's young people.

The Macroeconomic Picture

Our core estimates focus on individual earnings losses, i.e. the wages that workers forgo when transitions are slow or poorly supported. This is useful as it reflects the impact on people. We believe this is important because of the role that skills and employment play in an individual's wellbeing.

However, these figures only capture part of the economic story. From a macroeconomic perspective, the loss—or potential opportunity—is even greater. This is apparent when we look at the impact on productivity, the value that workers create for the economy through their labour.

One measure of productivity is Gross Value Added (GVA) per worker. GVA reflects the value of goods and services produced in the economy, minus the cost of inputs and raw materials. In simpler terms, GVA tells us how much value a worker (or a sector) contributes to the economy beyond the cost of what they use up in the production process.

In 2024, the average weekly GVA per worker was AU$2,699, 80% higher than the average weekly wage of AU$1,495.

Again, this highlights that the macroeconomic losses from gaps in transition paths are likely to be significantly higher than those based on earning losses alone. In addition, there are likely to be significant variations in these wider productivity losses across regions, sectors, and demographic characteristics of workers.

References

1 ACS, prepared by Faethm, "Technology Impacts on the Australian Workforce", March 2020, accessed here: https://www.acs.org.au/insightsandpublications/reports-publications/technology-impacts-on-the-australian-workforce.html

2 Reserve Bank of Australia, Long-term Unemployment in Australia, Natasha Cassidy, Iris Chan, Amelia Gao and Gabrielle Penrose, December 2020, accessed here: https://www.rba.gov.au/publications/bulletin/2020/dec/pdf/long-term-unemployment-in-australia.pdf

3 Reserve Bank of Australia, Long-term Unemployment in Australia, Natasha Cassidy, Iris Chan, Amelia Gao and Gabrielle Penrose, December 2020, accessed here: https://www.rba.gov.au/publications/bulletin/2020/dec/pdf/long-term-unemployment-in-australia.pdf

4 Australian Bureau of Labour Statistics

5 Australian Bureau of Statistics, Insights into the Australian labour market: Key insights into Australian labour market over the past five years using Labour Account data, June 2025, accessed here: https://www.abs.gov.au/articles/insights-australian-labour-market#sector-jobs

6 Australian Government, The Treasury, "Treasury Round Up, Labour Market edition: Labour market matching across skills and regions in Australia", March 2024, accessed here: https://treasury.gov.au/sites/default/files/2024-03/p2024-495252-full-report_0.pdf

7 Australian Government, The Treasury, "Treasury Round Up, Labour Market edition: Labour market matching across skills and regions in Australia", March 2024, accessed here: https://treasury.gov.au/sites/default/files/2024-03/p2024-495252-full-report_0.pdf

8 Australian Government: Jobs and Skills Australia, "Employers' experiences of young job applicants Findings from the Recruitment Experiences and Outlook Survey," 6 March 2025, accessed here: https://www.jobsandskills.gov.au/sites/default/files/2025-03/employers_experiences_of_young_job_applicants.pdf