

Educating for Care: Meeting Skills Shortages in

an Expanding ECEC Industry

By Mark Dean Laurie Carmichael Distinguished Research Fellow Carmichael Centre Centre for Future Work at The Australia Institute

MAY 2022

About The Australia Institute

The Australia Institute is an independent public policy think tank based in Canberra. It is funded by donations from philanthropic trusts and individuals and commissioned research. We barrack for ideas, not political parties or candidates. Since its launch in 1994, the Institute has carried out highly influential research on a broad range of economic, social and environmental issues...

Our Philosophy

As we begin the 21st century, new dilemmas confront our society and our planet. Unprecedented levels of consumption co-exist with extreme poverty. Through new technology we are more connected than we have ever been, yet civic engagement is declining. Environmental neglect continues despite heightened ecological awareness. A better balance is urgently needed.

The Australia Institute's directors, staff and supporters represent a broad range of views and priorities. What unites us is a belief that through a combination of research and creativity we can promote new solutions and ways of thinking.

Our Purpose – 'Research That Matters'

The Institute publishes research that contributes to a more just, sustainable and peaceful society. Our goal is to gather, interpret and communicate evidence in order to both diagnose the problems we face and propose new solutions to tackle them.

The Institute is wholly independent and not affiliated with any other organisation. Donations to its Research Fund are tax deductible for the donor. Anyone wishing to donate can do so via the website at https://www.tai.org.au or by calling the Institute on 02 6130 0530. Our secure and user-friendly website allows donors to make either one-off or regular monthly donations and we encourage everyone who can to donate in this way as it assists our research in the most significant manner.

Level 1, Endeavour House, 1 Franklin St

Canberra, ACT 2601

Tel: (02) 61300530 Email: mail@tai.org.au Website: www.tai.org.au

About the Centre for Future Work

The Centre for Future Work is a research centre, housed within the Australia Institute, to conduct and publish progressive economic research on work, employment, and labour markets.

It serves as a unique centre of excellence on the economic issues facing working people: including the future of jobs, wages and income distribution, skills and training, sector and industry policies, globalisation, the role of government, public services, and more. The Centre also develops timely and practical policy proposals to help make the world of work better for working people and their families. www.futurework.org.au

About the Carmichael Centre

The Carmichael Centre at the Centre for Future Work (part of The Australia Institute) is named in honour of Laurie Carmichael, a legendary manufacturing unionist who passed away in 2018 at the age of 93. Among other activities, the Carmichael Centre hosts a three-year Distinguished Research Fellow, who will conduct and publish research on themes related to Carmichael's legacy, including:

- industrial relations;
- social policy;
- manufacturing and industry policy;
- vocational education; and
- international labour solidarity.

About the Author

Dr Mark Dean is the Laurie Carmichael Distinguished Research Fellow, Carmichael Centre, at the Centre for Future Work within The Australia Institute.

For advice and input, the author thanks without implication Karen Noble, Simon Bailey, Correna Haythorpe, Nicole Calnan, Emma Lowe, Jonathan Guy, and Emma Cannen.



Table of Contents

Summary	4
Introduction	7
Overview of the Report	10
1. Economic Characteristics of Australia's Present ECEC Industry	12
Identifying the Problem: Privatised ECEC Delivery	14
Impacts of COVID-19 on an Eroded System	16
A case for change in the ECEC industry	17
2. Forecasting ECEC Workforce Education and Training Requirements	19
ECEC Workforce Trends and Projections	20
Forecasting ECEC Vocational Training Requirements	23
3. Rebuilding ECEC with TAFE: Education and Training to Sustain a Universal System	27
Developing the ECEC Workforce	27
TAFE and its Benefits	28
TAFE as Central to Universal ECEC Development	29
Funding TAFE for an ECEC Industry Strategy	31
Conclusion and Recommendations	33
References	37

Summary

This paper argues that the provision of Early Childhood Education and Care (ECEC) services should be treated as a strategic industry of national importance – not just a 'market', and not just a 'cost' item on government budgets. The ECEC sector supports hundreds of thousands of jobs. It directly creates billions of dollars of value-added in the Australian economy. It generates further demand for other sectors – both upstream, in its own supply chain, and downstream in consumer goods and services industries that depend on the buying power of ECEC workers. It facilitates work and production throughout the rest of Australia's economy, by allowing parents to work – although that goal would be much better achieved if Australia had a more comprehensive, universal, and public ECEC system. Perhaps most important, ECEC enhances the long-term potential of Australia's economy, and all of society, by providing young children with high-quality education opportunities that have significant benefits.

For all these reasons, building a stronger, more accessible, and high-quality ECEC system is not just a top-ranking social priority. It is a vital economic opportunity as well. Expanding and improving ECEC is essential to maximising Australia's post-pandemic economic recovery and enhancing our long-run economic and social performance.

In this regard, ECEC should be seen as a strategic economic sector of national importance. This understanding is similar to how Australian policymakers have traditionally viewed other dynamic, strategic industries: like manufacturing, minerals, or technology sectors. Recognising the spillover importance of those industries to the rest of the economy, governments took focused and pro-active actions to enhance their presence in Australia. Active industry policy is based on the idea that fostering a larger presence of key strategic sectors benefits the whole economy. In this paper we argue that the ECEC sector should be treated similarly. Its importance to the optimal functioning of the rest of the economy (with benefits ranging from increased women's workforce participation to greater learning capacities among children) justifies nurturing a healthy, vibrant, top-quality ECEC sector as a vital cog in Australia's overall economic machinery.

It has been broadly recognised that strengthening Australia's economy in the wake of the COVID-19 pandemic will require the more ambitious and active use of industry or sectoral strategies. While those sorts of strategies are traditionally associated with industries like manufacturing and resources, the application of active sector-based strategies is relevant and useful across the economy – including in human and caring services like ECEC.

The quality of education and care provided to children in their early years is fundamental to the future course of their lives. Ample scientific research confirms the lasting benefits of high-quality, formal ECEC for the lifelong learning capabilities, employment outcomes,

Meeting Skills Shortages in an Expanding ECEC Industry

physical and mental health, and family stability of children who receive those services early in life.¹ To achieve these benefits, however, the provision of ECEC services must be performed by well-qualified, well-supported, well-compensated professionals, in the context of an institutional environment focused first and foremost on enhancing the public interest. ECEC services are in many respects a public good: the benefits of high-quality, accessible ECEC services are experienced broadly across the economy, not captured solely by those who directly use the service. Therefore, these services are best provided through a universal, accessible, and public or not-for-profit industrial structure. And the inherent link between quality of care, and quality of jobs for those providing the care implies that the ECEC workforce must be well-trained and well-supported.

Australia's ECEC system is underdeveloped relative to the needs of both working parents and employers. The system provides formal group care for only around one-third of children under 5 (compared to coverage rates of up to 90 per cent in the most developed ECEC systems in other countries). Lack of access to quality, affordable care is a major cause of sub-optimal participation of women in the labour force in Australia: with both labour force participation and incidence of full-time work for women far lower than in other peer industrial countries. Expanding Australia's ECEC system to meet the benchmarks set in other countries (especially the best-in-class systems operating in the Nordic countries) would give a huge boost to labour supply, employment, incomes, and gender equality. Best of all, the revenue streams generated automatically by that expansion would be more than sufficient to fund the expansion of the ECEC system.

However, even our existing underfunded system faces a growing challenge in recruiting and retaining enough staff for this sensible expansion of ECEC services. Indeed, reported job vacancies across three major ECEC occupations have more than doubled since the pandemic (to over 6,000 positions nationwide), and the National Skills Commission has added ECEC educators and teachers to its list of priority occupations facing acute skills shortages. Poor job security, conditions, and compensation are a major factor in this staffing crisis: these unappealing aspects of the work drive many workers into other fields. If, on top of these existing challenges, the ECEC system were then expanded to a scale comparable to other industrial countries, then the challenge to train, recruit, and retain enough workers becomes even more daunting.

Our simulations suggest that an ECEC system comparable in size to other OECD countries would require the completion of some 48,000 new ECEC graduates per year from the vocational education and training (VET) system by 2030 (allowing an eight-year phase-in

¹ The extensive literature on the benefits of ECEC for participation, employability, and economic and social well-being (in Australia and other countries) is surveyed by Barnett (2008), Child Care Human Resources Sector Council (2008), McCain *et al.* (2011), Bivens *et al.* (2016), Executive Office of the President (2015), Calman and Tarr-Whelan (2005), Duncan and Magnuson (2013), Alexander and Ignjatovic (2012), and Australian Institute of Health and Welfare (2015).

period for the expansion). If we aimed to match best-in-class Nordic levels of ECEC provision, then those training needs would expand further, to 68,000 completions required per year by 2030. For comparison, over the four years from 2015 through 2018, the existing VET system (fragmented by years of funding cuts and privatisation) completed an average of some 35,000 ECEC graduates per year.

To meet the needs of a world-class ECEC system, Australia's VET system would need to dramatically ramp up its capacity to train highly qualified ECEC workers. And our review of the existing performance of VET providers in Australia makes it equally clear that the only institution with the capacity to meet that task is the Technical and Further Education (TAFE) system. Australia's state and territory TAFE institutes are the anchors of quality, public, accountable vocational education in Australia. After years of scandals and rorts associated with various fly-by-night private VET schemes, the TAFEs remain as the only reliable, accessible, and quality provider with the capability to meet the urgent need for well-trained ECEC graduates – even in the context of Australia's existing, underdeveloped ECEC system, but more so if that system is substantially expanded (as it should be). In this context, enhancing the ability of TAFE to train future ECEC workers, by developing a powerful and reliable skills pipeline, is a natural complement to the parallel goal of building a public and accessible ECEC system to meet the needs of Australian parents, children, and employers into the future.

Treating ECEC as a strategic industry in Australia's future economic development means producing a sectoral strategy for ECEC that reflects the whole-of-economy contribution it makes. This requires government funding for the provision of universal care to all Australian children under five years of age through publicly funded services and non-profit providers. It also requires properly restoring the role of TAFE as the primary deliverer of ECEC qualifications and training. These twin foundations of a sectoral strategy for a sustainable ECEC system are needed to repair years of damage done by market-based systems of service and education provision and will be essential to rebuilding Australia's economy in a sustainable way. This paper concludes by making ten specific policy recommendations that would help Australia's VET system, led by the TAFEs, to develop the skilled, motivated, and supported workforce that will be essential in the construction of a world-class ECEC system for the future.

Introduction

The COVID-19 pandemic has focused policymaking on restoring Australia's economic growth and getting people back to work in a post-pandemic economy. Unions and civil organisations have proposed strategies to ensure that recovery focuses thoroughly on rebuilding social and political institutions, which are essential to putting Australian industries and jobs on a sustainable trajectory (ACTU 2020a). Proposals for a more significant role for government in the economy have emerged from multiple quarters, particularly given how the pandemic has exposed the weaknesses of Australia's place in the world (lacking self-sufficiency in the production of essential health and safety equipment, vaccines, rapid antigen tests and more). The pandemic has also demonstrated in very tangible terms our dependence on essential workers: from nurses to logistics workers, educators, and carers.

In this context, policymakers must recognise the importance of Early Childhood Education and Care (ECEC), given its foundational role in securing positive outcomes for Australian workers and the broader economy. A budget submission by the not-for-profit advocacy organisation, The Parenthood, effectively explained the need to deepen Australia's capability in ECEC – an essential public service. In identifying the 2.6 million families with dependent children in Australia, it stated that "prioritising support for those parents and children is a critical investment in Australia's COVID recovery and future that will yield rich rewards for children, families, the economy and community" (The Parenthood 2021, pp. 2-3).

The expansion of ECEC provision is important for both economic recovery and early childhood development. But neither can be achieved without major investments and reforms in the ECEC workforce. In 2021, Education Services Australia prepared the *Shaping Our Future* report outlining a ten-year strategy to shape the ECEC sector's role in Australia's future. The report recognised that:

Investment in the sector and its workforce leads to a range of important benefits – improved and more equitable educational and developmental outcomes for children; increased intergenerational social mobility; and higher female labour market participation. Quality outcomes for children depend upon a highly skilled, well supported and professionally recognised workforce. (Education Services Australia 2021 p. 4)

This report assembles evidence that Australia's current market-based system for ECEC funding and service provision is incapable of meeting the needs of parents, families, and the broader economy. The report argues that rebuilding Australia's economy in the post-pandemic world requires treating ECEC not as a 'market', but as an industry – one that is

Meeting Skills Shortages in an Expanding ECEC Industry

essential to the sustainable development of Australia's economy. Furthermore, policies to rebuild Australia's economy in the post-pandemic context must prioritise women's participation. Women were disproportionately affected by pandemic job losses and disruptions. And women remain overrepresented in insecure and low-paid jobs – including in human and caring services like ECEC (ACTU 2020b).

From this perspective, expanding Australia's ECEC sector, while simultaneously addressing its structural shortcomings (insecure work, low pay, under-funding and lack of recognition for its skilled workers) can play a critical, strategic role in Australia's post-pandemic recovery. ECEC serves as a critical input to so many other industries, and hence is essential to the proper functioning of the whole economy. Therefore, its services must be adequately funded, its skills resourced by properly funded vocational education and training (particularly through TAFEs), and its ultimate product – the crucial care and education it delivers – provided to all Australian children in a universal system.

Overall, this implies that Australia should aim to deliver the best ECEC services in the world, rivalling those of northern European nations (particularly the Nordic countries), and entrenching fundamental values of inclusion, unity, and equality that will nurture young people from early in their lives. These are values already held by Australia's world-class ECEC workers. But in Australia's current underdeveloped and market-based ECEC system, their value as essential workers is undermined through insecure work, casualisation, underpayment and poor conditions; and the quality of the essential services they provide is diminished in the pursuit of private profit.

This report outlines a strategy to nurture ECEC as a strategic industry that makes an important contribution to Australia's economic growth. Key components of this strategy include:

- increased levels of funding to expand ECEC coverage to more families, and create more secure work and professional careers for ECEC workers;
- the public provision of vocational education and training through TAFEs to develop and sustain a qualified, motivated workforce for the growing ECEC sector; and
- the proper regulation and public provision of ECEC services to de-commodify the industry and remove the profit motive that has infiltrated this essential service.

Government must embrace lessons from other sectors of the economy which, by being treated and supported as strategic value-adding industries, have benefited from policies that proactively support their sustainable development in Australia. Treating ECEC as an *industry* means understanding that it is a critical pillar of not just our economy, but our society: it is a service that supports parents, especially women, to increase labour supply, and the quality education and skilling of ECEC workers builds their careers and positively influences the development of preschool-aged Australians. In this sense, ECEC is a source of economic growth and social development. Taking a value-adding industry view of ECEC

means identifying its fundamental role in the economy where it supports parents and ECEC workers, and helps all Australian children reach their fullest potential for lifetime participation in our communities and economy.

Laurie Carmichael and Industrial Democracy

This report is published by the Carmichael Centre at the Centre for Future Work, which was founded to undertake research and policy development on themes emphasised by Laurie Carmichael: a prominent Australian union leader from the 1970s through the 1990s. Industrial democracy was a core principle of Laurie Carmichael's union activism, and his vision included the need to combine pro-active industrial and sector development policies, with an extensive public commitment to vocational education. In this regard, the emphasis in this paper on treating ECEC as a strategic sector, worthy of pro-active sectoral development policies, and paired with an ambitious expansion of public vocational education to meet the workforce needs of an expanded future ECEC, fits very much within the tradition of Carmichael's approach – albeit extended to a public caring service, rather than traditional manufacturing or goods-production sectors.

Carmichael witnessed first-hand the positive benefits of industrial democracy while participating in the Australian Council of Trade Unions (ACTU) and Trades Development Council (TDC) delegation to northern Europe for the *Australia Reconstructed* (1987) report. Based on observations of workplaces in Sweden and Norway, the report determined that industrial democracy works not just because it increases profitability and production efficiency within firms, but also because

Economic performance of enterprises and the well-being of the workers are enhanced by their participation in decision-making schemes. These programs provide opportunities for the employees to develop their skills, employment opportunities and earning capacity. (ACTU & TDC 1987, p. 135)

As part of maximising productivity, these Nordic countries (and others in Western Europe) visited by the delegation had embraced the notion that industrial democracy was itself a "force of production, one which cannot be separated from training and skill enhancement" (ACTU/TDC 1987, p. 136). Investments in the education, training, and skills development of the workforce are critical to maximising the potential for innovation in products and services, increasing competitiveness for private firms, and improving quality amongst public institutions.

Learning how workers actively participate in processes of workplace change became a core theme for Carmichael's industrial policy activism, particularly the role of education in creating broader possibilities for the working lives of unionists. When work is built upon principles of industrial democracy, as Carmichael and the other delegates saw, there are benefits to the firm that range from fewer industrial disputes, lower staff turnover and reduced absenteeism. Even where the democratic decision-making process may take longer than unilateral management decisions, it is quicker and easier to implement change because workers are inherently part of the process. Ultimately, it was the conclusion of the *Australia Reconstructed* project that industrial democracy could serve as a major pillar of industry policy in Australia, becoming a mechanism that helps direct investment, plan industrial structures and determine economic activity.

The industry policy proposals in *Australia Reconstructed* (1987) informed the union movement's position that industrial democracy in workplaces is most effective when workers are involved in development and planning, so they can be fully informed about workplace problems and are consulted as equals to address these problems. This opens the way for innovative approaches to industrial issues, including through a collaborative approach to wages, training and skills, work organisation and practice, organisation of production and company structure. These processes of consultation and engagement produce discussions about ways forward, with the decision-making on workplace improvements becoming an entirely democratic process aimed at protecting quality work and quality ECEC services.

Hence, this vision of industrial democracy holds important lessons for how we think about reconstructing the ECEC sector in Australia. A robust industrial democracy – including worker and union engagement in industry planning and standard-setting, and the sector's connection to a strong, public, and accessible vocational education and training system – should be a key pillar of ECEC industry policy. In this vision, dedicated public investment and public delivery of ECEC services is undertaken by a permanent, well-qualified, well-supported workforce, operating in a well-regulated industry. When workers are democratically engaged in workplace innovation and development, they can become a driving force for lifting ECEC to a greater scale and level of importance, to enhance the proper functioning of Australia's national economy.

This vision of industrial democracy also highlights the important role of TAFE in providing education, training, and skills development for workers in any industry – including ECEC. As essential 'anchors' of the VET system, the TAFE institutes are essential to the provision of high-quality, accessible, and industry connected VET opportunities to workers from all socio-economic backgrounds. Strengthening the capacity of TAFEs to provide the pipeline of qualified workers that an expanding ECEC sector will need is thus a vital dimension of industrial democracy in this context. Moreover, innovative change in workplaces is evidently maximised when workers have enhanced their qualifications and expanded their involvement in decision-making processes.

OVERVIEW OF THE REPORT

The first section of this paper reviews the significant economic importance of ECEC for Australia, particularly when considering the needs of post-pandemic national economic

reconstruction. It contends that shortcomings in the government's provision of fiscal and other support for the sector have reflected a deepening preference for market-oriented service delivery. This favouritism toward private, for-profit delivery models has seen ECEC become dominated by low-paid, insecure work, poor quality outcomes, and private domination of the sector that prioritises profits over the education and care of children. It concludes that treating ECEC as a strategically important industry, worthy of pro-active support, can help to correct these failings, and improve social, economic, and political outcomes for this sector, and the others that depend on it.

The second section of the report estimates workforce and training requirements for the ECEC sector under three different funding scenarios: maintaining public funding at the status quo level; raising funding to the OECD average (as a share of GDP); and lifting funding to the Nordic average (to allow the establishment of a truly universal system of ECEC provision). It argues that this third scenario is preferable, if we are to ensure that children, working parents, and the overall economy have access to the best-possible ECEC services, with consequent flow-on benefits for labour supply, employment, and social cohesion. However, the ECEC sector already faces a crisis in recruitment and retention of staff – in large part because of the sub-par conditions and compensation offered in most ECEC centres. A commitment to expanding the sector must thus take on this staffing challenge directly. Estimates of the number of newly qualified ECEC workers required under each of the three scenarios are provided. Not surprisingly, the more the sector is expanded, the greater those staffing needs become – making it even more essential to address the staffing crisis immediately, with powerful investments in a public, industry connected skills pipeline.

The third section of the paper then argues that meeting the future skills needs of the ECEC sector (especially under a best-in-class Nordic-stye ECEC funding regime) will require a parallel expansion of well-funded public VET. The TAFE institutes are the only component of Australia's badly fragmented VET system with the capability to deliver that expansion. Pairing an expanded TAFE system with a strategy to expand public ECEC delivery also fits naturally with a more hands-on approach to industry policymaking, in which unions and workers play a more active role in developing workforce development and service quality goals. It also implies an interventionist role for public regulators in ensuring that the expansion of ECEC services is managed in a way that removes profit incentives (that have damaged the sector by commodifying an essential service) and targets the best possible standards for quality of care, training and support of staff, and educational outcomes for children.

Finally, the conclusion of the paper lists ten specific policy recommendations that could underpin this sectoral strategy for ECEC, and achieve the twin goals of an expanded, highquality, universal ECEC system, alongside revitalised public TAFEs that can train the tens of thousands of workers that ECEC system will need.

1. Economic Characteristics of Australia's Present ECEC Industry

Early Childhood Education and Care (ECEC) is a major component of Australia's economy, and essential to its efficient and inclusive functioning. ECEC adds a significant amount of value to the Australian economy, contributing to the nation's overall economic growth. Abundant evidence suggests ECEC improves children's cognitive and non-cognitive outcomes and is robustly associated with positive development and learning when children reach school age, and afterward.² Early childhood interventions hold a cumulative benefit in maximising the positive benefits of ECEC, particularly for those children most at risk (Molloy et al. 2019). Socio-economically disadvantaged children gain the most from high-quality ECEC service provision, and these and other positive effects of ECEC are entirely contingent upon, and proportionate to, their quality (NSW Department of Education 2018). As a result, high-quality ECEC provides significant benefits to young generations of Australians, maximising their ability to develop and thrive throughout their lives and careers.

Annual turnover in the ECEC industry is worth more than \$14 billion across 16,000 centres that provide long day care, preschool, and out-of-school care (United Workers Union 2021b). Australia's ECEC workforce is of high calibre, attracting well-qualified workers who are committed to the young people and families they serve. An inquiry by the Productivity Commission (2014) into the future of ECEC found that formal ECEC services had expanded rapidly over the previous decade, and that government funding had almost tripled to \$7 billion, at that time covering two-thirds of total ECEC costs. More recently, the Mitchell Institute reported that government expenditure on ECEC grew substantially over the ten years to 2018, by almost 140 per cent (Hurley, Jackson & Noble 2020). The Mitchell Institute also found that nearly 84 per cent of government funding in 2018 was in the form of childcare subsidies, with the remaining proportion allocated to expenditure on the delivery of preschool services.

Total government expenditure on ECEC services in the 2019-20 financial year was \$10.6 billion, with federal government funding accounting for \$8.5 billion and state/territory governments funding the remaining \$2.1 billion (Productivity Commission 2021). In 2021 the United Workers Union reported that an estimated \$9.5 billion was spent by the government on the childcare subsidy that funds 80 per cent of the ECEC sector, and this was predicted to grow to \$12 billion by 2024. The sector's total revenue was forecast to grow to \$15.4 billion over the same period (United Workers Union 2021b).

² See previous footnote for references to some of the extensive literature on the cognitive, social, and economic benefits of high-quality ECEC.

Since government funds the lion's share of ECEC in Australia, this presumably confirms that ECEC is an essential public service. But the money that parents spend on ECEC – estimated by Hurley, Jackson & Noble (2020) at as much as \$6.8 billion in 2018 – is an additional indicator that ECEC adds value to the economy. Before the pandemic, the Front Project found that approximately two dollars of benefits were returned for every one dollar spent on ECEC services in the year before children start school. It found ECEC provides a total return on investment of 103 per cent, making it an industry that more than pays for itself – and that is before considering the difficult-to-qualify benefits of long-term enhancement of young people's development and potential (PwC 2019). Public funding is essential to ensuring the participation of Australian children in ECEC and is thus essential to the operation of Australia's economy. But despite indicators of ECEC's value-adding role in, and critical importance to, the functioning of Australia's economy, its importance still fails to fully resonate in economic policymaking. The ECEC sector is still largely seen as a 'cost' item, rather than as a source of strategic economic advantage. And the necessity of providing topquality education and care (not just 'childminding') and ensuring good-quality jobs and training opportunities in the sector, is too often overlooked.

The Early Childhood Education and Care National Workforce Census is conducted occasionally by the Social Research Centre in collaboration with the Commonwealth government's Department of Education, Skills and Employment. The most recent published data covers a reference week in 2016 (Social Research Centre, 2017). At that point, the ECEC sector employed 195,000 people in Australia. That was an increase of 27 per cent since the group's 2013 census, making it one of the fastest growing workforces in the economy. However, later data from the Australian Bureau of Statistics (ABS 2021a) indicates that total ECEC employment has plateaued and even declined since 2016, and was especially volatile during the pandemic.³ Inconsistency in federal government support for the ECEC sector through the pandemic, combined with shocks to labour supply (particularly for women, given they perform a disproportionate share of unpaid care work at home) and the shift toward work-at-home arrangements for many workers, added to the uncertainty facing ECEC demand, and hence ECEC employment, since COVID-19 struck.

ECEC workers, despite their dedication, are significantly underpaid, and most work in relatively insecure roles. Wages fall well below economy wide averages, and as United Workers Union research has indicated, many in the industry feel it offers little opportunity for sustainable career-building (United Workers Union 2021a). Evidently, although ECEC is a vital public service (as was especially clear during the pandemic), its workers are not valued similarly; many have left the sector, and employee turnover is high. Here a disconnection between the valuable social role ECEC plays and the way its contribution is measured in economic terms is plainly visible.

³ More detail on recent employment trends in the sector is provided in the next section of this report.

The disconnect between ECEC's essential economic role and its inadequate policy support is made further clear in terms of ECEC quality. For its 2020 'Report Card' on child well-being in OECD countries, UNICEF Innocenti (2020) ranked Australia 32nd out of 38 nations on a range of measures (including child mental and physical health and academic and social skills). Australia's poor ranking is an indictment against the Australian government's treatment of the ECEC sector, and an indication that provision of ECEC does not match Australia's capacity to deliver high-value services for preschool-aged children. Going further back, the same group's 2008 Report Card (UNICEF Innocenti 2008) found that Australia met just two of ten benchmarks⁴ on early childhood services, sharing with Canada and Ireland the unenviable position of achieving fewer than three benchmarks overall. This also clearly shows that Australian federal governments have long failed to take seriously the pressing needs to improve ECEC services in Australia.

IDENTIFYING THE PROBLEM: PRIVATISED ECEC DELIVERY

Australia's ECEC industry is plagued by characteristics that reflect its growing privatisation and market-driven, business-oriented model of development. A drift to the market-based provision of ECEC services has undermined public provision in Australia and diminished the quality of service and the conditions under which it is delivered. Grudnoff (2022) reviewed the ECEC provision landscape, comparing three different 'ownership models': private forprofit providers (PFP), not-for-profit providers (NFP), and government-run public providers (PP). Figure 1 below shows that PFP providers now account for 50 per cent of ECEC service ownership, with just 11 per cent provided directly by government and the remaining 39 per cent by NFP services. The current system of ECEC in Australia, therefore, reflects a 50:50 split between PP/NFP provision, and PFP provision, with the latter proportion having grown substantially in recent years. On its current course, the industry can expect to become even more fully privatised (yet still publicly funded) in years to come.

⁴ These benchmarks are: 1) Parental leave of 1 year at 50% of salary; 2) A national plan with priority for disadvantaged children; 3) Subsidized and regulated child care services for 25% of children under 3; 4) Subsidized and accredited early education services for 80% of 4 year-olds; 5) 80% of all child care staff trained; 6) 50% of staff in accredited early education services tertiary educated with relevant qualification; 7) Minimum staff-to-children ratio of 1:15 in preschool education; 8) 1.0% of GDP spent on early childhood services; 9) Child poverty rate less than 10%; and 10) Near-universal outreach of essential child health services. Australia only met benchmarks 3 and 6 in 2008.

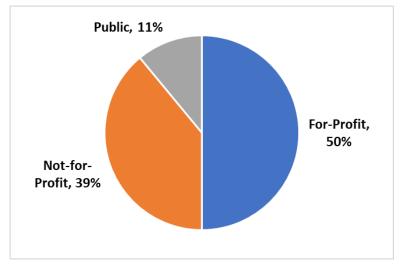


Figure 1: ECEC Service Provision by Sector

Not only is the ECEC industry dominated by private providers that operate on a for-profit basis, but many of these private companies also exhibit significant problems with standards compliance and quality of service provision. The National Quality Framework (NQF), introduced in 2012 by the Australian Children's Education and Care Quality Authority (ACECQA), set out to ensure that ECEC service providers meet benchmark standards of quality. The NQF has consistently found that most private providers leave significant room for improvement. The NQF report for the fourth quarter of 2021 found that just 16 per cent of private for-profit providers exceeded national quality standards (68 per cent met minimum standards), whereas 51 per cent of government services exceeded national quality standards (ACECQA 2021). The United Workers Union (2021b, p. 4) analysed NQF data and found that nearly three quarters of over 12,000 enforcement actions for quality and safety breaches since 2015 were incurred by PFP providers. This is evidence that the current market-based system of ECEC has produced damaging outcomes for ECEC workers and participants alike, commodifying an important economic and public service.

There is also an evident geographical dimension to the lack of sustainability in this marketbased system of ECEC. In early 2022, the Mitchell Institute (Hurley et al. 2022) described the current state of ECEC in Australia as characterised by 'deserts' and 'oases'. In the deserts, demand for ECEC cannot be met by service providers (with upwards of three children for each place in an ECEC centre). These deserts are disproportionately found in rural and regional areas, and especially affect children and families on lower incomes or below the poverty line. But there are also ECEC deserts in major cities, particularly in multicultural areas; in total these deserts affect more than 35 per cent of the Australian population (9 million people). This contrasts with ECEC 'oases' (where approximately ECEC place is available per child), disproportionately located within higher-income areas of major cities. The major takeaway from the Mitchell Institute report is that Australia's ECEC system is not meeting its aims, particularly since "providers are not only establishing services where there

Meeting Skills Shortages in an Expanding ECEC Industry

Source: Grudnoff (2022)

are greater levels of demand, but where they are likely to make greater profits" (Hurley et al. 2022, p. 8).

The dominance of the ECEC industry by for-profit providers receiving an increasing share of public subsidies is not translating into maximised public benefit from this essential service. The United Workers Union has reported on the diversion of public money from direct care of children and staffing resources because of the industry's corporatisation, focusing particularly on how five large for-profit private providers account for \$1.7 billion (12%) of total sector revenue. The dominance of PFP providers in ECEC demonstrates typical 'trickle-down' characteristics, combining "secure government subsidies and low wages for educators," along with wage theft and tax avoidance (United Workers Union 2021b, p. 4). Indeed, the feminisation of ECEC work has contributed to persistent low wages and reflects gendered labour dynamics that place Australian women at a major disadvantage compared to their male counterparts in terms of pay and conditions (see Pennington 2021; Stanford 2020). In ECEC such gendered labour market dynamics are exploited by PFP providers to keep wages low and conditions poor, with most workers (mostly women) receiving well below average wages (Grudnoff 2022, p. 24).

The United Workers Union has also shown that the five largest PFP providers of ECEC are owned by overseas consortia of shareholders and investment funds, with billions in revenue leaving the economy without any tax being paid. The private for-profit business model prioritises shareholder returns over quality improvements in ECEC services. Indeed, the United Workers Union discovered an ECEC industry that serves business interests above all else:

Some Australians may be surprised to learn that the early learning centre in their suburb is controlled by Swiss bankers or an American private equity giant and even more dismayed to learn that these providers are seriously dropping the ball on quality and compliance. This leaves other taxpayers wondering why for-profit early learning providers exist at all, parents concerned for their children's safety, and educators increasingly worried about their ability to deliver the highest quality early learning to children in their care. (United Workers Union 2020, p.3)

IMPACTS OF COVID-19 ON AN ERODED SYSTEM

In 2020, the first year of the COVID-19 pandemic, it seemed the Coalition government understood the economic importance of ECEC. By providing the industry with JobKeeper support, and emergency subsidies to parents to offset the cost of ECEC, the government ensured that this essential service was maintained.

However, the federal government's emergency funding arrangements for ECEC lasted only from 6 April to 28 June 2020 – less than three months – before the support was withdrawn,

and the industry was outright excluded from the government's \$80 billion pandemic economic response package. The Front Project (2021) surveyed 1,000 parents and carers impacted by the pandemic. It found that 97 per cent considered ECEC to be important, and those looking for work due to pandemic-induced unemployment valued it most of all. The survey revealed that access to ECEC impacts everyday economic activity and spending – from attending work to grocery shopping and socialising to decisions about work opportunities and where to live. These considerations aside, ECEC was most valued by respondents as essential to the education and development of children.

Ribeiro (2020) showed that free ECEC during the early months of the pandemic in Australia created significant benefit for parents, particularly mothers trying to work from home and juggle caring duties as well. The research also cited representatives from the ECEC industry, including unions, explaining how the decision to eliminate free care was simply another manifestation of the government's long-held attitude towards ECEC: namely, it was just a cost item on the government's budget to be minimised, rather than an essential service that can contribute to long-run economic and social development. Government's short-lived support was motivated first and foremost by a commitment to market-driven expansion that serves the interests of private, for-profit firms; that support was then quickly withdrawn as soon as the government decided it was advantageous to do so.

A CASE FOR CHANGE IN THE ECEC INDUSTRY

The current market basis for the provision of ECEC in Australia delivers generous public subsidies that benefit the executives and shareholders of private providers – at the expense of young people's development and ECEC workers' compensation. In combination, these features of Australia's current ECEC industry do not provide a sustainable foundation for the industry's future, nor the nation's economic prosperity and social development. When ECEC operates as a profit-seeking commodity market, major problems are created for those that depend on ECEC for care services and careers; quality suffers, and wages are squeezed, in the pursuit of ever-increasing returns on shareholder investments.

At present, the poor-quality performance of PFP providers, and their growing market share, conflict with the essential role of ECEC to serve young children. By its very definition, the market basis on which ECEC is presently founded favours the profit-maximising motives of PFP providers and is therefore fundamentally at odds with goals of maximising ECEC outcomes for young children. However, public and not-for-profit provision of ECEC services consistently produces better quality outcomes, which is especially striking relative to the shrinking share of funding these services receive from government (and hence their shrinking footprint in an increasingly privatised market). This suggests that the highest quality ECEC is achieved when it is provided by public services, and government must develop policy for the ECEC industry that mobilises publicly funded ECEC resources to meet developmental aims.

Meeting Skills Shortages in an Expanding ECEC Industry

The ECEC industry needs, and deserves, its own industrial strategy. Such a strategy must recognise ECEC as a major pillar of society and the economy, helping both to develop sustainably. There is a great deal of evidence of the success of targeted sectoral strategies applied to other industries (such as strategic manufacturing, mining, or technology sectors), from which an ECEC industry policy can draw lessons. For example, active sectoral strategies for manufacturing can drive high levels of productivity and economic growth, creating high-quality, high-income skilled jobs (Stanford 2016). The identification and support of industries with greatest potential for generating spillover economic, employment, and technological benefits for the rest of the economy has been essential to manufacturing success stories around the globe. But this has required an interventionist policy role for government in coordinating investment, infrastructure development, skills and capacity building, networking, innovation, and procurement. All this must be directed towards growth that not only expands the target industry itself, but also produces positive economic gains in all other areas of the economy.

Similarly, a sectoral strategy for ECEC can drive its own sustainable development, while maximising spin-off benefits for other parts of the economy. An effective sector strategy must consider funding, workforce, infrastructure, and resource needs, and focus on the public provision of services, education and training to meet the public interest. Planning for the development of ECEC with attention to each of these prerequisites can generate major returns in other areas of the economy, as more people seize employment opportunities, spend more money in the economy, and benefit from the ECEC services provided (with their children receiving the greatest long-term gains). To describe the first fundamental area of attention for an industrial strategy for ECEC, the following section details the workforce requirements needed to reverse the negative trends in ECEC provision and quality in Australia and build an ECEC system that matches benchmarks set in other industrial countries.

2. Forecasting ECEC Workforce Education and Training Requirements

The previous section reviewed legitimate and compelling reasons to significantly expand Australia's ECEC system, to achieve higher labour force participation (especially of women) and better jobs for ECEC workers, enhance the lifelong learning and earning capabilities of future generations, and spur sustained job creation as Australia emerges from the COVID-19 pandemic. It is not just the *quantity* of ECEC services supplied that is important: the *quality* of ECEC services is equally vital, for the sake of both the education and care received by children and their families, and for the quality and stability of jobs in the sector. In this regard, the challenge of reversing the commodification of ECEC services so evident in recent years in Australia (with a majority of ECEC centres now operated by private, for-profit firms) is a critical policy priority in planning the future expansion of this sector.

If the ECEC system is to grow enough to fulfill its potential as a strategic industry in Australia's overall economic mix, a steady and adequate supply of well-qualified, supported ECEC workers is a vital prerequisite. Not surprisingly, ECEC provision is a highly labourintensive industry: the hands-on care, instruction, and management of ECEC services depends first and foremost on a workforce of dedicated, trained ECEC professionals. Already, even in Australia's currently underdeveloped ECEC system, providers face growing challenges recruiting and retaining sufficient staff. In part, this is a predictable result of the poor wages, conditions, and job security typical of many ECEC positions in Australia.⁵ If the sector is to expand as necessary to ensure quality, affordable ECEC services for all parents and their children, then this staffing and training challenge will become even more daunting.

This section discusses the recruitment and training challenges facing the ECEC sector in more detail. First, we review recent trends in ECEC staffing levels, including the unprecedented instability experienced during the COVID-19 pandemic. Then we highlight recent evidence showing that – despite the decline in overall ECEC employment since the pandemic – the sector's recruitment and retention challenges have become more severe than ever. Finally, we consider three future scenarios for the sector, and estimate the likely ECEC staff training needs associated with each. In any scenario, the existing flow of trained and qualified graduates is inadequate to meet the sector's future needs. This shortfall is especially apparent, however, when contemplating the workforce needs implied by the

⁵ Grudnoff (2022) details the inferior wages, hours of work, and conditions experienced by ECEC workers in Australia; see also United Workers Union (2021a).

expansion of Australia's ECEC system to match benchmarks evident in other industrial countries.

In sum, our analysis confirms that policymakers must pay urgent attention to developing a powerful, high-quality training "pipeline": one that can provide ECEC centres with well-qualified, motivated staff as the system grows in coming years. Later, in Section 3 of this report, we will argue that the TAFE system is the only viable institution with capacity to meet that urgent and growing need for vocational education for ECEC workers.

ECEC WORKFORCE TRENDS AND PROJECTIONS

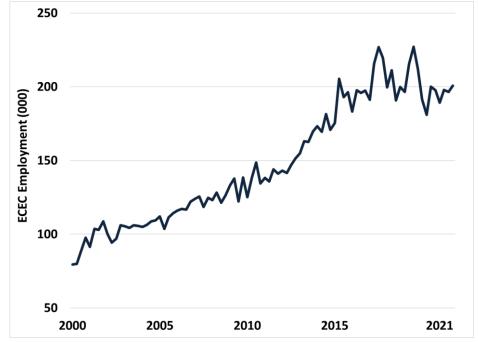
The COVID-19 pandemic had an enormously destabilising impact on employment in the broader ECEC sector. At first, many centres had to close entirely, due to health restrictions aimed at limiting community spread of the virus. Then, when re-opening could occur, the whole system was buoyed – but only temporarily – by the provision of important Commonwealth subsidies (which made ECEC services effectively free for just a few months). That restored ECEC activity and employment. However, just as quickly, the Commonwealth then eliminated those subsidies entirely. Even worse, they arbitrarily cancelled the provision of JobKeeper wage subsidies to the ECEC sector – making it the first sector in the whole economy to have that vital emergency support withdrawn.⁶ This tipped the sector back into another tailspin. Meanwhile, with more Australians working at home, the withdrawal of many Australian women from the labour force altogether, and the price shock imposed by the sudden withdrawal of Commonwealth subsidies, demand for ECEC services declined. All this has created unprecedented uncertainty for ECEC operators – made worse by the back-and-forth of the federal government's haphazard policy interventions.

Figure 2 presents the historical trend of ECEC employment in Australia, from the turn of the century up to December 2021. The data includes three major occupations in the sector: educators (sometimes referred to as carers), early childhood teachers, and childcare managers.⁷ Total employment in ECEC grew almost 150 per cent between 2000 and 2017, when it reached an annual average of some 213,000 positions. ECEC employment then stagnated at about that level until the COVID-19 pandemic hit. The sector lost some 30,000

⁶ Some sectors (such as higher education) and some groups of workers (such as foreign migrant workers and casual employees who had been with their employer for less than one year) never had access to JobKeeper protections.

⁷ ABS industry level data does not break out ECEC as a separate sector. However, the ABS's detailed occupational data tracks these three major categories of ECEC work. There are likely other positions in ECEC work that are not captured in these three categories. The occasional ECEC workforce census undertaken by Social Research Centre (2017) estimated total sector employment at 195,000 positions in 2016. That was almost exactly equal to the implied 2016 average ECEC employment from the ABS occupational data for that same year; that suggests that these three occupational categories capture most ECEC workers, and hence trends in these series are a reliable indicator of the evolution of total ECEC employment.

jobs in the first months of the pandemic, falling to 180,000 positions by May 2020. Employment then rebounded, but for 2020 was still 20,000 positions below the year-earlier level. Another 4,000 positions were regained in 2021 with the further re-opening of the economy. Through these ups and downs, however, ECEC employment has declined in absolute terms over the last 5 years – and more severely as a proportion of total employment. This decline in ECEC employment has occurred despite continued growth in women's labour force participation and employment. The contrast between the growth of women's paid work, and the stagnation or gradual decline in ECEC delivery, attests to the inadequacy and unsustainability of Australia's ECEC system.





Source: Author's calculations from ABS (2021a). Includes educators, teachers, and managers.

Despite the reduced level of employment in the ECEC sector, providers nevertheless face intensifying challenges to recruit and retain adequate numbers of staff. As with many other sectors of Australia's economy, the rapid rebound in overall spending power in the macroeconomy after reopening from initial lockdowns, combined with a near-freeze in the size of the overall labour force (mostly reflecting the closure of Australia's international borders to immigration and migrant labour), has created a much tighter balance between labour demand and labour supply. By March 2022, the national unemployment rate had declined to four per cent. Employers in many sectors reported severe challenges in staffing, and the number of job vacancies advertised by employers soared to record highs.

The ECEC sector has not been immune to these challenges, which are made worse by the unattractive nature of compensation and job conditions in the industry. Figure 3 reports the number of job vacancies reported by ECEC providers over the last decade. Like the

employment data pictured in Figure 2, these statistics include three major ECEC occupational categories: educators/carers, teachers, and managers.

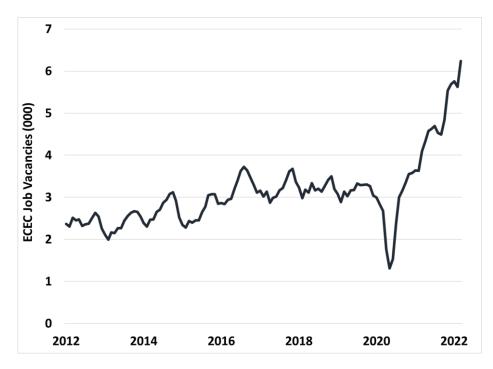


Figure 3: Job Vacancies (000s) in Australia's ECEC Industry (2012-2022)

For three years prior to the pandemic, the ECEC sector reported an average of some 3,000 vacancies at any given time. That implies a slightly higher vacancy rate (1.5% of employment) than typical of the broader economy. These higher pre-pandemic vacancy rates reflected the unappealing compensation and working conditions of much ECEC work, which led to elevated turnover and hence a greater incidence of job vacancies. In the first months of the pandemic, job vacancies among ECEC providers plunged dramatically: since many centres had to close, new hiring obviously ground to a halt. With re-opening, however, the ECEC sector now confronts acute challenges of recruitment and retention. By early 2022, the sector was reporting over 6,000 vacancies – more than twice as many as in 2019, even though the sector's overall employment has declined in that period. These challenges in recruitment have caused operational crises at many ECEC centres, which have fallen below minimum staffing levels. Thousands of ECEC centres – over 11 per cent of all operators by early 2022 – required special waivers exempting them from normal minimum staffing requirements to stay open (Duffy 2022).

Further evidence of the desperate shortage of trained and qualified ECEC workers, despite the sector's stagnation in overall size, is provided by data from the National Skills Commission's surveys of employer staff shortages. Its *Skills Priority List* is compiled based on employment projections, expected replacement demand, and employer surveys. The most recent priority list identifies national shortages for both early childhood teachers and

Source: Author's calculations from National Skills Centre (2021a)

childcare workers (National Skills Commission 2021b). Providers are experiencing shortages in recruiting for both occupations, in most or all states; future demand for childcare workers is expected by the NSC to be especially strong.

In sum, even the existing underdeveloped ECEC system is overstretching the capacity of the vocational training pipeline to provide the sector with enough well-qualified, motivated workers. Some ECEC centres are likely to have to close in coming months and years due to this acute staffing shortage. The poor wages and conditions offered in the sector are a major contributor to this crisis, as is the fragmented and underfunded nature of Australia's vocational education system (discussed further in the next section).

From this crisis-ridden starting point, the staff recruitment and retention challenge in ECEC will become much worse, if in fact Australia were to make a long-term commitment to expand ECEC provision to adequately meet the needs of working parents (and the entire economy). Much public debate over the viability of expanded ECEC, putting Australia on a par with other leading industrial nations, has focused on the fiscal dimensions of that undertaking: how would we pay for it? But the desperate state of workforce training, development, and retention in the ECEC sector may pose an even more formidable barrier to the creation of a world-class ECEC system in Australia. Even if adequate funds were allocated to finance a major expansion of ECEC (and they can and should be⁸), the next and possibly bigger question becomes: who will work there?

FORECASTING ECEC VOCATIONAL TRAINING REQUIREMENTS

To gain insight into the likely dimensions of the future training and recruitment challenges facing an expanded ECEC sector, we consider three possible scenarios for the future of ECEC service delivery in Australia. These scenarios correspond to three fiscal scenarios outlined by Grudnoff (2022), in his analysis of the economic and fiscal benefits generated by expanded ECEC provision. Grudnoff points out, first, that Australia's overall funding base for ECEC is significantly lower than the average for other industrial countries – not surprising, given the reduced extent and coverage of service provided here. In 2020 (according to OECD data), Australia spent a total of 0.59 per cent of GDP on ECEC provision, including both public resources and private expenditures.⁹ The average ECEC spending ratio across the OECD was 0.83 per cent of GDP, some 40 per cent higher than Australia's commitments. The Nordic

Meeting Skills Shortages in an Expanding ECEC Industry

⁸ Indeed, as Grudnoff (2022) shows, the revenue streams arising automatically from increased employment of women in conditions of universal quality ECEC provision would be more than sufficient to pay for the costs of providing that service; in this context, expanded ECEC literally does 'pay for itself.'

⁹ Grudnoff points out that in addition to being smaller than other industrial countries, Australia's ECEC expenditures are also much more heavily weighted to private sources (primarily parent fees): 37% of total ECEC funding is provided from private sources in Australia, the fourth highest of any OECD country.

countries, meanwhile, demonstrate a vastly superior level of ECEC investment – and have best-in-class coverage rates, participation of women in the labour market, and educational outcomes as a result. The five Nordic economies allocated an average of 1.66 per cent of GDP (almost three times Australia's proportion) to ECEC services. Based on this commitment, they achieve very high levels of early childhood enrolment in formal group care, and unmatched levels of women in the workforce (through both increased participation, and increased incidence of full-time work). Grudnoff goes on to simulate the economic, employment, and fiscal impacts of increasing Australia's existing stunted ECEC system: to match either the average across all OECD countries, or the benchmark systems operated in the Nordic countries. He finds that expanded ECEC would support powerful increases in women's labour market participation, employment, GDP, and government revenues.

Table 1									
ECEC Training Requirements, Three Scenarios									
	Spending		Employment (000)			Annual	Annual		
Scenario	% GDP	\$Billion	2030	Increase from 2019	Annual Increase	Replace- ment	Training Demand (000)		
Status- Quo	0.59%	\$12.8	247.8	34.9	4.4	15.0%	41.5		
Policy									
OECD Average	0.83%	\$18.0	298.2	85.3	10.7	12.5%	47.9		
Nordic Average	1.66%	\$36.1	472.5	259.6	32.4	7.5%	67.9		
Source: Author's calculations from NSC, ACECQA, and ABS data, as described in text. Scenarios extrapolated from 2021 annual GDP (\$2.17 trillion) and 2019 pre-pandemic ECEC									

Table 1 summarises the major parameters of Grudnoff's three scenarios: the current system (status quo), a system that was expanded to meet the average level of spending across the OECD, and a best-in-class system that matched the proportions and coverage of the Nordic countries. The Table also reports the corresponding implications in each scenario for the total level of employment in ECEC provision in Australia, and then the consequent needs for vocational training to ensure that the industry is provided with an adequate supply of qualified workers to fill those positions. The simulations use Australia's 2021 average GDP (\$2.17 trillion) as the starting point against which the three levels of funding are applied. This implies \$12.8 billion in total spending in the status quo scenario; 40 per cent more than that in the OECD average scenario; and finally, a tripling of total funding to meet Nordic coverage levels (matching the 1.66 per cent of GDP investments in ECEC made there).

employment (212.9).

The implications for employment are estimated based on an eight-year forward period, recognising that either of the expansion scenarios (OECD or Nordic) would require several years to be fully phased in. Expected employment growth in the status quo scenario is based on the National Skills Commission's latest national occupational employment forecasts (National Skills Commission, 2021a). The NSC predicts employment growing across the three major ECEC occupations by a total of 21,800 positions over the next five years. About half that growth is expected to occur among educators/carers; about 8,000 new positions are expected for childcare teachers; and the remaining 3,300 positions reflect new jobs for childcare managers. Extrapolating that forecast to an 8-year horizon (to 2030) implies a cumulative increase in ECEC employment of close to 35,000 positions.¹⁰ Over an 8-year period, this implies 4,400 new positions per year.

However, most of the vocational graduates required for the ECEC sector are not filling newly created positions: rather, they are needed simply to replace workers who leave the sector (for retirement, for jobs in other industries, or because workers have simply left the labour force altogether). Turnover in the ECEC sector is very high, reflecting the unappealing wages and conditions of many of these jobs. Various research has reported annual ECEC staff turnover rates of 20-30 per cent per year (see Irvine et al. 2016, McDonald et al. 2018, Jackson 2021) – although some of that reflects movement to other positions within the sector.¹¹ Assuming a conservative replacement rate of 15 per cent per year, implies an annual need for VET graduates in the status quo scenario that reaches 41,500 per year by 2030 (mostly for replacement demand, but also to meet modest net job creation). In contrast, the entire VET system today is preparing a much smaller number of completed qualified graduates for the ECEC field. Between 2015 and 2018, an average of 36,000 VET qualifications in ECEC were completed per year.¹² This makes it clear that the flow of completed VET graduates for ECEC positions needs to be ramped up considerably - even in a status quo scenario in which Australia's ECEC system remains far smaller than is required to fully meet the full needs of working parents.

The challenges facing the training pipeline for ECEC workers will be even more severe if we consider the prospects of an expanded and improved ECEC system – one that is expanded in

¹⁰ Note that these NSC forecasts represent a significant reduction in expected job creation in the ECEC sector compared to earlier forecasts published by the Labour Market Information Portal (now discontinued); for example, the workforce development plan published by Australian Children's Education and Care Quality Authority (2019) initially expected an increase of 39,900 positions in the five years to 2023. However, the stagnation of ECEC employment since 2016, and subsequent decline during the pandemic, implies slower growth in the sector's employment under a status quo scenario.

¹¹ The National Skills Commission includes replacement demand in its forecasts of future skills shortages by sector (National Skills Commission 2021b), but does not publish those estimates; the fact that both carers/educators and teachers are expected by the Commission to face national skills shortages in coming years, despite relatively modest growth in the sector's total employment, reflects the high turnover and hence strong ongoing replacement demand in the industry.

¹² See Australian Children's Education & Care Quality Authority (2019).

line with the other two scenarios in Grudnoff's (2022) analysis. The likely employment and training requirements associated with those two scenarios are also estimated in Table 1. In both cases, we assume that one-half of the additional funds allocated to the ECEC system are reflected in increased employment headcounts; the other half are assumed to be allocated to improved facilities, equipment, training, and compensation (all of which are also integral to the vision of improved ECEC provision). In that case, the proportional increases in employment in those scenarios are smaller than the proportional increases in funding – but they are still substantial. An additional 85,000 ECEC workers are expected to be required in the OECD-average scenario by 2030, and almost 260,000 new ECEC workers required in the Nordic scenario (doubling the sector's total employment).

At the same time, however, the improved conditions, training, and compensation for ECEC workers in either expansion scenario can reasonably be expected to reduce the rate of turnover among ECEC workers. They could come to see their jobs as offering stability, career prospects, and a living wage – and hence will be more likely to stay for longer periods of time.¹³ Therefore, Table 1 assumes a lower annual replacement rate of 12.5 per cent in the OECD scenario, and much lower (7.5%) in the Nordic scenario. Combined with the annual increase in employment implied in each of those expansion scenarios, this produces total VET completion requirements of 48,000 graduates per year in the OECD-average scenario by 2030, and 68,000 per year in the Nordic scenario. Clearly, if Australia is going to expand its ECEC system in line with the needs of working parents and employers, to match the level of provision of other industrial countries, ramping up high-quality vocational education for ECEC workers must be an immediate priority.

¹³ Jackson (2021) stresses the importance of positive inducements for greater staff retention as being critical to addressing future skills shortages in the sector.

3. Rebuilding ECEC with TAFE: Education and Training to Sustain a Universal System

DEVELOPING THE ECEC WORKFORCE

Even in its current underdeveloped state, Australia's ECEC sector faces a daunting challenge to recruit, train, and retain enough skilled workers to provide children with quality education and care. If the ECEC system were to be expanded on par with the experience of other industrial countries, those workforce requirements would grow substantially. A massive investment in education, certification and regulation of the workforce will be essential to building a bigger, better ECEC system. This implies the establishment of stable, high-quality education-to-career pathways for ECEC workers – that begin with industry standard qualifications and permit them to undertake further studies and skills development. Access to career-long learning opportunities would in turn aid their transition to positions of seniority in the sector, accumulating institutional knowledge and experience that will be invaluable to ECEC centres and their workers well into the future.

Australia's ECEC industry is staffed by dedicated, hard-working, professional, well-educated workers. Eighty-five per cent of the workforce held ECEC-related qualifications in 2016, and 12 per cent held a bachelor-level degree or post-graduate qualification. Over a quarter of the workforce were studying while working. A total of 34 per cent of workers were qualified with Diploma or Advanced Diploma qualifications in ECEC provision (Grudnoff 2022). The latest Early Childhood Education and Care National Workforce Census also confirmed that ECEC workers were active in acquiring additional training and qualifications, to help sustain their careers, increase job security and earnings, and contribute to higher quality service provision.

A long-term commitment to improved funding and service delivery, ideally aimed at matching Nordic-level coverage and quality benchmarks, would require a larger, better-trained, better-supported, and better-compensated workforce. A pro-active strategy for sustainable workforce development should be developed and implemented with input from all stakeholders, including ECEC providers, unions, VET institutions (particularly TAFEs), and government. Additional funding for education and training for ECEC workers must be channelled primarily through TAFE institutes, which are the only component of Australia's presently fragmented and chaotic VET system with sufficient scale, resources, and infrastructure to meet the levels of education and training required by an expanded ECEC system.

TAFE AND ITS BENEFITS

The operation of the TAFE system generates a range of substantial benefits that are experienced throughout the Australian economy. As compiled by Pennington (2020), these benefits include approximately \$3 billion per year of direct value-added for the Australian economy, including upwards of \$2.3 billion of wages, salaries, and other employment benefits paid to Australian workers. The accumulated vocational education of Australian workers provided by TAFE's past training activity supports higher productivity and earnings which benefit TAFE-trained workers, employers, and the national economy. These benefits are worth an estimated \$86.4 billion each year to the Australian economy. Additional social benefits are generated by the greater opportunities for young people from working class, regional, immigrant, and other poorer communities to participate in better-paying, more stable jobs.

Table 2 summarises Pennington's (2020) estimates of the annual benefits generated by the past and present activities of the TAFE system, across these key streams. A total of \$92.5 billion each year in economic benefits is harvested through these various channels. The current operation of TAFE each year costs just a fraction of that figure at \$5.7 billion, demonstrating the very strong economic return leveraged from Australia's historic investments in TAFEs.¹⁴ To continue reaping those benefits of TAFE activities, and a TAFE-educated workforce, requires a substantial enhancement in the resources allocated to TAFEs, so that this flow of benefits can be maintained.

Table 2 TAFE Annual Economic Impact				
TAFE Economic Footprint	\$6.1 billion			
Higher Earnings and Productivity	\$84.9 billion			
(Includes Higher Tax Revenues)	(\$25 billion)			
Social Benefits	\$1.5 billion			
Total Annual Benefit	\$92.5 billion			
Source: Pennington (2020).				

Evidence from Australia and international experience shows that stable, well-resourced, and publicly accountable education providers like TAFE are the 'anchors' of a sustainable VET system, given the high quality and broad scope of training and skills they provide (Carney and Stanford 2018). Pennington (2020, p. 8) estimates that 72.5 per cent of Australian workers currently holding VET qualifications received their education and training through the TAFE system. Therefore, understanding and acknowledging the strategic role of TAFE as

¹⁴ The two figures are not directly comparable, since the \$92.5 billion annual flow of benefits reflects the return on investments made in TAFE in previous years, not just the current year.

the most trustworthy, capable provider of VET is essential to optimising the VET system's capacity to meet the future workforce needs of an expanding ECEC sector.

There are many qualitative reasons why TAFE is a standout in VET. TAFE-educated workers achieve qualifications in an environment that is complemented by other support services that aid students in the transition from learning to work. Indeed, research shows that TAFE provides better training, connected services and holistic experiences than do private providers (Pennington 2020). National Centre for Vocational Education Research (NCVER) research has also found that registered training organisations (RTOs) across the VET sector value delivery of education programs that encompass the entire student experience and encourage flow-on outcomes for employers, communities, and other stakeholders (Guthrie & Waters 2022). This is fundamentally what TAFE provides to all students and trainees as a public service. And since TAFE-educated workers develop experience through on-the-job placements and build working relationships with other TAFE-educated learners, they forge collegial ties early in their careers, and gain experience in meaningful team-building that benefits them throughout their working lives.

The community centred nature of TAFE training is another critical factor enhancing its effectiveness. As a publicly funded service available to all Australians, TAFE is an anchor of vocational education and training across all types of community settings. For example, the strong suburban and regional presence of TAFE institutes places them at the frontline of opportunities for those otherwise locked out of employment or experiencing insecure work. This can benefit communities and industries adapting to change when industries close and workers are laid off. TAFEs can do this because they are trusted public institutions with a clear societal mission: to provide vocational education for all Australians that is low-cost (often free) and connected to other student support services.

Moreover, TAFE-provided training leads to stronger employment outcomes. TAFE graduates are more likely to be employed and less likely to be unemployed than workers with less education, and even than some workers with degrees – earning more and finding jobs easier. Employees and owner-managers with VET qualifications receive a wage premium of 39 per cent compared with those whose highest educational attainment is Year 12 or below (Pennington 2020). The combination of TAFE-trained ECEC workers, with accessible ECEC services, amounts to a potent pathway that would enhance the lifetime education and employment opportunities for Australian families and children from all socio-economic backgrounds.

TAFE AS CENTRAL TO UNIVERSAL ECEC DEVELOPMENT

It follows that the best possible education and care to Australian preschool-aged children should also be provided by the most highly trained and experienced workers – employed in

Meeting Skills Shortages in an Expanding ECEC Industry

delivering a public or not-for-profit service, and well-trained in public vocational education delivered through the TAFEs. In this sense, developing a universal public ECEC system is a natural analogue to developing a universal public VET system: building a world-class public ECEC system, staffed with top-notch graduates from public TAFEs, provides a dual source of economic and social benefit. Meeting the goals of high-quality ECEC services thus means recognising that the full and proper funding of Australia's state- and territory-based TAFE systems must be an essential component of post-pandemic economic reconstruction.

There are broad differences between VET delivered by TAFE and VET delivered by private, for-profit providers: differences in quality and accountability that are also clear in the ECEC system, as well. A scan of ECEC training package offerings across the VET system indicates that a Certificate III in Early Childhood Education and Care consists of 15 core units of training (whether delivered through a private provider or through a TAFE). But training package delivery differs significantly between TAFE and private providers: TAFEs provide 12 months full-time study, while private providers most commonly offer just six months of full-time study. The Australian Government's (2020, p. 34) review finds that:

The minimum course durations that are set as guidelines are not consistently adhered to, which can impact the quality of education and training received, in some cases resulting in insufficient course duration to enable students to gain the competencies specified in the training package.

Evidently, there is a high degree of consistency across core offerings at TAFE institutes, which also offer the broadest range of elective units. Yet in contrast, there is ambiguity and inconsistency in how core units offered by private providers (which vary greatly between different training firms) align with core requirements of ECEC curriculum. There is also ambiguity regarding quality of assessment. For example, private providers frequently appear to base assessment on an ambiguous notion of 'opportunities to demonstrate learning', whereas TAFE assessments have clear expectations including industry placement, hands-on individual and team-based projects, and written assignments.

Fundamentally, TAFEs provide a greater breadth and depth of curriculum than for-profit VET providers, and this helps to explain why TAFE achieves consistently better outcomes than for-profit services in ECEC. This is confirmed by recent ACECQA sector snapshots that show greater proportions of public and not-for-profit ECEC services exceeding minimum standard requirements of the NQF, meaning overall that there is a larger emphasis on service provision beyond average industry requirements (see ACECQA 2022, 2021). These evaluations also suggest that the variation in VET provision directly impacts the outcomes of workers entering ECEC careers; those trained by private providers are often ill-equipped with sub-par education and training.

Due to the high standards set within ECEC for quality service delivery, TAFE better meets the needs of a sustainable ECEC industry than do for-profit providers. The federal government

practically admits as much in its policy review of Australia's ECEC sector (Australian Government 2020) for the OECD's *Starting Strong VI* report (OECD 2021). It does so by emphasising the NQF's aim to identify the characteristics of ECEC service quality in efforts to improve "process and structural quality in ECEC settings", specifically:

Quality improvement and articulation of what 'quality' looks like resulting in improved private benefits (unique to each child) and enhanced public awareness of the value of ECEC for society [and] benefits associated with parental workforce participation including increased productivity and ensuing economic benefits for individuals and the national economy. (Australian Government 2020, p. 9).

The wellbeing of children, the drive to continuously improve services, and the aim to maximise the economic participation of workers – both within the sector and amongst the broader population (particularly women) – are all outcomes that are undermined by profit-driven services. The goals of private, for-profit ECEC providers lead to business models being deployed that effectively minimise staffing levels, working conditions and service provision, undermining these characteristics of a well-functioning ECEC industry. In contrast, a publicly provided and driven ECEC sector, supported by a steady flow of well-qualified TAFE graduates, is a socially oriented model that is far more capable of providing ECEC services as a public good and a key driver of economic development.

FUNDING TAFE FOR AN ECEC INDUSTRY STRATEGY

The clear importance of TAFE to society and its strong reputation within the ECEC industry means the TAFE system must play a special role in the forefront of rebuilding Australia's post-pandemic economy. A minimum 70 per cent of funding to VET should be allocated to TAFE, due to its superior quality and social accountability. Within this generally expanded funding envelope, increasing the share of resources going to training programs in feminised industries (including aged care, disability support, and community services, as well as ECEC) would help more women move from traineeships in these human service industries into secure, high-quality, and permanent work. This would help to address ongoing structural inequalities that mean feminised industries (like ECEC) are still significantly characterised by insecure work and lack of career opportunities.

Given the student-centred and industry responsive focus of education delivered by TAFE, its role in driving the sustainable development of Australia's ECEC industry should be front and centre. ECEC must be treated as a public service and be made free and accessible to all Australian children below school age. Free TAFE should also be deployed as an instrument to aid workers in labour market adjustments, thereby providing workers – particularly women – opportunities to train for paid employment while balancing caring and other responsibilities in the transition to permanent work. Completing the circle, as free TAFE provision becomes a cornerstone of industry policy, publicly provided free ECEC services

should be reciprocally offered to students enrolling in ECEC training programs. That would help to meet targets of completions needed to meet the workforce needs of an expanded ECEC sector. If Australia is to take seriously the importance of ECEC in economic recovery, policymakers must acknowledge that only TAFE can provide quality, accountable training at the scale required to meet the workforce needs of a growing ECEC sector.

Maximising TAFE's role in economic recovery broadly, and ECEC specifically, is critical at a time when the long-term sustainability of ECEC and the role it will play in Australia's future depends on providing the industry with the best education, highest quality services and most equipped workforces. This means ensuring that Australia's TAFE system is equipped to deliver high-quality education and training to all ECEC workers. Importantly, this requires that unions occupy a larger role in the development of an ambitious and sustainable workforce development plan. This would reinforce the benefits resulting from restoring a central role for TAFE in ECEC education and training strategies. With better-resourced TAFE programs leading an ambitious skills development strategy for the industry, ECEC workers will be better equipped to participate in identifying workforce needs, ECEC program development, occupational health and safety decision-making, and other innovations in the education and care delivered to young Australians.

Conclusion and Recommendations

This paper has described a vision in which Australia's ECEC system is strengthened and expanded – with the goal of becoming a well-funded and high-quality strategic industry in its own right, in turn providing a valuable input (namely, education and care for the children of working parents) to the rest of the economy. By reconstituting a public, universal, and high-quality ECEC system, we can reverse the damaging consequences of our current market-driven, highly privatised, and thoroughly inadequate ECEC system. But to achieve this, government must play an active regulatory, planning and funding function, in collaboration with industry stakeholders. Increasing the certainty that a publicly funded industry maximises benefits for the children it is supposed to serve means first removing the profit motive from service provision.

An active industry policy for ECEC will set the direction for the de-marketisation of ECEC services, with higher levels of government funding facilitating a vastly expanded system of ECEC in Australia. A vital prerequisite in this effort is establishing a stable, professional, well-supported ECEC workforce, by providing extensive education and training of ECEC workers, and their entry to secure, well-paid career pathways. This can only be achieved by fully funding the training and development of a regular pipeline of trained ECEC workers, led first and foremost by greater investment in publicly funded, TAFE-delivered education and skills, new mandates for workforce qualifications and staffing levels, and health and wellbeing quality frameworks that neutralise cost-competitive approaches to delivering ECEC services.

Specific policy measures which would help to attain this vision include the following:

Recommendation #1: An industry strategy and workforce plan that prioritises ECEC as an essential public service.

The federal government should develop a national ECEC industry policy that commits to adequate levels of funding for universal ECEC provision, complemented by a strategy to build and retain highly skilled workers, and that regulates the industry to maintain high standards of service provision. The federal government would work with individual states and territories and ACECQA on specific plans to roll out a universal ECEC system (optimally matching the scale and quality of the Nordic countries) by the end of the decade, through funding commitments, workforce planning, mapping of education and training systems and requirements, and the establishment of stringent regulatory mechanisms that would shepherd the ECEC system towards sustainable goals.

Recommendation #2: Federal government funding increased to provide universal ECEC to all Australian preschool-aged children.

As part of this national ECEC strategy, the federal government must recognise that over the long term, far greater investment will be needed to create and sustain an adequate ECEC

system for Australia. The development of a universal system will require funding for an expanded workforce and more enrolment places, gradually making ECEC available to all preschool-aged children over the remainder of the decade. A truly universal system would require funding commensurate with the percentage of GDP spent by the Nordic nations (1.66%), phased in over several years (preferably by 2030). In that way, future generations of Australian children receive free, universally provided ECEC.

Recommendation #3: Prioritise meeting projected ECEC workforce demands with the conversion of casual, contract-based, and temporary staff to permanent and direct employment.

The federal government should recognise that a major contributing factor to the erosion of standards of quality and service in ECEC has been the systemic insecurity and low pay that characterises too many ECEC jobs. In turn, these conditions are perpetuated by the growing privatisation of ECEC services that benefits shareholders and executives, with a diminishing share of revenues going to workers who in many cases are hired on temporary or casual contracts.

Increased funding to ECEC should thus be contingent on converting existing casual and contract-based employees to full-time or part-time permanent positions. This will address pervasive insecure work, create fairness where staff are able to benefit from improved conditions (i.e., leave entitlements, consistency in pay), and help establish certainty in staffing numbers for ECEC centres. This will have flow-on benefits for preschool-aged children (who are shown to receive better care from more stable, experienced staff), and stronger staffing teams capable of achieving and defending quality standards in education and care.

Recommendation #4: Increased funding to Vocational Education and Training (VET), with 70 per cent of VET funding allocated to TAFEs.

To support essential services like ECEC, the federal and state/territory governments should increase funding to VET to help secure viable education and training pathways for Australians seeking careers in many essential services, particularly human and caring services (like ECEC). For many Australians, TAFEs provide good quality education outcomes and strong bridges between school and work that afford many opportunities for stronger employment and better lives.

Furthermore, TAFE is the backbone of VET, where it provides services either free of charge, or at low cost to the public. TAFEs are especially important in rural and remote regions where for-profit providers are less likely to offer services. Therefore, a minimum of 70 per cent of funding to the VET sector must be allocated to TAFE, ensuring that most of the public funding for the education and training of many Australians is delivered through these public institutions to achieve the best possible education and training outcomes – and the best preparation for labour market opportunities, since services are delivered to match locally specific labour market conditions.

Recommendation #5: Channel VET and TAFE funding into education and training programs that support workers in feminised industries.

Additional stipulations in VET funding arrangements should also address the gendered labour dynamics that disadvantage women in feminised industries like ECEC. The current federal government's support for VET disproportionately favours 'masculinised' industries, like manufacturing and construction; moreover, these industries benefit from higher incomes and better conditions than the care sector. Thus, VET funding (including for TAFEs) should favour expanded education and training programs in care industries. This will help ensure that these programs provide exceptional standards of qualifications, promote beneficial career pathways for women (with jobs that provide better pay and conditions), and improve women's labour force participation and hours of work.

Recommendation #6: TAFE should be the primary provider of foundational education and training for ECEC careers.

As ECEC is an essential public service that must be publicly funded and delivered, so too should the education and training of ECEC workers be publicly funded and delivered by TAFE. The federal government should require that TAFEs provide the main education and training for ECEC workers, reducing the need for private VET providers. TAFE must be recognised as the foundational provider of education and training for careers in the ECEC sector, as well as the provider of choice for workers seeking further education or training (prior to tertiary education). The TAFEs also serve as a 'safety net' for ECEC workers who may face limited labour market opportunities at their current level of qualification.

Recommendation #7: Lift minimum qualification standards for new ECEC workforce entrants.

The federal government should lift minimum qualification levels for employment in ECEC from Certificate III (existing requirement) to Certificate IV. This would also require setting benchmark employment standards and compensation at levels commensurate with that level of qualification. This would also provide ECEC workers with advanced skills and knowledge and help more staff to attain higher qualifications, including degree-level education. Once again, the TAFEs would be instrumental in delivering Certificate IV-level qualifications and any other Diploma-level credentialing prior to workers embarking on further education pathways.

Recommendation #8: ACECQA's National Qualification Framework (NQF) should be matched to standards set in publicly delivered ECEC services.

The federal government should mandate ACECQA to evaluate existing ECEC services based on the best performing public services in the industry. This would set higher baselines for educator-to-child ratios, minimum skills levels (Certificate IV), and the provision of highquality approved learning frameworks that support universal access to child learning and development programs.

Recommendation #9: Piloting new models of not-for-profit, cooperative, and worker ownership and participation in providing ECEC services in underserved communities.

The government should support the piloting of democratically organised and worker driven ECEC services in remote and rural regions of Australia that are currently underserved by Australia's existing ECEC system, as well as in urban areas that presently experience lack of access stemming from socio-economic disadvantage. This would involve developing a program of services in collaboration with other stakeholders (including unions and TAFE institutes) to identify education and skills requirements, project workforce needs, mobilise funding, and attain regulatory approvals to ensure such services meet new minimum NQF standards in their design.

Efforts to expand ECEC supply through various not-for-profit institutional forms could assist local communities in accessing additional ECEC services, with due attention to the specific needs of local communities currently disadvantaged due to geographic, cultural, or socioeconomic conditions. Not-for-profit, co-operative, and worker-owned pilots could also help to address labour market issues and provide education and training pathways into careers for local ECEC workers. This approach emphasises the importance of public goods being provided directly by community stakeholders, and the need to de-commodify the delivery of human and caring services.

Recommendation #10: A stronger role for unions in evaluating ECEC services, identifying workforce needs, and providing direct input to ECEC curriculum, education, and training development.

At all stages in the establishment of a universal ECEC system, including design, implementation, evaluation, and regulation, workers and their representative unions should be consulted as equal partners alongside government, the ECEC industry, TAFE institutes and community stakeholders. Workers must be consulted as the most direct, and most knowledgeable actors in identifying workforce education, training and skills needs, and be directly involved in translating this industrial expertise into outcomes designed to sustain the ECEC industry. Representative sector councils, representing all industry stakeholders and tasked with setting standards for universal ECEC provision, would feature a minimum representation of union delegates. They would contribute to policymaking that considers workers' direct input into the development of curriculum, regulatory, education and training, and quality frameworks.

References

ABS. 2021a. *Employed persons by Occupation unit group of main job (ANZSCO), Sex, State and Territory*, Australian Bureau of Statistics (Canberra, Australia).

ABS. 2021b. *Population Statement: National Population Projections, 2020-21 to 2031-32,* Australian Bureau of Statistics (Canberra, Australia).

ABS. 2021c. *Preschool Education, Australia*, Australian Bureau of Statistics (Canberra, Australia).

ABS. 2020. *Preschool Education, Australia*, Australian Bureau of Statistics (Canberra, Australia).

ACECQA. 2022. *NQF Snapshot – Q4 2021*, Australian Children's Education & Care Quality Authority (Sydney, Australia).

ACECQA. 2021. *NQF Snapshot – Q3 2021*, Australian children's Education & Care Quality Authority (Sydney, Australia).

ACECQA. 2019. *Progressing a national approach to the children's education and care workforce*, Workforce report, Australian Children's Education & Care Quality Authority (Sydney, Australia).

ACTU. 2020a. *Australia's Economic Reconstruction after COVID-19: A National Jobs Plan, And Five Ways to Get Started*. Australian Council of Trade Unions (Melbourne, Australia).

ACTU. 2020b. *Leaving women behind: The real cost of the Covid recovery*. Australian Council of Trade Unions (Melbourne, Australia).

Alexander, Craig, and Dina Ignjatovic. 2012. *Early Childhood Education has Widespread and Long Lasting Benefits*, TD Economics (Toronto, Canada).

Australian Institute of Health and Welfare. 2015. "Literature Review of the Impact of Early Childhood Education and Care on Learning and Development," Working paper, Cat. no. CWS 53. AIHW (Canberra, Australia).

Australian Government. 2020. Organisation for Economic Co-operation and Development Policy Review: Quality Beyond Regulations in ECEC Country Background Report – Australia, (Canberra, Australia).

Barnett, W. Steven. 2008. *Preschool Education and Its Lasting Effects: Research and Policy Implications*, Education and the Public Interest Center & Education Policy Research Unit (Boulder & Tempe, USA).

Meeting Skills Shortages in an Expanding ECEC Industry

Berry, Craig. 2018. *What We Really Mean When We Talk About Industrial Strategy*. A Future Economies Publication, Manchester Metropolitan University (Manchester, UK).

Bivens, Josh, Emma García, Elise Gould, Elaine Weiss, and Valerie Wilson. 2016. *It's Time for an Ambitious National Investment in America's Children*, Economic Policy Institute (Washington DC, USA)

Calman, Leslie, and Linda Tarr-Whelan. 2005. *Early Childhood Education for All: A Wise Investment*, Legal Momentum (New York, USA).

Carney, Tanya, and Jim Stanford. 2018. *Advanced Skills for Advanced Manufacturing: Rebuilding Vocational Training in a Transforming Industry*, Centre for Future Work at The Australia Institute (Canberra, Australia).

Child Care Human Resources Sector Council. 2009. *Literature Review of Socioeconomic Effects and Net Benefits*, Child Care Human Resources Sector Council (Ottawa, Canada).

COAG. 2009. *Investing in the Early Years—A National Early Childhood Development Strategy,* Council of Australian Governments (Canberra, Australia).

Duffy, Conor. 2022. 'Australian childcare 'in crisis', as new figures show 11 per cent need special federal government waiver to legally operate,' *ABC News Online*, 8 February.

Duncan, Greg J. and Katherine Magnuson. 2013. "Investing in Preschool Programs," *Journal of Economic Perspectives* 27(2): 109-132.

Executive Office of the President of the United States. 2015. *The Economics of Early Childhood Investments* (Washington: Executive Office of the President of the United States).

Government of Australia. 2020. 'Early Childhood Education and Care Relief Package', Press Release (Canberra, Australia).

Grudnoff, Matt. 2022. *Economic Benefits of ECEC in Australia*. Centre for Future Work at The Australia Institute (Canberra, Australia).

Guthrie, Hugh and Melinda Waters. 2022. *Delivering high-quality VET: what matters to RTOS?*, National Centre for Vocational Education and Research (Adelaide, Australia).

Hurley, Peter, Hannah Matthews and Sue Pennicuik. 2022. *Childcare Deserts & Oases: How Accessible is Childcare in Australia?*, Mitchell Institute, Victoria University (Melbourne, Australia).

Hurley, Peter, Jen Jackson and Kate Noble. 2020. *Australian Investment in Education: Early Learning*. Mitchell Institute, Victoria University (Melbourne, Australia).

Irvine, Susan, Jennifer Sumsion, Jo Lunn, and Karen Thorpe (2016). 'One in five early childhood educators plan to leave the profession,' *The Spoke*, 23 June.

Meeting Skills Shortages in an Expanding ECEC Industry

Jackson, Jen. 2021. 'Early childhood educators are leaving in droves. Here are 3 ways to keep them, and attract more,' *The Sector*, 18 January.

L'Hôte, Emilie, Nicky Hawkins, Nathaniel Kendall-Taylor and Andrew Volmert. 2020. *Moving Early Childhood Up the Agenda: A Core Story of Early Childhood Development in Australia*, FrameWorks Institute, prepared for CoLab (Washington DC, USA).

McCain, Margaret, Fraser Mustard, and Kerry McCuaig. 2011. *Early Years Study 3: Making Decisions, Taking Action*, McCain Family Foundation (Toronto, Canada).

McDonald, Paula, Karen Thorpe, and Susan Irvine. 2018. 'Low pay but still we stay: Retention in early childhood education and care,' *Journal of Industrial Relations*, 60(5): 647-668.

Molloy, Carly, Meredith O'Connor, Shuaijin Guo, Colleen Lin, Christopher Harrup, Nicholas Perini and Sharon Goldfield. 2019. 'Potential of 'stacking' early childhood interventions to reduce inequities in learning outcomes', *Journal of Epidemiology Community Health*, 73(12): 1078-1086.

National Skills Commission. 2022a. Internet Vacancy Index, IVI DATA Detailed Occupation, Australian Government (Canberra, Australia).

National Skills Commission. 2022b. 'New positions or staff replacement: why are businesses recruiting?', Blog Post, 22 February, Australian Government (Canberra, Australia). National Skills Commission. 2021a. *2020 Occupation Projections*, Australian Government (Canberra, Australia). Australia).

National Skills Commission. 2021b. *Skills Priority List*, Australian Government (Canberra, Australia).

NSW Department of Education. 2019. *A review of the effects of early childhood education*. NSW Government (Sydney, Australia).

OECD. 2021. Starting Strong VI: Supporting Meaningful Interactions in Early Childhood Education and Care, OECD Publishing (Paris, France).

Palmer, Jennifer. 2019. *Beyond the ABCs and 123s – Social and Emotional Development in Early Learning Settings*, National Conference of State Legislatures (Washington DC, USA).

Pennington, Alison. 2022. *Fragmentation & Photo-Ops: The Failures of Australian Skills Policy Through COVID*, Centre for Future Work at The Australia Institute (Canberra, Australia).

Pennington, Alison. 2021. 'Crocodile tears no mask for Coalition's economic war on women', *Michael West Media* (24 March).

Pennington, Alison. 2020. *An Investment in Productivity and Inclusion: The Economic and Social Benefits of the TAFE System*, Centre for Future Work at The Australia Institute (Canberra, Australia).

Productivity Commission. 2021. *Report on Government Services 2021*. Government of Australia (Canberra, Australia).

Productivity Commission. 2014. *Childcare and Early Childhood Learning*. Government of Australia (Canberra, Australia).

PwC. 2019. A Smart Investment for a Smarter Australia: Economic analysis of universal early childhood education in the year before school in Australia. The Front Project, PricewaterhouseCoopers (Sydney, Australia).

Ribeiro, Celina. 2020. "Free childcare has been amazing': Australian parents hope pandemic may pave way for reform', *The Guardian* (11 May).

Robert, The Hon Stuart and McKenzie, the Hon Bridget. 2022. 'Coalition Government delivers record funding to drive stronger educational outcomes', Ministers' Media Centre, Ministers of the Education and Skills Portfolio, Commonwealth of Australia (Canberra, Australia).

Snowden, Angelica. 2021. 'Concern over the quality of childcare due to staff shortage,' *The Australian*, 9 January.

Social Research Centre (2017). 2016 Early Childhood Education and Care National Workforce Census, Social Research Centre, Australian National University (Melbourne, Australia).

Stanford, Jim. 2020. *Pay Equity in Community Services: The Consequences of Federal Budgetary Decisions*, Briefing Paper, Centre for Future Work at The Australia Institute (Canberra, Australia).

Stanford, Jim. 2020. A Fair Share for Australian Manufacturing: Manufacturing Renewal for the Post-COVID Economy, Centre for Future Work at The Australia Institute (Canberra, Australia).

Stanford, Jim. 2016. *Manufacturing (Still) Matters: Why the Decline of Australian Manufacturing is NOT Inevitable, and What Government Can Do About It,* Centre for Future Work at The Australia Institute (Canberra, Australia).

The Front Project. 2021. How Families Experience ECEC.

The Parenthood. 2021. 'Pre-Budget Submission to the Australian Treasury – Budget 2021-2022'

UNICEF Innocenti, 'Worlds of Influence: Understanding what shapes child well-being in rich countries', Innocenti Report Card 16, UNICEF Office of Research – Innocenti (Florence, Italy).

United Workers Union. 2021a. *Exhausted, Undervalued and Leaving: The Crisis in Early Education* (Melbourne, Australia).

United Workers Union. 2021b. *Spitting Off Cash: Where Does All the Money Go in Australia's Early Learning Sector?*, (Melbourne, Australia).

United Workers Union. 2020. Unsafe and Non-compliant: Profits above Safety in Australia's early learning sector (Melbourne, Australia).