



**Victorian
Skills Authority**

Victorian Skills Plan

Education and Training Industry Insight

October 2022



Education
and Training

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Introduction

This report on the Education and Training industry forms part of the 2022 Victorian Skills Plan and outlines demand for occupations, education and training directed to meeting the demand and current workforce issues facing the industry.

This report has been prepared by the Victorian Skills Authority (VSA). The VSA was formed in July 2021 in response to the review *Future Skills for Victoria: Driving collaboration and innovation in post-secondary education and training* (known as the Macklin Review). The VSA is charged with preparing an annual Victorian Skills Plan (the Skills Plan) to guide decision-making on skills and training, by the Government, education and training providers, industry and communities.

The Victorian Skills Plan

The annual Skills Plan sets out Victoria's skills needs for 2022 to 2025 by drawing on data, evidence and insights from a range of system-wide and local sources.

The Government in conjunction with industry, communities and education and training partners brings collaborative action through the Skills Plan which:

- **defines skill needs** with clear statements of required skills and capabilities (current and emerging)
- **sets priorities** for post-school education and training in Victoria
- **communicates to the community** the opportunities education and training can provide to offer careers for individuals that also meet the workforce needs of industry
- **aligns action** across industry and government to support improved outcomes for all Victorians.

The Skills Plan consists of:

- a summary report – the Victorian Skills Plan
- the industry needs of the Victorian economy segmented into 13 insight reports, each comprising like industries – of which this report is one
- profiles of industry and occupations in the regional areas of Victoria which outline priorities for skills development – either as snapshots or Regional Skills Demand Profiles
- current employment and forecast demand to 2025 across Victoria – a user-driven dashboard.

About Industry Insight Reports

Each industry insight is based on robust research, qualitative and quantitative data collection and analysis and extensive consultation with the Government's Industry Advisory Groups, partners and stakeholders over a period of six months. Each report sets out to:

- profile the **industry outlook**, taking into account sector trends and key drivers of demand
- detail the **workforce and skilling implications** of the industry based on forecasting
- set **industry priorities** in responding to current and future workforce challenges
- provide initial guidance for an **education and training response** to these challenges.

The industries reflected in each report are defined according to their classification within *1292.0 - Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006*, prepared by the Australian Bureau of Statistics. Occupations within industries have been defined using the *Australian and New Zealand Standard Classification of Occupations (ANZSCO)*.

Each industry insight contributes to the conclusions and recommendations of the Skills Plan, focusing on actions for implementation over a three-year period.

The VSA acknowledges and extends sincere thanks to the individuals and organisations that participated in the consultations and contributed to these materials.

Using this report

This is a point-in-time report on the Construction industry in Victoria and the associated skills and workforce issues.

This report, along with the Skills Plan, has been prepared for industry and provider partners as a summary of demand for occupations and workforce issues. In addition to being used by the Victorian Government to consider responses, as a public document it is available to industry and education and training partners to form actions and responses.

The report does not represent the full picture of workforce issues in the industry. Opportunities associated with skills and workforce are longstanding. The information in the report, however, provides the basis for ongoing work on skills demand and responses, including by the VSA and through the Industry Advisory Groups.

Feedback

Feedback on this report, and others, is welcome and can be provided to SkillsPlan@education.vic.gov.au. Feedback will contribute to developing insights and actions.

Report Coverage

This report focuses on the education and training industry as defined under ANZSIC and the occupations relevant to the industry, classified according to ANZSCO. It covers a wide variety of education and training activities including teaching and instruction in classrooms, at the workplace or at home.

Statistics about an industry and its sub-sectors are collated by the Australian Bureau of Statistics (ABS) from the activity of businesses. Each business is classified to an industry based on their primary activities. Where an individual works for multiple businesses, their main job is used.

Industry classifications rarely encompass the full nature of the work (and therefore skills) associated with a given industry. ABS definitions of industries or sectors may not align with the definitions used by an industry association, while the allocation of businesses on primary activity can result in businesses that perform similar services but with a different emphasis being classified in different industries.

Coverage in this report is limited to employment in the industry and sectors as defined by ABS, noting some occupations are almost exclusively associated with an industry, such as teachers in education and training, while others, such as accountants and electricians, are associated with many industries. Note, however, that occupational demand for Victoria as reflected in the dashboard is the total of occupational demand for all industries.

Table 1 sets out activities that may occur within the education and training industry but are reported formally under other industries. The relevant Industry Insight report is listed.

Table 1 | Scope of related industry activities and insights related industries

Activities	Industry Insight
Administrative and other business support activities	Administrative and Support Services
Early childhood education and care (where the focus is on care)	Health and Community Services
Training of animals including racehorses, race dogs and puppy school	Services

Executive Summary

Industry outlook

The education and training industry is vital to Victoria's economy and society. Early education and schooling prepare people for success in life and to contribute to the social fabric of the state through a range of undertakings such as volunteering, the arts or sport. The industry is key to economic advancement and innovation as it conducts research, prepares leaders and professionals and most workers needed for industry. The vitality of the industry contributes directly to Victoria. Victorian industry grows and diversifies if it has access to a workforce characterised as contemporary with the skills needed for growth that contributes to economic prosperity. The quality of education and training in Victoria also attracts individuals and their families to Victoria to live and work.

Access to quality early education and care and schooling is key to the participation of parents and guardians in productive work. Expanding this access, accompanied by strong schooling and post-schooling outcomes contributes to a fully active society.

The industry employs approximately 308,700 workers¹ across pre-school education services, school education, post-secondary education, inclusive of adult, community and further education, and other non-accredited education and training, such as sports and recreational instruction and arts education.

After the significant disruption to operations and ways of working caused by the COVID-19 pandemic, the industry is expected to experience strong growth. The key drivers include anticipated return to population growth and the return of international students once international travel returns to pre-COVID levels, plus Commonwealth Government investment in child care and State investment in three-year-old kindergarten and the expansion of the Best Start, Best Life reforms, the Disability Inclusion package for secondary schools and continued provision of Free TAFE.

On average, across all industries total employment is expected to grow by an additional 211,900 workers to 2025, from 3,538,900 workers in 2022, an annual growth rate of 1.97 per cent^{a,2,3} In comparison between 2017 and 2020 employment grew by 2.68 per cent^b annually.⁴

In the education and training industry, employment is expected to grow by an additional 25,800 workers to 2025, from 308,700 workers in 2022, an annual growth rate of 2.56 per cent^c which is higher than the overall Victorian average across all industries.^{5,6} In comparison between 2017 and 2020 employment across this industry grew by 5.01 per cent annually^{d,7}.

Substantial workforce growth will be required to meet expected demand. By 2025, an estimated 41,000 net new workers will be needed.⁸ This includes approximately 25,800 workers to fill new positions and 15,100 to replace retirees across all occupations in the education and training industry workforce.

Table 2 identifies the top ten occupations in demand across the industry to 2025. Of these, eight occupations (highlighted in table) are expected to experience employment growth at a rate above the overall Victorian average between 2022 and 2025.

^a 3-year compound annual growth rate

^b Computed for 2017 to 2020 employment growth for pre-COVID comparison


^c 3-year compound annual growth rate

^d Computed for 2017 to 2020 employment growth for pre-COVID comparison

Table 2 | Top ten occupations in demand in the education and training industry by 2025^{e,f,9}

Occupation	Current employment	Employment growth (2022–25)		Retirements (2022–25)	New workers needed (2022–25)
		Number	Per cent		
Primary School Teachers	61,100	2,500	1.6%	2,300	4,800
Secondary School Teachers	48,350	2,150	1.4%	2,300	4,400
Education Aides	22,900	3,150	3.6%	800	3,950
University Lecturers and Tutors	13,900	1,950	3.3%	1,050	3,000
Early Childhood (Pre-primary School) Teachers	17,400	1,700	4.7%	550	2,250
Private Tutors and Teachers	10,650	1,150	2.9%	700	1,850
General Clerks	8,500	1,200	3.5%	550	1,750
Special Education Teachers	6,400	1,000	3.2%	550	1,550
Vocational Education Teachers	6,550	550	2.0%	550	1,050
Education Advisers and Reviewers	11,650	500	2.6%	350	850

Legend

 Above Victorian employment growth average between 2022 and 2025

Modelling of teacher demand prepared by the Department Education and Training (DET) for the Victorian Teacher Supply and Demand Report (TSDR)¹⁰ differs from the estimates above due to key methodological differences. The Skills Plan models economy-wide demand using a top-down approach whereas the TSDR constructs bottom-up estimates based on granular data collection, industry-specific attrition trends, and upcoming requirements from new policies impacting teacher demand. TSDR is the recommended source of forecasts for teacher supply and demand in Victoria.

Significant technological advances and a growing emphasis on child safety are also driving demand for new workers, such as data privacy and cybersecurity officers, child safety officers, and information technology workers.

Meeting this demand will be challenging. Industry already reports significant shortages in vocational education and training (VET) teachers and trainers, early childhood teachers, education aides and leaders across all sectors. These roles need to be filled for growth to be realised.

Industry also identified changing skill needs to ensure continued quality of education outcomes. Education and training workers at all levels need to build their skills in class and behaviour management, use of digital management and pedagogy tools, innovation in practices and management and leadership.

^e Due to rounding, some totals may not correspond with the sum of the separate figures.

^f Note that child carers are covered in the Health and Community Services Insight report which highlights that current employment levels are around 20,400 workers, with an expected new worker demand of 1,950 between 2022-25. This is made up of 1,000 new jobs (employment growth) and replacement of 1,000 retirees.

Workforce priorities

Three priorities are identified to address workforce and skilling needs for the education and training industry:

1. Build the education workforce – focus is required to improve capacity and capability in the teaching workforce across all sectors to deliver desired student outcomes.
2. Optimise the education support workforce –to diversify the workforce mix, alleviate pressure on teachers and enhance student experience and outcomes.
3. Enhance career progression to maximise retention and improve leadership capability – career progression to more senior technical and/or leadership roles should be cultivated to enhance retention.

Education and training pipeline and workforce response

Pathways to employment in the education and training industry include Higher Education and VET with 56 per cent of workers holding a degree or above as their highest level of education and 31 per cent holding a VET level qualification as their highest level of education. There were approximately 40,940 enrolments in relevant VET qualifications and 18,120 in higher education in 2019.

Key entry points to the industry include the Certificate III and IV in School-Based Education Support, Certificate IV in Training and Assessment (TAE), Diploma and Certificate III in Early Childhood Education and Care and the Bachelor of Education and Master of Teaching.

Graduates from these programs are the key source of workers to the industry. While activity in these courses is generally high, evidence shows that meeting workforce demand will still be challenging.

In early childhood education the pace of growth creates continued demand for workers that is not easily met. Awareness of employment opportunities for education support workers need to be lifted, drawing workers from more diverse backgrounds such as psychology and youth work.

In VET, the dual requirements of industry expertise and education qualification means that it is important to attract experienced and passionate industry practitioners into teaching roles. Across all sectors, increased attraction needs to be matched by retention and progression in order to fill senior roles.

Improving practical experience while studying (particularly in early childhood education) and building capability in class and behaviour management improve success for incoming teachers. Whether the Certificate IV TAE is adequate for entry as a VET teacher is contested. Commentators indicate it focuses too much on compliance to training packages rather than teaching and that it is a barrier for industry experts who wish to contribute their expertise to advancing their industry through training.

Clearer strategies for professional development and appropriate mentoring and support in all sectors can also help existing workers to remain current and stay in the workforce. Greater use of communities of practice, particularly across TAFEs and training organisations, are an important strategy to improve teaching relevance and quality and to provide feedback to qualification developers.

Job design, impact of policy and compliance obligations and the employee value proposition are some of the issues in securing the required workforce. These remain key areas of focus for the industry.

Table 3 highlights actions that could be adopted by education, industry and government to meet workforce demand.

Table 3 | Actions for consideration for education, industry, and government

- Continue to leverage existing Government early childhood education initiatives
- Develop a VET workforce strategy to provide a comprehensive approach to deepening and broadening the vocational teacher workforce
- Support professional development that supports teaching and operational excellence
- Strengthen collaboration between providers within and across sectors
- Promote collaboration between employers and education providers to create touchpoints for both workforce and student bodies
- Build a community of practice model that allows institutions to share updates and learning across the entire education and training industry
- Develop a stronger focus on supporting career progression into senior technical and/or leadership roles

Industry Outlook

The education and training industry is vital to Victoria's economy

The education and training industry employs 8.7 per cent of the total Victorian workforce (308,700 workers).¹¹ Across the industry, approximately 70 per cent of workers are female, significantly higher than the Victorian average of 47 per cent. Approximately 34 per cent of workers in the sector are aged over 50, which is slightly higher than the Victorian average across all sectors of 29 per cent.¹²

The education and training industry delivers learning in institutional settings, in the workplace or virtually into work and home. The services are provided by early childhood education and care services, kindergartens, schools, learn locals, TAFEs and other registered training organisations (RTOs), universities, non-university higher education providers and non-accredited providers.¹³ Early childhood education and care services are also considered part of the health and community services industry given children receiving these services are often young and the focus is on care in addition to play-based learning.

Employment opportunities in the industry are available at all skill and experience levels. For example, educational support workers such as integration aides and examiners play important roles in the industry.

Most workers in the industry have formal post-school qualifications.¹⁴ 31 per cent have a vocational education and training (VET) qualification and 56 per cent hold a higher education qualification (as their highest qualification level). Over time, enrolments in both higher education and VET have increased in line with population growth and in response to increased participation in non-compulsory education.

The education and training industry is highly regulated.¹⁵ Entry to teach or to operate in most sectors requires a designated tertiary qualification and each sector follows curriculum and has various forms of quality oversight. In addition, as most providers offer services to children, workers are required to hold a Working with Children Check.

The education and training industry has been severely impacted by the COVID-19 pandemic. During lockdowns to restrict the spread of infection, intakes into early childhood services were restricted to children of essential workers and vulnerable children. Schools moved in and out of lockdowns throughout 2020 and 2021. Remote and home-based learning was established during these periods.¹⁶

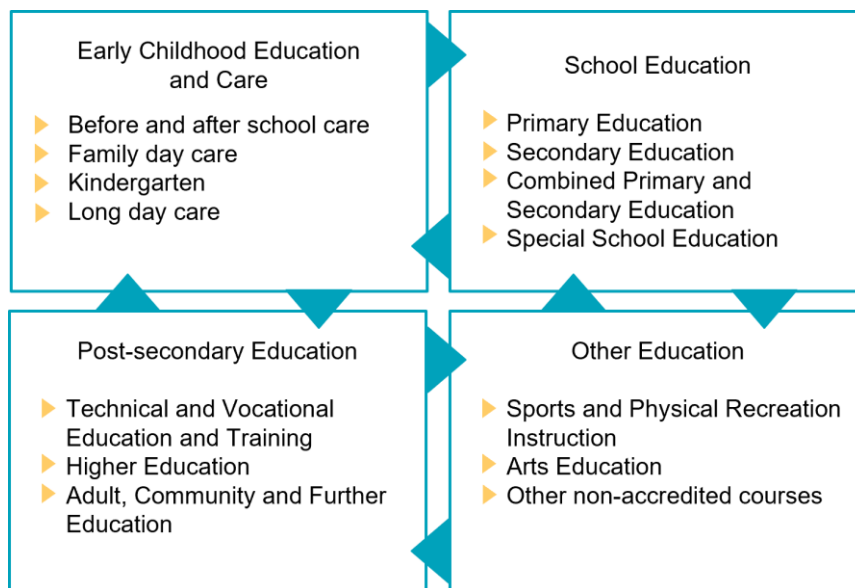
¹⁷

In a similar way, post-secondary education also delivered virtual learning. The closure of borders and restrictions on travel had severe impacts on the international student market. Those students who could travel home in the early stages of the pandemic were not able to return to Australia for most of 2020 and 2021. This was also the case for new students, resulting in substantial declines in numbers. International students who remained in Australia were able to continue study remotely but with access to worksites closed they struggled with income to support themselves. The international education sector will require a sustained period of growth to reach the numbers immediately prior to COVID-19.

Other education, such as sports instruction and arts education, were unable to operate in person for long periods as they were treated as non-essential.

Key sectors within the education and training industry are shown in Figure 1.

Figure 1 | Key sectors within the education and training industry⁹



Early childhood education and care

Early childhood education and care (ECEC) straddles the education and health and community service industries, and includes long day care, kindergarten, family care day, and outside-school-hours care. The workforce consists of teachers, who are the focus of this insight report, and educators (classified as child carers by the Australian Bureau of Statistics and therefore represented that way in later sections of this report), who are the focus of the Health And Community Services Insight report. Teachers and educators work across both industries, however, and therefore appear in both reports.

Most parents and guardians send their children to kindergarten, or other forms of ECEC, before they attend school. Providers in this sector either operate centres or provide services in homes (family day care) or through schools (for outside school hours care).

ECEC services focus on providing a safe, quality play-based learning program. Workers providing these services typically attain appropriate qualifications through VET pathways and higher education.¹⁸

Kindergarten programs are not compulsory in Victoria; however, the vast majority of children are enrolled in the year before school and, increasingly, in three-year-old kindergarten as well.¹⁹

In 2020-21, there were a total of 314,480 children in the Victorian ECEC system.²⁰ There are approximately 50,000 people working in the ECEC sector,²¹ comprising primarily of female workers (94 per cent).²²

While Victorian government subsidies have previously been available for both long day care and sessional kindergarten programs, the ECEC sector will grow significantly due to the Commonwealth Government’s investment to increase child care subsidies plus \$5 billion of State funding announced for three-year-old kindergarten from 2019-2029, and an additional \$9 billion over the next decade for the Best Start, Best Life reforms, which include free kindergarten and transitioning four-year-old kindergarten to 30-hour a week Pre-Prep programs by 2032.^{23,24} As enrolments in kindergarten and hours delivered increase, it is anticipated that demand for both sessional and long day care kindergarten programs will increase. Workers in kindergarten programs are educators who hold a VET qualification, and teachers who are university qualified.²⁵

⁹ Informed by the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC), 2013 – available [here](#). Early childhood education and care sits across both the education industry and the health and community services industry.

Most early childhood services are regulated under the National Quality Framework – administered by the Commonwealth Department of Education and the Australian Children’s Education and Care Quality Authority.²⁶ Other early childhood services are regulated under the Victorian Children’s Services Act.²⁷

School education

Primary and secondary schools deliver curriculum to children and teenagers, typically between the ages of 5 and 18. Outside the mainstream school system, there are specialist schools for children with additional learning needs and abilities. These schools have lower staff to student ratios, an alternative curriculum and infrastructure, assistive technology and additional equipment to support students.

Teachers in mainstream and specialist schools must have a university level qualification.²⁸ Schools may prefer aides to hold a qualification, however it is not mandatory. Psychologists, nurses, speech therapists and other support staff hold a qualification where entry to the occupation stipulates a qualification in order to practice. Some occupations may also require industry certification to practice in addition to the qualification.

In Victoria, out of the 1,014,246 students as at July 2021, 63.9 per cent of students attended government schools (weighted in favour of primary schools).²⁹ Out of 2,276 schools in Victoria, 1,553 are government schools with a total of 648,044 students enrolled state-wide.³⁰ Of the students enrolled in government schools, nearly 60 per cent were in government primary schools.³¹ It is anticipated that growth will continue steadily as population increases – in 2020, enrolments in government schools grew 1.65 per cent.³²

The proportion of students attending non-government schools is higher in Victoria than in almost all other states and territories and continues to increase. In 2020, the number of students enrolled in Victorian independent schools grew 2.67 per cent and 0.65 per cent at Catholic schools. Independent schools are expected to continue strong growth ahead of Catholic schools.³³

Post-secondary education

The post-secondary education sector provides education and training for a wide range of industries, encompassing VET qualifications (delivered by TAFEs, industry, community and other providers), higher education (delivered by universities, university colleges and institutes of higher education), as well as adult, community and further education which provides non-accredited training as preparation for work.

There were 917 registered training organisations in Victoria in 2020,³⁴ including 16 TAFEs (four of which operate as a division within universities) that provide VET.³⁵ In 2020, Victoria had 932,055 students enrolled across all VET institutions.³⁶ TAFEs and private training providers deliver learning mainly directed to the needs of occupations in a wide range of industries. VET qualifications can be gained by students through an apprenticeship or traineeship, and in different locations of learning such as the classroom, workshops, workplaces and on-line.

There are nine public universities in Victoria (including the Australian Catholic University), and approximately 31 Institutes of Higher Education (e.g., the Australian College of the Arts, the Australian Institute of Music and Endeavour College of Natural Health).³⁷ Students enrolled across all higher education institutions in Victoria totalled 337,410 equivalent full-time study load (EFTSL) in 2020. Universities usually offer courses across a wide range of disciplines to students who have completed secondary school (or an appropriate alternative pathway) and at all higher education qualification levels. Staff are required to conduct academic research as well as teach courses to students, and typically engage with the broader community and industries to map courses to public and industry needs.

There are over 900 registered training organisations in Victoria providing vocational education and training services to a range of learners.

The adult, community and further education sector is led by the Adult, Community and Further Education Board, which administers public funding for approximately 250 Learn Local providers (many who are part of Neighbourhood Houses),³⁸ AMES Australia and the Centre for Adult Education (CAE) to deliver pre-accredited training and other educational programs. These programs are for adult learners, the majority of whom have low levels of education attainment and/or have experienced socio-economic hardship. They support learners to improve core skills (such as literacy, numeracy, employability and digital skills), engage with community, and return to study and broaden their employment options (including providing pathways for further education).³⁹ In 2019, nearly 30,000 Victorians undertook short courses delivered by Learn Local providers.⁴⁰ Over 30 per cent of learners who enrol in Learn Local courses go on to accredited training at a TAFE or another training provider.⁴¹ Enrolments in Adult, Community and Further Education are not counted as part of the overall pipeline of workers about to enter the workforce given the focus of learning is primarily to support engagement in community and further study.

Other education

Non-accredited education and training available through commercial and community entities is also included in the education and training industry definition.

Many courses and services are non-accredited and not regulated and are offered by commercial entities and self-employed operators. Courses typically cover personal and business development and digital skills, often endorsed by companies such as Microsoft and Google.⁴² Companies such as General Assembly offer short form targeted instruction in the latest in digital tools and techniques. Similar programs are delivered by regular education institutions in addition to their accredited courses. Many employers also engage individual, providers or commercial firms to deliver specific professional development programs focused on uplifting the capability of their organisation.

There is now a cross-over and competition between the formal education sector and the commercial and community sector engaged in non-accredited education and training services, characterised most recently by the growth in micro-credentials.

Community based non-accredited education and training includes arts education and sports and recreational instruction which provide the avenue for advancing art and culture and covers important roles such as community arts and dance, umpiring for community sport or yoga instruction for personal well-being.⁴³

The education and training industry is expecting steady growth consistent with population growth and significant government funding

The education and training industry is expected to grow over the next three years to 2025. This will be underpinned by population growth, government priorities to expand access to ECEC, the increased demand for skilled and qualified workers across all industries and the growth of research and its commercialisation.





























Shared Government Responsibilities





















Education and training with its strong focus on the public good results in both the Commonwealth and states and territories sharing responsibilities. Under the Australian Constitution, the states and territories carry responsibility for education and training, although there have been decisions of governments to transfer responsibilities. In the broad, government engagement and oversight of the sectors are as follows:

- For ECEC, states carry responsibility for management and funding of the services and therefore workforces, especially for pre-school learning, although the Commonwealth subsidises child care services and sets quality standards in conjunction with states and territories
- For schooling, the states and territories carry most responsibility, including regulating for quality and workforce with the Commonwealth providing substantial financial transfers to support schooling outcomes and with states and territories operating national schooling bodies such as the Australian Curriculum, Assessment and Reporting Authority
- For vocational education, operations and funding rest principally with states and territories with the Commonwealth providing financial transfers (including student loans), coordination and funding of national industry training packages and qualifications and regulation through the Australian Quality Skills Authority, although Victoria and Western Australia retain authority assigned under the Constitution for accreditation of VET courses and providers operating solely within their jurisdiction
- For higher education, the Commonwealth carries public funding responsibilities based on agreement between levels of Government, and quality oversight through the Tertiary Education Quality and Standards Agency, with states and territories retaining Constitutional responsibility which entails responsibility for the legislative establishment of universities, including governance and financial oversight.

The industry outlook is driven by a range of factors,⁴⁴ set out in Table 4, followed by specific examples in each sector.

Table 4 | Drivers of demand in the education and training industry

	Driver	Early childhood education and care	School education	Post-secondary and ACFE	Other education
Policy	Decision of federal and Victorian Government to expand access to ECEC, improve school retention and outcomes, and lift workforce participation for parents and guardians, school leavers and Victorians with disabilities.	 High	 High	 High	 Medium
	Regulatory requirements based on lifting quality education outcomes will continue to determine eligibility to work as teachers and staff to student/child ratios will determine the number of teachers required.	 High	 High	 Medium	 Low
	Across all education sectors, primarily senior secondary, VET and higher education, the needs of Industry are taken to shape learning expectations on the basis that it supports productivity and improves likelihood of students securing jobs.	 Low	 Medium	 High	 Low
Economic	The number of services, including for-profit will grow in response to the growth in the youth population.	 High	 Low	 Medium	 Low
	The drop in the international student numbers prompts institutions to diversify offerings and target alternative student markets.	 Low	 Medium	 High	 Low
Social	Population growth, particularly in regional areas and peri-urban areas, will drive greater demand for education.	 High	 High	 High	 Medium
	Increases in demand from workers to upskill through shorter, sharper and more flexible learning.	 Low	 Medium	 High	 Medium

	Driver	Early childhood education and care	School education	Post-secondary and ACEF	Other education
	An increasing emphasis on mental health and wellbeing increases expectations on institutions to diversify their services.	 Low	 High	 High	 Medium
Technological	COVID-19 accelerated the workforce to uplift its digital capability (e.g., with virtual learning technologies). Ongoing upskilling will be required into the future.	 Low	 High	 High	 Medium
	Digital disruption gives rise to new expectations of learners for new modes and pedagogies for learning.	 Low	 Medium	 High	 Low
Environmental	Solutions for clean economy are expected to lie in higher education research, and vocational education is expected to prepare more workers for adjustments to the built economy to mitigate climate change.	 Low	 Medium	 High	 Low
	Physical infrastructure will need to expand and evolve to accommodate increased student numbers.	 High	 Medium	 Medium	 Low

Early childhood education and care

The ECEC sector will be driven significantly by government investment, with kindergarten reforms generating additional demand for early childhood educators and teachers. The Victorian Government is investing \$5 billion over 10 years to support the rollout of universal funded three-year-old kindergarten.⁴⁵ It is also investing \$9 billion over the next decade to expand the Best Start, Best Life program with three major new initiatives, making kinder free across the state, transitioning four-year-old kindergarten to 30-hour a week Pre-Prep programs by 2032 and establishing 50 government operated child care centres.⁴⁶

The Australian Government released in 2021 a ten-year strategy to ensure a sustainable, high-quality sector.⁴⁷ The Australian Government will also invest approximately \$5.4 billion to reduce the cost of child care, starting on July 2023⁴⁸, designed to lift workforce participation of parents. Correspondingly, there is likely to be significant growth in programs offered by early childhood education and care providers.

The ECEC sector will also be driven by population growth in regional and rural areas.^{49,50} This will have implications for the physical infrastructure that is required to support increased places and creates additional opportunities for providers to enter the industry.

School education

Government investment will continue to drive growth in the school education sector, with a particular focus on providing increased educational support to students. The Victorian Government has committed \$1.6 billion as part of a Disability Inclusion package, ensuring that students in mainstream schools and special schools are supported at school – this will create 1,730 jobs by 2025.⁵¹ An emphasis on inclusion for children with disabilities is likely to increase workforce participation for parents and guardians.

The Victorian Government will also invest \$277 million to deliver a comprehensive range of reforms, including the School Mental Health Fund to implement mental health and wellbeing programs, and specialist services, increasing demand for school counsellors.⁵²

Population growth will increase demand for infrastructure, particularly in regional and rural areas. The Victorian Government has committed \$1.6 billion in infrastructure investment for 100 new schools, as well as maintenance and upgrades to existing schools across the state.⁵³

\$32.8 million has been made available to extend the Primary Maths and Science Specialists initiative to train 200 more primary school teachers as mathematics and science specialists and help more students achieve their potential in STEM.⁵⁴ Similarly, further investment in the Secondary Mathematics and Science Initiative will support specialisation in the teaching of mathematics and science in secondary schools.⁵⁵ This is indicative of a broader emphasis on digital teaching and education to meet other industry needs as students leave school.

The 2022 Victorian Budget delivers on the recommendations of the Firth Review and supports the move to a new integrated senior secondary certificate in 2023, which will be fully implemented by 2025. This will bring together the Victorian Certificate of Education (VCE) and Victorian Certificate of Applied Learning (VCAL) certificates and introduce the new VCE Vocational Major and a Victorian Pathways Certificate (VPC) across government schools.

The Budget investment of \$277.5 million includes \$87.9 million to boost VET teacher, trainer and school capacity and \$120.2 million to help schools implement the new certificates and improve access to VET for government school students. In addition, \$69.4 million will be directed to expand the successful Head Start program state-wide, giving Victorian Government school students the opportunity to sign up to an apprenticeship or traineeship while completing their VCE at school.⁵⁶

Post-secondary education

The post-secondary education sector will continue to be driven by strategic government investment in skills to equip graduates from vocational education and training and higher education programs with what is required to meet industry needs.⁵⁷ The Australian Government is continuing to negotiate a new National Skills Agreement with the states and territories.⁵⁸ This will have implications for how the education and training industry will shape education design and delivery.

Post-secondary education demand will be driven by industry needs and social and technological factors such as increased emphasis on wellbeing.

In 2019, the Victorian Government launched the Free TAFE initiative to increase training participation for those occupations in highest demand. There are now over 60 courses available attracting more than 100,000 enrolments.⁵⁹ Similarly, the \$1 billion JobTrainer Fund was expanded to continue delivering low fee or free training places in areas of skills need. The previous Australian Government invested an additional \$500 million (to be matched by state and territory governments), including 10,000 additional digital skills training places and around 33,800 additional training places in the aged care sector.⁶⁰

Throughout the COVID-19 pandemic the Australian Government delivered the 'Boosting Apprenticeship Commencements' wage subsidy, enabling eligible Victorian employers to receive a wage subsidy for 50 per cent of the wage up to \$7,000 per quarter for new or recommencing apprentices and trainees for a 12-month period from the date of commencement. From July 2022, the Australian Apprentice Training Support Payment is available to eligible apprentices in priority occupations listed on the Australian Apprenticeship Priority List.⁶¹

The Australian Government's Job-ready Graduates Packages is aimed at providing 30,000 new university places, 50,000 new short course places and additional support for students in regional and remote Australia. This will be a \$20 billion investment by 2024.⁶² The higher education sector will need to focus on flexible and remote models of delivery to meet increased demand.

There is also a continuing trend toward research commercialisation in the higher education sector. The Commonwealth has increased funding for research commercialisation and the Victorian Government has established Breakthrough Victoria as a catalyst for application of Victorian research.

An important source of this revenue is in the international student market, which is expected to rebound by 2025-26 (having fallen by over a third over the course of the COVID-19 pandemic in Australia, while demand in the UK, US and Canada remained steady).⁶³ Where domestic demand for students is likely to grow slowly (with undergraduate enrolments still capped under the Job-ready Graduates package), tertiary education providers are challenged to improve the international student experience to drive enrolments (and revenue) while visa processing timelines can act as a drag on attraction and enrolments.

Finally, there were reforms to the Higher Education and Skills Group within the Department of Education and Training in late 2021. A dedicated Adult, Community and Further Education (ACFE) division has been created to connect the work of the ACFE Board with programs led by the Higher Education and Skills Group, the Office of TAFE Coordination and Delivery and the Victorian Skills Authority to improve learner pathways into further education and employment.⁶⁴

Increases in the Commonwealth Government's childcare funding and the roll out of three-year-old kindergarten and the expansion of the Best Start, Best Life across the State will drive significant demand for VET qualified workers in early childhood education. The vocational education and training sector is poised for growth, boosted by significant government funding to 2025-26 (e.g., the Free TAFE program). The return of international students will likely increase demand in post-secondary education, although providers may be wary of the stability of the market, especially where it may have been seen as a strategy to subsidise research.

Other education and training

The growth of edtech and in-house professional development is triggering growth in this sector. Global learning platforms and the expansion of non-accredited micro-credentials and short courses are the main drivers.

Workforce and Skilling Implications

An estimated 41,000 additional workers are required to meet projected demand over the next 3 years

On average, across all industries total employment is expected to grow by an additional 211,900 workers to 2025, from 3,538,900 workers in 2022, an annual growth rate of 1.97 per cent^h.^{65,66} In comparison between 2017 and 2020 employment grew by 2.68 per centⁱ annually.⁶⁷

In the education and training industry, employment is expected to grow by an additional 25,800 workers to 2025, from 308,700 workers in 2022, an annual growth rate of 2.56 per cent^j which is higher than the overall Victorian average across all industries.^{68,69} In comparison between 2017 and 2020 employment across this industry grew by 5.01 per cent annually^k.⁷⁰

The education and training industry in Victoria is expected to need an additional 41,000 workers by 2025.⁷¹ This comprises demand for 26,800 new workers and replacing 15,100 retirees.⁷² A growing population will drive demand for education and training services across Victoria, with job opportunities forecast for all sectors in the industry.

The transformation of the early childhood system in Victoria to deliver free kinder for Victorian families from 2023, transitioning the four-year-old Kindergarten 15-hour program to a Pre-prep program offering 30 hours of play-based learning a week and continuing the current commitment to rollout the three-year-old Kindergarten program across the state will lead to 11,000 new jobs.^{73,74}

Demand for primary and secondary school teachers is expected to grow in regional and rural areas given the number of metropolitan residents who have relocated since the COVID-19 pandemic.⁷⁵ The recently announced New Schools Enterprise Agreement is expected to lead to 2,000 more public school teachers.⁷⁶

Government investment in mental health and wellbeing programs in schools will increase demand for mental health practitioners and counsellors (e.g., as part of the School Mental Health Fund). Research shows that ongoing and increasing use of internet and social media among young people at school and at home increases exposure to mental health threats such as online bullying, inappropriate online material and negative news cycles.⁷⁷

Table 5 identifies the top ten occupations in demand over the next three years, taking into account the number of new workers needed and replacing retirees.⁷⁸ Of these, eight occupations (highlighted in table) are expected to experience employment growth at a rate above the overall Victorian average between 2022 and 2025. These figures are estimates but it is important to note that they may be under-estimated as they do not account for existing vacancies nor take account of changes in the rate of workers leaving the industry, which stakeholders indicated appears to be higher than normal currently.

^h 3-year compound annual growth rate

ⁱ Computed for 2017 to 2020 employment growth for pre-COVID comparison

^j 3-year compound annual growth rate

^k Computed for 2017 to 2020 employment growth for pre-COVID comparison

Table 5 | Occupations in demand for the education industry^{l,m,79,80}

Occupation	Current employment	Employment growth (2022–25)		Retirements (2022–25)	New workers needed (2022–25)
		Number	Per cent		
Primary School Teachers	61,100	2,500	1.6%	2,300	4,800
Secondary School Teachers	48,350	2,150	1.4%	2,300	4,400
Education Aides	22,900	3,150	3.6%	800	3,950
University Lecturers and Tutors	13,900	1,950	3.3%	1,050	3,000
Early Childhood (Pre-primary School) Teachers	17,400	1,700	4.7%	550	2,250
Private Tutors and Teachers	10,650	1,150	2.9%	700	1,850
General Clerks	8,500	1,200	3.5%	550	1,750
Special Education Teachers	6,400	1,000	3.2%	550	1,550
Vocational Education Teachers	6,550	550	2.0%	550	1,050
Education Advisers and Reviewers	11,650	500	2.6%	350	850

Legend

	Above Victorian employment growth average between 2022 and 2025
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Modelling of teacher demand prepared by the Department Education and Training (DET) for the Victorian Teacher Supply and Demand Report (TSDR)⁸¹ differs from the estimates above due to key methodological differences. The Skills Plan models economy-wide demand using a top-down approach whereas the TSDR constructs bottom-up estimates based on granular data collection, industry-specific attrition trends, and upcoming requirements from new policies impacting teacher demand. TSDR is the recommended source of forecasts for teacher supply and demand in Victoria.

The greater use of technology-based solutions for curriculum, assessment, administration and teaching and learning has increasing demand for ICT related occupations. Growing emphasis on child safety is also driving demand for emerging occupations and job roles in the industry. These are outlined in Table 6. Emerging occupations are defined as new, frequently advertised jobs which are substantially different to occupations already defined in the ANZSCO.⁸²

Table 6 | Emerging occupations in the education and training industry⁸³

Emerging occupations	
<ul style="list-style-type: none"> Child safety officers 	<ul style="list-style-type: none"> Data privacy and cybersecurity officers

^l Due to rounding, some totals may not correspond with the sum of the separate figures

^m Note that child carers are covered in the Health and Community Services Insight report which highlights that current employment levels are around 20,400 workers, with an expected new worker demand of 1,950 between 2022-25. This is made up of 1,000 new jobs (employment growth) and replacement of 1,000 retirees.

Emerging occupations	
<ul style="list-style-type: none"> Industry liaison officers 	<ul style="list-style-type: none"> Information technology and audio-visual consultants
<ul style="list-style-type: none"> School investigators 	<ul style="list-style-type: none"> Risk analysts

Occupational and skill shortages need to be addressed to realise growth

The education and training industry faces significant demand, driven by the pressures from the COVID-19 pandemic, government investment to lift quality and capacity, and continuing population growth.

The National Skills Commission Skills Priority List identifies occupations in shortage in the industry. A shortage exists when employers are unable to fill or have considerable difficulty filling vacancies for an occupation at current levels of remuneration and conditions of employment, and in reasonably accessible locations. Where an occupation specialisation is in shortage, the occupation will be treated as in shortage. Many occupations listed face more chronic shortages in regional Victoria.

VSA consultations indicates further occupations across Victoria can be considered to be in shortage, or soon will be. For example, VET teachers and trainers are in shortage across many industry areas in which they teach.⁸⁴ exacerbated an ageing workforce.⁸⁵

A list of current occupation shortages is shown in Table 7.

Table 7 | List of occupational shortages facing the education and training industry ^{86 87}

Occupational shortages	
<ul style="list-style-type: none"> Early childhood teachers 	<ul style="list-style-type: none"> Early childhood educators (child carers)
<ul style="list-style-type: none"> Education aides (which includes Aboriginal and Torres Strait Islander education workers, Integration aides, Preschool aides and Teachers' aides) 	<ul style="list-style-type: none"> Librarians
<ul style="list-style-type: none"> Language teachers 	<ul style="list-style-type: none"> Private tutors
<ul style="list-style-type: none"> School allied health professionals 	<ul style="list-style-type: none"> Senior early childhood teachers and educational leaders
<ul style="list-style-type: none"> Special education teachers (which includes special needs teachers, teachers of the hearing impaired and teachers of the sight impaired) 	<ul style="list-style-type: none"> STEM teachers
<ul style="list-style-type: none"> Vocational education teachers 	
Additional occupations as part of the National Skills Commission's updated Skills Priority List released on 06 October 2022⁸⁸	
<ul style="list-style-type: none"> Primary school teachers 	<ul style="list-style-type: none"> Secondary school teachers
<ul style="list-style-type: none"> Student counsellors 	<ul style="list-style-type: none"> Careers counsellors

At all levels, workers in the education and training industry will need to build general skills to ensure a strong foundation in preparing learners for employment opportunities and further study. A list of specific skills shortages across the education and training workforce is shown in Table 8.

Table 8 | Skills shortages facing the education and training industry ⁸⁹

Skills shortages	
<ul style="list-style-type: none"> Digital capability 	<ul style="list-style-type: none"> Innovation
<ul style="list-style-type: none"> Literacy and numeracy 	<ul style="list-style-type: none"> Management and leadership
<ul style="list-style-type: none"> Planning and organising 	<ul style="list-style-type: none"> Problem solving
<ul style="list-style-type: none"> Teamwork 	

Education and Training Pipeline

There were around 40,940 enrolments in education and training related VET qualifications in 2020 and 18,120 education relevant enrolments in Higher Education in 2019.^{90,91} This should translate to more than 22,680ⁿ completing students entering the workforce each year with relevant qualifications, presenting a significant opportunity to meet projected demand, although some will seek employment in other industries. For further detail, see the collaborative response toward the end of this report.

VET will continue to facilitate important pathways to the education and training industry

VET will continue as an important channel of preparation for the education and training workforce. Thirty-one (31 per cent) of workers in the industry hold a VET level qualification as their highest level of education.⁹²

The VET sector is used for entry to early childhood education and care and as a teacher in the VET sector itself. The Diploma of Early Childhood Education and Care and the Certificate III in Early Childhood Education and Care are the threshold qualifications for early childhood and care and Certificate IV in Training and Assessment for teaching in VET. There are a small number of enrolments in education and training related skill sets in Victoria.

The VET sector also offers courses for preparation in school-based education support and outdoor leadership.

There were approximately 40,940 enrolments in VET education and training related qualifications and skill sets in 2020 in Victoria.

VET Activity

People enrol in VET courses for one of three main reasons:

- to prepare for employment
- to support current employment
- to progress their careers within the industry.

This equates to training categorised as prior to employment; with employment (as an apprenticeship or traineeship) and upskilling once qualified as shown in Table 9. The table shows the enrolments in 2020 in VET courses on the Victorian Funded Course List (FCL) and the Victorian Funded Skill Set List (FSSL) related to this industry and against each category.^{93,94} The enrolment numbers are drawn from Total VET activity (TVA) which comprises enrolments supported by public funding or by private contribution.

As part of preparing this report, industry representatives have provided their perspectives on the purpose of these qualifications, which is summarised in Figure 2 and helps to read Table 9.

ⁿ This number is determined by taking the total number of VET enrolments in courses undertaken prior to employment, combined with 1/3 of the total number of HE enrolments in AQF 5-8 courses (as these courses are traditionally undertaken prior to employment and the average bachelor degree is three years, so therefore only those in their final year of study will enter the workforce the following year).

^o Note that the Victorian Funded Skill Set List was formally introduced from 2021 onwards.

Figure 2 | VET pipeline key

1. 'AT' indicates a classroom-based course is also available as an apprenticeship or traineeship option
2. 'Q' indicates industry values the course as a qualification
3. 'SS' indicates industry values the course as a skill set
4. 'EIR' indicates it is an Endorsed Industry Requirement as noted by industry
5. 'OL' indicates the course leads to an Occupational License as noted by industry

Note: Industry has not provided feedback on all qualifications and where indicated; each value assignment can be reviewed in the future.

Table 9 | VET pipeline for the education and training industry in Victoria^P

Prior to employment	
Qualifications (18,175 TVA enrolments 2020, 271 Skill Set enrolments 2020)	
Certificate III	8,026
Certificate III in Early Childhood Education and Care (Q,AT,EIR)	8,026
Certificate IV	9,499
Certificate IV in Career Development (Q,AT,EIR)	120
Certificate IV in Outdoor Leadership (Q,SS,AT,EIR)	88
Certificate IV in School Age Education and Care (Q,AT,EIR)	43
Certificate IV in Training and Assessment (Q,SS,EIR)	9,248
Diploma	650
Diploma of School Age Education and Care (Q,AT,EIR)	363
Diploma of Teacher Education Preparation (Q)	287
Skill Set	271
Enterprise Trainer-Presenting Skill Set (Q,SS)	271
With employment (apprenticeship and traineeship)	
Qualifications (2,351 TVA enrolments 2020)	
Certificate III	1,344
Certificate III in Early Childhood Education and Care (Q,EIR)	936
Certificate III in School Based Education Support (Q,EIR)	408
Certificate IV	48
Certificate IV in Outdoor Leadership (Q,SS,EIR)	35
Certificate IV in School Based Education Support (Q,EIR)	13
Diploma	959
Diploma of Early Childhood Education and Care (Q,EIR)	940
Diploma of School Age Education and Care (Q,EIR)	19
Upskilling once qualified	
Qualifications (20,012 TVA enrolments 2020, 129 Skill Set enrolments 2020)	
Certificate III	3,214
Certificate III in School Based Education Support (Q,AT,EIR)	3,214

^P VET courses can support a range of occupations across a range of industries, and occupations can also support a range of industries. To present the likely VET trained employment pipeline by industry, enrolments for a course have been assigned to the most common industry in which people seek employment.

Certificate IV	4,425
Certificate IV in School Based Education Support (Q,AT,EIR)	4,131
Certificate IV in TESOL (Teaching English to Speakers of Other Languages) (Q)	294
Diploma	12,175
Diploma of Early Childhood Education and Care (Q,AT,EIR)	11,362
Diploma of Training Design and Development (Q,SS,EIR)	409
Diploma of Vocational Education and Training (Q,SS,EIR)	404
Graduate Certificate	198
Graduate Certificate in Career Development Practice (Q,EIR)	198
Skill Set	129
Assessor Skill Set (Q,SS)	129

Note: Enrolment figures in the table above are as reported by NCVET, Total VET student and courses 2020: program enrolment. There may be instances where program enrolments are not reported by providers to NCVET and therefore not included in the enrolment figures in the total VET training activity data. Total VET activity for 2021 is expected to be released in August 2022.

Higher education is the primary pathway into the education and training industry

Higher education (HE) is the primary pathway into the education and training industry, with 56 per cent of workers holding a degree or above as their highest level of education. An education related higher education qualification is required for teaching roles in ECEC and at schools. Lecturers, tutors and researchers in higher education usually enter the industry based on higher education level qualifications, usually at a discipline post-graduate level. Most higher education institutions offer staff in teaching roles professional development programs to contribute to the quality of teaching and learning.

Occupations in the industry that rely heavily on higher education qualifications are projected to grow over the next five years.⁹⁵ This is in response to modest population growth across the state in school age children and the flow-through to post-school education and training. Specialist roles that focus on at-risk students, child safety and privacy protections required by regulation and law will also grow in number.

In 2019, there were more than 18,110 education and training related enrolments delivered by Victorian universities.⁹⁶ Total enrolment has grown steadily at 2.5 per cent annually between 2017 and 2020. The education and training industry pipeline for the HE system is shown in Table 10. Only high enrolment courses with equivalent full-time study load (EFTSL) over 100 are included. There are a significant number of qualifications with lower levels of enrolments.

Table 10 | Higher Education pipeline for the education and training industry in Victoria⁹

Teacher Education (18,116 EFTSL, Victoria, 2019)	
Australian Qualifications Framework (AQF) 9+ (e.g., Master and above) (5,408 EFTSL)	AQF 5-8 (e.g., Diploma, Bachelor, Hons) (12,708 EFTSL)
<i>Examples include:</i> <ul style="list-style-type: none"> • Master of Teaching (Secondary) (1,905) • Master of Teaching (Primary) (994) 	<i>Examples include:</i> <ul style="list-style-type: none"> • Bachelor of Education (Primary) (3,100) • Bachelor of Education (Early Childhood and Primary) (2,886)

⁹ A course may be allocated to different narrow field of educations by different higher education providers based on the primary purpose of the course. Higher education enrolments reported against a course under a specified narrow field of education reflect only the portion of enrolment allocated to the narrow field of education and are not reflective of the total enrolment for the course.

<ul style="list-style-type: none"> • Master of Teaching (Early Childhood and Primary) (837) • Master of TESOL (437) 	<ul style="list-style-type: none"> • Bachelor of Education (1,357) • Bachelor of Education (P-12) (851) • Bachelor of Education (Secondary) (477) • Bachelor of Health and Physical Education (and other outdoor education) (449) • Graduate Diploma of Education (Early Childhood) (427)
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Workforce Priorities and our Collaborative Response

Education and training workforce priorities centre on high-quality teaching pathways and increasing education support services

Workforce shortages will be a factor for most sectors of this industry, heightening the need for new attraction strategies, workforce optimisation and a priority on retention.

With Australia facing an effective full-employment labour market, recruitment practices such as encouraging people back to the industry to fill short-term gaps is less likely to work than in the past. The supply of new entrants from VET or higher education on the other hand has built in lead times. Collaboration across key stakeholders such as government, industry, TAFEs and dual sector universities will be critical in responding to these challenges.[†]

This context gives rise to a heightened focus on innovative workforce planning. While there are technology approaches that can adjust education models, teachers and associated occupations remain central to the success of education and training – as are researchers in universities.

Rather than relying on tried approaches, the focus needs to be on job design to meet the expectations of potential candidates. The current organisation of work may exclude potential candidates such as parents with caring responsibilities or embed gender or socio-economic biases which act against people considering the job and career. Equally, targeted strategies could attract new candidates who may otherwise not consider the industry; as such, workplace support and training will be crucial. Traineeships which offer learning and earning at the same time, and using work placements as a strategy for spotting talent early, are two examples of approaches that could be considered.

Retention is also important, especially in this industry where capacity fluctuates for available educators and teachers, with a limited role for digitisation to transform the work function. Rates of pay and career progression, values alignment where the mission of the organisation meets the aspiration of employees, and general support and collegiality are also issues to consider.

The strong demand for workers across the labour market is placing pressure on the industry as there are many other attractive work destinations. This is felt particularly in the VET sector, which relies on teachers with industry expertise, as it can be more appealing to remain in their industry of origin. Failure to address this issue simply exacerbates shortages in skills for high growth industries such as healthcare.

The education industry also needs to ensure that it can meet demands for emerging skills needed to support student wellbeing and education outcomes, including child safety, engagement of at-risk students and allied health support.

Against this backdrop, feedback from engagement in developing the Skills Plan and this report, identified three key priorities, noting that the issue of remuneration while a valid response, is beyond the remit of this report. The three priorities are:

1. Build the education workforce in quantity and capability
2. Optimise the education support workforce
3. Support career progression to maximise retention and increase leadership capability.

[†] In the 2022-2023 State Budget, the Victorian Government allocated \$10 million to establish new Skills Solutions Partnerships, which will help address skills shortages in priority areas through collaboration with government, industry, TAFEs and dual sector universities.

Priority 1: Build the education workforce in quantity and capability

Each sector in this industry needs to prioritise workforce attraction to ensure sufficient flow of new entrants. However, the calibre and attributes of entrants are essential in such a human-centred activity.

The education and training industry is driven by the need for a quality experience for students and the flow-on to their learning and pathway outcomes. This is determined almost entirely through the quality of the teacher and educator. The preparation for entrants into the education and training industry is driven by this aspiration – the art and passion for teaching and facilitating the acquisition of skills and knowledge for every student.

At the same time, the expectations on workers in the industry is changing, whether in adopting technology in practice, new needs of inclusivity, or new teaching and learning practices. Strategies to lift teaching professionalism within the industry is also important. These expectations vary depending upon the sector. The quality of teaching practice is central in early education and schooling across the curriculum and for elements in other sectors with outcomes directed to industry, teaching is empowered by contemporary industry and discipline knowledge.

Improved collaboration within the industry has the potential to improve capacity and capability in the teaching workforce across all sectors. Collaboration between universities and education systems and administrators, between VET teachers and the industry which determines VET teacher qualification content and delivery, and between the ECEC sector and VET providers are key. Enhancing these exchanges helps build understanding and relevance of education and training in preparing entrants to the industry.

Collaborative response

In **early childhood education** the pace of growth creates continued demand for workers that is not easily met. Educators and teachers are needed to deliver on the significant government investment in childcare, three-year-old kindergarten, free kindergarten and Pre-Prep. Existing initiatives under the Victorian Kindergarten Workforce Strategy to attract prospective workers such as the Best Start, Best Life campaign, coupled with financial incentives for study (for example the Early Childhood Scholarships) should continue to be leveraged.⁹⁷ The National Children's Education and Care Workforce Strategy (2022-2031) has also been developed to support the recruitment, retention, sustainability and quality of the sector workforce, and will require a strategic response, as the use of childcare through increased subsidies will drive workforce need.⁹⁸ Once employed, strengthening supports can improve workforce retention.

Demand for **primary and secondary school** teachers is also significant. The education and training industry response will need to continue to support workforce planning by enabling school leadership to make effective and efficient decisions through provision of quality resources and tools.⁹⁹

In **VET**, growing the teacher workforce is critical to meeting workforce demand. Consultation highlighted shortages are increasingly common and extend to almost every industry, while the existing workforce seeks to keep pace with evolving skills needs to maintain industry currency.

There is a strong need for teachers with specialised industry experience, particularly in areas of acute demand (e.g., metal casting and rail signalling). Regulation requirements (the requirement for the teacher and assessor to hold the VET level teaching qualification as well as industry experience relevant to each unit of delivery) limits the flexibility needed by providers to adjust delivery models. Current certification requirements, on their own can provide barriers to entry for experienced industry practitioners to make a contribution back to their industry through teaching. Whilst it is important to ensure industry professionals are prepared to be effective trainers, stakeholders highlighted that current teacher training is too compliance focused. Improved recognition of prior learning may also support industry professionals to transition into teaching roles.

Stakeholders also highlighted those teachers and trainers with more industry currency would likely provide students with training on the latest equipment and tools. Improving industry engagement for

current workers could assist in ensuring the curriculum keeps pace with rapid industry reform and trainers and teachers understand how students will apply their learning in practice.

A **workforce strategy** for the VET sector is needed. Providers require guaranteed access to an education workforce and VET trainers and assessors need quality professional development. Balancing an increase in the volume of industry experts and ensuring they are adequately skilled to become a trainer is essential to the success of a VET workforce strategy.

Government plays a crucial stewardship role in the education and training industry and can focus on using regulation, funding, assets and other levers to support attraction and retention of high-quality staff.

The size of the education and training industry is strongly influenced by government policy. Schooling is a right, so follows population growth, and recent announcements to expand access to early childhood care and education will grow that sector in line with population. While post-school education and training is not compulsory, qualifications at this level are seen by governments as crucial for Victorian industry and viewed by the community as governments' responsibility for economic growth and social cohesion.

Workforces that have access to continuing training can more rapidly respond to industry shifts and changing student needs. This can be enhanced by strengthening collaboration between public education providers within (for example the childcare provider network) and across sectors. A holistic approach allows sectors to support career pathways and development between entities and improves consistency in capability.

Employers in the education and training industry can facilitate greater retention by providing ongoing employment and career progression opportunities. For industry relevant schooling and tertiary education, flexible work arrangements that allow industry experts to continue working in other industries and to teach can promote retention and assist in keeping educational and training practices aligned with broader industry needs. Those industries which are consumers of graduates of education and training also have a role, for example supporting employees to move between teaching and their work.

Wider industry engagement is also an important element in ensuring high quality teaching. Employers will need to collaborate with education providers to create frequent touchpoints for the student body throughout education delivery of relevant courses, for example in construction and healthcare. Industry highlighted in consultation that personal attributes and attitudes, such as punctuality, workplace communication and teamwork, are growing in importance.

Table 11 | Issues to address to build the education workforce

- A coordinated approach to workforce planning for each sector
- Specialised industry experience and industry currency in the VET sector
- Attraction and retention is frequently influenced by other factors such as access to services (e.g. public transport and housing, especially in regional areas) which limit the capacity to attract staff
- Limits in the connections and understanding of the needs for entry level preparation for the industry
- Casual teaching opportunities that require a significant investment of time, effort and money in retraining are unlikely to attract industry professionals

Priority 2: Optimise the education support workforce

Workers with specialised skill sets in technology, operations and working with vulnerable cohorts (e.g., educational aides) can help address student needs and enhance learning experiences. They also

reduce pressure on the academic and teaching workforce, allowing more time to focus on curriculum and delivery. Specialised skills can be used to enhance literacy and numeracy in mainstream classes, or to bring technology to life in the teaching process.

A greater diversity of roles also enables the industry to recruit from a broader base with lower barriers at the entry level. An increase in the overall education support workforce pipeline can assist in managing industry demand.

Collaborative response

A focus on how to support industry workers as they transition into education roles can improve attractiveness to the industry. Mentoring, supervision and peer networks will assist but place pressure on existing resources. The educational support workforce can play an important role. For example, new industry trainers could be supported in the classroom by integration aides and outside of the classroom by youth workers.

The education and training response could support attraction to the sector through improved awareness of relevant employment opportunities. Individuals studying courses and qualifications more traditionally aligned to other industries may be valuable in the education and training industry. For example, psychology and youth work students should be introduced to how they can apply their skills in a school, TAFE or university setting to learning and student welfare.

The education and training response should also focus on how to improve and align the skills of support workers with changing industry and student needs. For example, support workers from a psychology or child safety background could be given specific training in early childhood or secondary education classroom settings.

Table 12 | Issues to address to optimise the education support workforce

- Raise awareness of career pathways in educational support roles
- Support to deal with learning challenges, especially for students' whose learning journey has been disrupted by COVID-19

Priority 3: Support career progression to maximise retention and increase leadership capability

The education and training industry relies heavily on a casual workforce, particularly in the post-secondary sector. This can limit the extent to which institutions are likely to engage in professional development, further training, career planning and leadership development.

Career progression could be considered as a retention strategy and as a basis of preparing people for senior technical and/or leadership roles.

Collaborative response

Professional development for experienced teachers and trainers is another important element of the education and training response. A community of practice model that allows institutions to share updates and learning across the education and training industry can assist leaders in building overall workforce capability. It also improves interconnectedness in the education and training response. This should be underpinned by a stronger focus on supporting career progression into senior technical and/or leadership roles. This can contribute to securing the future generation of leaders in the industry and reduce additional burden on industry and outside funding.

In the VET sector specifically, communities of education and training practice, known traditionally as 'senates' provide an ideal clearing house for professional learning and improvements in curriculum and delivery.

Table 13 | Issues to address to support career progression

- Industry relies heavily on a casual workforce
- Professional development to support career progression to senior technical and/or leadership roles

A summary of actions that could be adopted by education, industry and government to meet workforce demand are provided below.

- Continue to leverage existing Government early childhood education initiatives
- Develop a VET workforce strategy to provide a comprehensive approach to deepening and broadening the vocational teacher workforce
- Support professional development that supports teaching and operational excellence
- Strengthen collaboration between providers within and across sectors
- Promote collaboration between employers and education providers to create touchpoints for both workforce and student bodies
- Build a community of practice model that allows institutions to share updates and learning across the entire education and training industry
- Develop a stronger focus on supporting career progression into senior technical and/or leadership roles

Appendix A Data methodology

VSA Employment Model overview

The VSA Employment Model produces estimates of:

- projected employment growth between 2022 and 2025
- projected retirements between 2022 and 2025
- projected total new workers needed between 2022 and 2025.

Table 14 further defines the model outputs and identifies the primary source for each output.

Table 14 | Employment model outputs

	Employment growth 2022-25	Retirements 2022-25	New workers needed 2022-25
Definition	Change in the number of workers employed from 2022 to 2025	Workers expected to permanently leave the workforce from 2022 to 2025	Workers needed from 2022 to 2025 to meet demand from growing employment and to replace retirees
Primary source	Benchmarked to the NSC Employment Projections	Derived from retirement rates from Australian Census Longitudinal Dataset	The sum of employment growth and retirements

All outputs are modelled at the occupation, industry and region level:

- occupations are defined by 4-digit occupation unit groups in the Australian and New Zealand Standard Classification of Occupations (ANZSCO)
- industries are defined by 1-digit industry divisions in the Australian and New Zealand Standard Industrial Classification (ANZSIC)
- regions are defined by the nine Regional Partnerships of Victoria as outlined by the Victorian Department of Jobs, Precincts and Regions.

Benchmark data from the NSC give estimates of projected employment growth. Using an approach called iterative proportional fitting, the detailed occupation, industry and region breakdowns are generated by applying the distribution of employment in ABS Census and other data to the benchmark projections.

The model was developed by the VSA with the support of Nous and Deloitte Access Economics (DAE). The sections further below describe how the key outputs were modelled.

The VSA Employment Model gives a best estimate of employment by industry, occupation and region. It provides an indication but does not, and cannot, tell the full story of the region's economy.

Employment growth, 2022-25

Source: VSA and Nous (2022), *modelling of NSC (2022) Employment Projections*

This modelling takes the NSC Employment Projections as the benchmark data for 2022-25 and breaks it down into occupation by industry by region tables.

The benchmark data sources provide ‘control totals’ for occupation, industry and region breakdowns independently. However, they do not provide the interaction between each of the variables. For example, they do not give the breakdown of occupations within industries.

Iterative proportion fitting uses a detailed ‘seed’ data table with the necessary breakdowns from a representative dataset and scales that distribution to control totals in the new dataset. Over many iterations, the seed data is transformed to sum up to the occupation, industry and region control totals.

The seed data comes from the ABS Census 2016. The control totals for occupation and industry come from the NSC's Employment Projections, and the control totals for region come from the NSC's Small Area Labour Markets data. Table 15 describes the inputs in detail.

The modelling results in:

- industry and occupation projections that align with the NSC Employment Projections
- regional data that matches the distribution across NSC Small Area Labour Markets
- industry by occupation by region data tables that approximate the distribution within the ABS Census 2016.

Table 15 | Data sources used to model employment growth from 2022 to 2025

Type	Data	Source
Seed	Employment x 3-digit industry (ANZSIC3) x 4-digit occupation (ANZSCO4) x Statistical Area Level 2 (SA2)	ABS, <i>Census of Population and Housing</i> , place of usual residence data
Control total	Employment x SA2	NSC, <i>Small Area Labour Markets</i> , ‘SALM smoothed SA2 Datafiles (ASGS 2016) - March quarter 2022’.
Control total	Employment x ANZSIC1	NSC, <i>Employment Projections, 2020-25</i>
Control total	Employment x ANZSCO4	NSC, <i>Employment Projections, 2021-26</i>

Notes:

1. Following the modelling, SA2 data is aggregated up to Regional Partnership region. Where an SA2 spans multiple regions, the estimates have been apportioned based on geographic area.
2. The NSC industry projection is often not available until some months after the occupation projections. As at May 2022, there were no 2021 to 2026 ANZSIC1 by state forecasts available. The previous release of 2020 to 2025 ANZSIC1 by state forecasts were used and scaled up to match the Australian total employment numbers in the ANZSCO4 forecasts.

Retirements, 2022-25

Source: VSA, *Deloitte Access Economics (DAE) and Nous (2022), Retirement projections 2022-2025*

Retirements are estimated by applying occupation-specific retirement rates to the employment projections.

Using the Australian Census Longitudinal Dataset, an estimate of the size of the labour force aged 50 and over in 2016 was taken and compared to the size of the labour force aged 45 and over in 2011. After adjusting for migration, the gap is an estimate of retirements between 2011 and 2016. The relative age structures of occupations in the Census 2011 were then used to estimate retirements at the detailed occupation level (ANZSCO4).

The outputs were used to estimate an occupation-specific retirement rate, calculated as:

$$\text{Retirement rate} = \text{retirements between periods } t \text{ and } t+1 / \text{employment at } t$$

The retirement rates were applied to the employment projections to estimate the number of retirements between 2022 and 2025 at the region (Regional Partnerships), industry (ANZSIC1) and occupation (ANZSCO4) level.

New workers needed, 2022-25

New workers needed is the simple sum of employment growth and retirements. It is calculated at the region (Regional Partnerships), industry (ANZSIC1) and occupation (ANZSCO4) level.

New workers needed is an estimate of demand for workers to join an industry, occupation or region. In this model, demand comes from growth in employment (as business, government and other employers expand their operations) and the need to replace retirees who leave the workforce.⁵

New workers needed is not an estimate of skills shortage. In the VSA Employment Model, demand is always met by supply of new workers who enter the work force from study, unemployment, migration, a change in industry or occupation, or other avenues.

This means that the VSA Employment Model is not suitable for identifying current or future skill shortages. The Victorian Skills Plan draws on the National Skills Commission's Skills Priority List and stakeholder feedback to identify skills shortages within industries and across Victoria.

⁵ This will generally underestimate demand as it does not account for the need to replace workers who leave a job for other reasons, such as switching occupations or migrating out of Victoria.

Appendix B Victorian VET pipeline methodology

Enrolment numbers

Sources:

National Centre for Vocational Education Research (NCVER) (2021), Total VET students and courses 2020, available [here](#).

Victorian Department of Education and Training (2022), Funded Course List, available [here](#).

Victorian Department of Education and Training (2022), Funded Skill Set List, available [here](#).

The Victorian VET pipeline table estimates the number of enrolments in each qualification and skill set for the 2020 academic year in Victoria. The NCVER total VET students and courses is used as the dataset. Only courses on the Victorian Funded Course List (FCL) and the Victorian Funded Skill Set List (FSSL) are included.

The following steps were taken to develop the table:

1. Each course was reviewed by Industry Advisory Group members and allocated to **only one** of three main reasons for studying: to prepare for employment; to support current employment (apprenticeship or traineeship); or to progress their career. Each course is then listed under their respective allocation.
2. The numbers of students who enrolled in that course in 2020 is then noted in the VET pipeline table.
3. For courses that provide **an apprenticeship and traineeship option, and a classroom-based option** are duplicated twice in the table, with enrolment numbers split across the other two options: the number of apprentice and trainee enrolments reported under the header 'with employment (apprenticeship and traineeship); the number of classroom-based enrolments is shown under the purpose for completing the classroom-based option (either to prepare for enrolment or to progress their career). An (^{AT}) is noted next to these duplicated classroom-based courses to indicate they are also delivered as an apprenticeship or traineeship.
4. Where industry has provided feedback on the value of qualification or skill set, a (^Q) indicates it is valued as a qualification, while a (^{SS}) indicates it is valued as a skill set. A (^{EIR}) indicates it is an Endorsed Industry Requirement and (^{OL}) indicates it is an Occupational Licence. Industry has not provided feedback on all qualifications and where indicated; and each value assignment can be reviewed in the future.
5. Numbers are then totalled in their respective headers above. For the Skills Plan, the number of enrolments 'prior to employment' is a key focus for industry as it indicates how many students are being trained but are not yet employed.

The 2020 enrolment figures are a best estimate of the pipeline of workers for industry to draw on. The 2020 figures were the latest dataset available from the NCVER at the time of developing the Skills Plan and will be updated in future iterations of this document. They intend to provide an indication of the pipeline but do not and cannot tell the full story of workforce supply. Factors such as completion rates and the COVID-19 pandemic during 2020 are also likely to impact the availability of the future workforce.

Appendix C Stakeholder engagement process

The VSA would like to thank the many stakeholders engaged in the development of this report, who provided their time, expertise and experience to input, test, update and validate the content.

Stakeholders from organisations across government, education and industry were engaged to provide input to the report and the Skills Plan more broadly. Specifically, stakeholders provided insight on economic outlook, workforce and skilling challenges and an education and training response across three rounds of consultations. Engagements guided initial thinking and research, as well as opportunities to test and revise the insights. We would like to thank the following organisations for their participation in the stakeholder engagement process. Table 16 lists the organisations involved.

Table 16 | Consultation participants

Organisation
Adult Community Education Victoria (ACEVic)
Adult Learning Australia
Adult, Community and Further Education (ACFE) Board
Arts Industry Council Victoria
Australian Education Union - Victoria
Australian Industry Group
Bendigo Kangan Institute
Chisholm Institute
Community Colleges Australia
Deakin University
Early Learning Association Australia
Federation University
Gippsland Institute of TAFE
Gordon Institute of Technical and Further Education (The Gordon)
Goulburn Ovens Institute of Technical and Further Education (GOTAFE)
Group Training Association of Victoria
Independent Higher Education Australia
Independent Tertiary Education Council of Australia (ITECA)
Latrobe University
Melbourne Polytechnic
Melbourne Polytechnic
South West Institute of Technical and Further Education (South West TAFE)

Sunraysia Careers Network

Sunraysia Institute of Technical and Further Education (SuniTAFE)

Swinburne University

Victorian Aboriginal Education Association

Victorian Adult Literacy and Basic Education Council (VALBEC)

Victorian Department of Education and Training

Victorian TAFE Association

William Angliss Institute

Wodonga Institute of Technical and Further Education (Wodonga TAFE)

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