



Inquiry into Victorian universities' investment in skills
Victorian Parliament

University of Melbourne Submission
May 2022

Executive Summary

The University of Melbourne welcomes the opportunity to contribute to the Victorian Parliament's inquiry into Victorian universities' investment in skills.

Victoria's universities already play a crucial role in supplying skilled graduates to the State, supporting employment, productivity, and innovation. This importance will only continue to grow as the Victorian Government seeks to expand and modernise the economy and address the skills gaps that exist. There is an opportunity for the Victorian Government to work closely with the State's universities to ensure Victorians are supported to upskill and reskill in areas with the greatest need.

As a research-intensive university with strong partnerships with industry, the University of Melbourne is well positioned to respond to future skills needs, including through the delivery of internships and micro-credentials. For example, through the Innovation Practice Program, the Faculty of Engineering and Information Technology matches industry and government partners with masters students, who are tasked with developing innovative solutions to real-world problems faced by those organisations. The University also provides rapid upskilling and reskilling that responds to emerging skills needs through its Melbourne MicroCerts courses.

To assist universities in responding to future skills needs, the Victorian Government could support additional work-integrated learning and internships for university students. Additionally, the Victorian Government could consider targeted support for upskilling by identifying areas where public funding in support of micro-credentials and short courses would deliver economic benefits but where the incentives for businesses to invest are weak.

The University of Melbourne has identified addressing climate change and advancing the clean economy transition as a key strategic priority. To this end, it has established Melbourne Climate Futures (MCF) to connect and amplify the depth and breadth of our research, create a portal to share ideas and collaborate on real action and empower the next generation of climate policy leaders. The University is also home to the Melbourne Energy Institute (MEI), which delivers influential, interdisciplinary research on the transition to a clean energy system, in partnership with industry.

Through the Net Zero Australia project, the University and its partners are calculating the number and types of jobs that will be required under different pathways to net zero emissions for Australia. While this work is still underway, the University is confident that the figures will pose challenging targets for our tertiary education sector. The response to this will require a whole-of-sector response to map out skills supply and demand issues and develop a corresponding investment plan.

The University of Melbourne has a significant regional presence in the Goulburn Valley, and is committed to addressing regional skills needs, particularly in the areas of agriculture and health. The University's campus presence includes the Shepparton Department of Rural Health, Dookie Agricultural campus (also host to NorVicFoods and a Drought Hub research centre) and the Academy for Sport, Health and Education. The University is planning further collaboration in the region, through the development of the Goulburn Valley Regional Education Strategy. This will create a partnership between the University of Melbourne, La Trobe University and GOTAFE, mobilising resources, knowledge and capabilities to deliver transformational education outcomes in the region by 2030.

The Victorian Government could support these efforts through investing in regional post-secondary educational infrastructure, such as the planned renewal of the Dookie campus, and collaboration on the Goulburn Valley Strategy. The Victorian Government may also wish to consider a review into student placement arrangements in the teaching, health and community service sectors.

For further information, or to discuss the submission, Professor Gregor Kennedy, Deputy Vice-Chancellor (Academic) can be contacted at dvc-academic@unimelb.edu.au.

Recommendations

The University of Melbourne recommends that the Victorian Government:

- Support work-integrated learning and internships for university students by:
 - increasing the number of internships offered by the Victorian Public Service
 - providing funding support for university-developed internship programs, such as the Innovation Practice Program
 - developing optional template agreements between employers, education providers and students to reduce the administrative costs associated with internships.
- Consider targeted support for upskilling by identifying areas where public funding in support of micro-credentials and short courses would deliver economic benefits.
- Recommit to a partnership with the university sector to help sustain the skills needed for the public sector workforce, in particular health and education.
- Commit to a review of the arrangements for student placements in the teaching, health and community service sectors.
- Establish a steering committee, made up of senior proponents from clean economy organisations, the tertiary sector, peak bodies, industry associations and government, to map out skills supply and demand issues and develop an investment plan to respond to these.
- Consider ways to foster cultural change across the sector, hosting roundtables with university experts and senior public servants to discuss how clean economy concepts could be embedded across universities, including in non-STEM fields to skill the future workforce.
- Consider supporting clean economy university-industry linkages, including through internships.
- Provide funding for regional post-secondary education infrastructure, such as the Agricultural College Modernisation Program.
- Support the Goulburn Valley Strategy being developed by The University of Melbourne, La Trobe University and GoTAFE.

1. Future skills

Across both their teaching and research functions, Victoria's universities will play a central role in supporting the State's future skills needs. Our university sector produces thousands of skilled graduates for the State's economy each year (see **Attachment 1** for data on Victoria's universities, including completions). Strong economic growth, along with Victoria's aspiration to sustain a robust and innovative economy with growing numbers of high-paid jobs, will heighten the importance of the State's universities helping to build skills capacity through undergraduate and postgraduate degree programs. The sector's role in career-long upskilling and reskilling will likewise become increasingly important in the coming years. Given that unforeseen shifts in the economy are inevitable and access to additional workers is constrained by the current tight labour market, Victoria's economic performance will to a large extent depend upon the ability to add to the skills of those already in the workforce and re-skill those seeking to re-enter the workforce.

Victoria's world-class research system will also be crucial in its contribution to R&D activity, in its training of the State's next generation of researchers, and in attracting world-class academic talent to Victoria. The diversity and reputation of Victoria's research institutions are an asset for the State and will help to sustain a highly skilled workforce and create new businesses and jobs.

Finally, the contribution of international students to Victoria's labour market has been illustrated by the impact of pandemic-related border closures. Those who come to Victoria to study are an important part of the State's workforce, either by working part-time during their studies or by remaining in Victoria following graduation. The ability of our universities to continue to attract large numbers of international students will help to sustain the State's future skills needs.

University of Melbourne initiatives

Innovation Practice Program

The [Innovation Practice Program](#) (IPP), administered by the Faculty of Engineering and Information Technology, matches organisations from industry and government with masters students from Engineering, Biomedicine, Business, and IT. A mentor from the partner organisation works with a dedicated student team over 12 weeks to develop an innovative proposal for a product, service, or organisational change in response to an organisational innovation opportunity.

The Program comprises two interdependent streams, one for students and one for industry mentors:

- **For Students: 'Creating Innovative Professionals' (CIP):** CIP is a designated innovation subject, with three contact hours per week. At the end of 12 weeks, student teams are expected to produce an innovation proposal that is technically feasible, economically viable, socially desirable, and aligned with the sponsor's strategy. Students are assessed on the value created for the partner organisation.
- **For mentors: 'Leading Innovative Teams' (LIT):** Industry mentors participate in a 2-day leadership intensive workshop and one 90-minute leadership class per week, as well attending the three-hour innovation classes with their student team. LIT provides mentors with an opportunity to develop the coaching and leadership skills required to guide innovation projects and take the next step in their careers.

More generally, the University is seeking to expand the opportunities for our students to undertake internships or other work-integrated learning activities as part of their study program.

Micro-credentials

The University of Melbourne is expanding its delivery of micro-credentials and short courses, and now offers a range of innovative and high-quality professional education courses delivered online, face-to-

face and in blended study mode. The [Melbourne MicroCerts](#) suite of courses are highly accessible and aligned to industry and workforce needs, providing in-demand skills and knowledge.

The [Melbourne School for Professional and Continuing Education](#) (MSPACE) partners with businesses or other external organisations to deliver training programs. Courses delivered by MSPACE include custom programs that draw from the university's expertise to address an organisation's challenges or capitalise on its strengths, as well as learning and development packages – in-demand courses from the University's portfolio, that can be tailored to an organisation's needs.

Researchers from the Melbourne Graduate School of Education supported the Australian Government in the development of the National Microcredentials Framework, released earlier this year. The Framework will serve as the basis for the Microcredentials Marketplace, a nationally consistent platform for students to compare short course offerings and credit point value.

The Melbourne Curriculum

The Melbourne Curriculum – the University of Melbourne's teaching model – was initiated in 2008, with the aim of positioning the University among the world's best by offering students an educational option similar to that provided at elite universities around the world. The Curriculum consists of five generalist bachelor-level offerings, with vocation-specific, professional-entry programs offered at the postgraduate level. This adds to the choices available to students, both by being distinctive within the Australian university system, and by allowing students time to consider their career aspirations before entering a vocation-specific study program. The focus on generalist skills at the bachelor level helps build resilience in our graduates, allowing them to adapt these skills to changing economic conditions and to their career interests. The University's suite of vocational postgraduate programs also provides an entry point for professionals with career experience and previous undergraduate study, who are looking to re-skill without completing a full bachelor degree.

Potential support from the Victorian Government

Work-integrated learning/Internships

The Victorian Government is already active in supporting internships for tertiary education students: the 2022/23 Budget included funding for 300 internships over two years to support the State's advanced manufacturing capability and committed to expanding the existing defence industry internships program. Additional targeted measures in support of work-integrated learning and internships for university students are an opportunity to accelerate the skills outcomes delivered by degree programs:

- Victorian Public Service internships: As one of the State's largest employers, the Victorian Government could consider expanding the work-integrated learning opportunities available to university students by increasing the number of placements offered by the Victorian Public Service. Consideration should also be given to providing clearer information on internship opportunities.
- Targeted funding in support expanding university-developed internship programs, such as the Innovation Practice Program.
- Developing optional template agreements between employers, education providers and students to reduce the administrative costs associated with internships.

Support for upskilling

The current low unemployment rate, and the resultant skills shortages in key areas, suggest a potential role for the Victorian Government in supporting upskilling to aid the State's economic performance. There is an opportunity for the Government to identify areas where investment in upskilling workers

through micro-credentials and other short programs would benefit the economy. For example, investing in data and digital skills programs, which have been [identified](#) as the fastest growing emerging skills, may lead to increases in the State's productivity.

Partnership between Government and the university sector

Victoria's universities play a key role in the provision of building the quality of the professions and the skills needed for the State's public sector workforce, in particular health and education. Past successes in meeting these needs have been underpinned by a well-functioning partnership between the Government and the university sector. The Melbourne Graduate School of Education has recently partnered with the Government to help deliver programs to support increases in the State's early childhood and teaching workforce. It is important that the Government adopt a partnership model across the board, maintaining and sustaining dialogue with the university sector on skills forecasting relating to the public sector workforce, professional entry standards, and opportunities for upskilling the existing workforce.

Review of financing arrangements for student placements

The financing arrangements for student placements continue to pose a challenge to the workforce pipeline in the health, child protection, family violence and disability sectors. National workforce projections suggest high demand for social workers in the coming years; at the University of Melbourne, this is reflected in growing demand for our Social Work programs. However, we are increasingly unable to offer the required number of practicum placements for these students, so our capacity to help satisfy this area of skills need is impeded. While COVID-19 has exacerbated these challenges (particularly in the hospital context), it did not create them. There is an urgent need to review the arrangements for student placements across all fields within education, health and community services to ensure all students have access to the required practicums as part of their training.

To address this issue, the Victorian Government should conduct a review of the arrangements for student placements in the education, health and community service sectors, including a comparison of arrangements in place in other jurisdictions. The financing arrangements should support ongoing, collaborative relationships between universities and service providers, and should deliver an adequate number of placements in line with enrolments and workforce demands in these fields.

Recommendations

The University of Melbourne recommends that the Victorian Government:

- *Support work-integrated learning and internships for university students by:*
 - *increasing the number of internships offered by the Victorian Public Service*
 - *providing funding support for university-developed internship programs*
 - *developing optional template agreements between employers, education providers and students to reduce the administrative costs associated with internships.*
- *Consider targeted support for upskilling by identifying areas where public funding in support of micro-credentials and short courses would deliver economic benefits.*
- *Recommit to a partnership with the university sector to help sustain the skills needed for the public sector workforce, in particular health and education.*
- *Commit to a review of the arrangements for student placements in the education, health and community service sectors.*

2. Working towards a clean economy

There is a large and looming challenge to develop the skills required to establish a clean economy and meet net-zero emissions by 2050. To meet those targets, Victoria will need a much greater number of people pursuing STEM and technical VET, including many more women. It is likely this will also need to be complemented by skilled migration, given the immediacy of the demand. Prospective employers will also likely need to play a greater role in investing in the talent pipeline.

There are many areas in which Australia needs higher-level technical expertise and capacity to train people in clean energy and clean transport. The University is working to address skills gaps, including green hydrogen production using industrial electrolysis; hydrogen processing and use; and power system engineering for renewable-rich systems.

Additionally, the University has identified climate finance, including the development and implementation of business models that support the transition to a clean economy, as a key skills gap. The circular economy at a concept/system-level also represents a skills gap, stemming from a lack of researchers working in that area.

As noted in the University's [submission](#) to the Victorian Government's Clean Economy Workforce Development Strategy, the University is a partner on the [Net Zero Australia](#) (NZAu) project, along with the University of Queensland, Princeton University and the Nous Group. In addition to determining asset builds and total costs, this project is calculating the number and types of jobs that will be required under different future pathways to net zero emissions for Australia and our export partners. Results are expected in Q3-Q4 2022, but the University is nonetheless confident that those figures will pose challenging targets for the tertiary education sector.

University of Melbourne initiatives

The University is committed to addressing climate change and aiding the clean economy transition. To this end, it has established [Melbourne Climate Futures](#) (MCF). MCF's mission is to accelerate transition to a positive climate future. It does so by leveraging the breadth and depth of the University of Melbourne's climate research and its convening power and partnerships. It also does this by nurturing a next generation climate workforce with the skills and knowledge to take forward a clean economy through the MCF Academy and working alongside the University in its own efforts to decarbonise.

The University is also home to the [Melbourne Energy Institute](#) (MEI). MEI has a complementary focus on interdisciplinary research on the transition to a clean energy system, with specific programs on energy systems, hydrogen and clean fuels, power generation and energy storage and optimisation of materials for energy applications. It also coordinates the [Zero Emission Energy Laboratory](#) (ZEE Lab), a program that places graduate students in paid internships with industry partners to work on projects developing clean energy and transport technologies.

At an institutional level, there have been a range of initiatives, including the Sustainability Fellows Program, launched in 2019. This established faculty-based Sustainability Fellows to lead the integration of sustainability into the University's core and compulsory undergraduate curriculum, foster deeper understandings of sustainability's relevance to all fields of endeavour, and contribute to the development of a University-wide, interdisciplinary community of practice.

In 2021, the University launched the [Wattle Fellowship](#) to nurture sustainability leadership in students selected from across all disciplines. The Joining Melbourne Module, 'Sustainability Communities & Campuses' was also developed and integrated into some core subjects (e.g., Discovery) and other undergraduate subjects.

Potential support from the Victorian Government

The University notes that the Victorian Government has established the Clean Economy Workforce Skills and Jobs Taskforce and the \$6 million Clean Economy Workforce Capacity Building Fund. However, these are focused on the TAFE and training sector. Skills gaps exist at all education and training levels, including in higher education. Addressing the enormous challenge of transitioning to a clean economy will require a consolidated and joined-up approach, which includes both higher education and vocational education providers.

To do this, the University has proposed that the Government establish a steering committee, made up of senior proponents from clean economy organisations, the tertiary sector, peak bodies, industry associations and government. This steering committee could work together to address acute skills shortages by mapping out supply and demand issues and developing an investment plan to respond to these.

Other opportunities for Government to play a greater role include holding roundtables with senior government representatives, industry and university faculty leadership to discuss integration of clean economy principles in teaching and learning across all fields of study. The Victorian Government could also consider ways it could encourage partnerships between universities and industry on clean economy concepts, including through internships.

Recommendations

The University of Melbourne recommends that the Victorian Government:

- *Establish a steering committee, made up of senior proponents from clean economy organisations, the tertiary sector, peak bodies, industry associations and government, to map out skills supply and demand issues and develop an investment plan to respond to these.*
- *Consider ways to foster cultural change across the sector, hosting roundtables with university experts and senior public servants to discuss how clean economy concepts could be embedded across universities, including in non-STEM fields.*
- *Consider supporting clean economy university-industry linkages, including through internships.*

3. Regional skills analysis in health, agriculture and community services

The University of Melbourne has conducted extensive consultations with stakeholders in the Goulburn Valley region. These have emphasised the need for regional education providers to work collaboratively to improve quality and choices in education that contribute to regional outcomes and success. Better collaboration will help to address many of the inherent challenges associated with maintaining university teaching and research in regional areas. Regional campuses typically offer fewer course options than larger metropolitan campuses. Smaller class sizes place pressure on the financial viability of some programs and challenges to resourcing education and research infrastructure. This is particularly significant given that federal research funding falls well short of the full costs of university research and there is no longer a dedicated program of funding support for university infrastructure.

There is an opportunity to accelerate the skills contribution of the State's universities to regional Victoria by supporting greater collaboration regionally and government investment in regional infrastructure. This includes collaboration between universities with a presence in regional areas, as well as between the university and TAFE sectors. TAFE institutions have a central role in skills provision in regional Victoria. Closer links between universities and TAFEs promises better responsiveness to local skills needs, and better utilisation of limited education resources.

University of Melbourne initiatives

Goulburn Valley Regional Education Strategy

The University of Melbourne, La Trobe University and GOTAFE are working with diverse stakeholders on developing the Goulburn Valley Regional Education Strategy and Plan. Our collective vision is to inspire ideas and expansive thinking through collaboration that contributes to the Goulburn Valley as a place of education transformation and success that benefits rural and regional cultural, social and economic well-being and enrichment.

Through co-leadership, quality education offerings with a local and global focus, knowledge mobilisation and inspiring programs, we will work with diverse partners and stakeholders for the benefit of the community. The education partnerships will transform education outcomes for students of all age groups and from all backgrounds by providing a connected approach to education pathways, courses, articulation and the experience of studying at GOTAFE, La Trobe University and the University of Melbourne.

Dookie Campus

The University's Dookie Campus is the oldest agricultural college in Victoria, dating back to 1886. The campus has a major mixed farming operation with broadacre crops, merino sheep, a robotic dairy, orchards and a winery. It has been, and remains, at the forefront of Australian agricultural teaching, learning and research. Around 500 University of Melbourne students undertake study at Dookie over the course of a year and there are about 150 students living there at any one time. The campus also hosts expert on-campus researchers and has strong and growing links with industry.

The Dookie Campus is the site for the University's Diploma in General Studies (DiGS), a one-year program designed to provide students with a pathway into one of the University of Melbourne's bachelor programs, or to provide direct entry into employment. In 2022, the University is launching DiGS (Extended), an 18-month program open to Aboriginal and Torres Strait Islanders as both school leavers and mature-age students, particularly in the Northeast Victoria and Goulburn Valley regions.

NorVicFoods

The recently launched [NorVicFoods venture](#) (NVFv) is designed to strengthen the agri-food innovation system in the Hume region of Victoria. It listens and engages deeply with businesses in the region and

draws on the University's expertise to solve issues faced by agri-food businesses in the value chain to build skills, create jobs and increase economic prosperity.

NorVicFoods has been established using \$2.7 million funding from the Victorian Higher Education State Investment Fund and \$1.3 million from the University. The purpose-built venture aims to create high-value jobs in the region over four years, empowering the community with the knowledge, skills, and resources to develop tangible solutions to problems in the agri-food sector.

Based in Shepparton, NorVicFoods has been established to bring together research and innovation in science, technology, engineering, and policy to enhance the Hume region's agri-food businesses and deliver economic value to the area.

Drought Hub

The University of Melbourne is leading a unique State-wide partnership to help farmers, agricultural businesses and communities become more resilient to the impacts of future droughts.

The [Victoria Drought Resilience Adoption and Innovation Hub](#) will play a critical role connecting these sectors to innovative technologies and practices. It will also translate research and knowledge into impactful outcomes and support take-up through testing, adoption, and scaling-up of new solutions and commercialisation.

The Hub has been granted \$8 million over the next four years by the Federal Government under the Future Drought Fund. It is one of eight drought resilience hubs across Australia. The other partners in the Victoria Hub are five farming groups – Birchip Cropping Group, Food & Fibre Gippsland, Southern Farming Systems, Riverine Plains, and the Mallee Regional Innovation Centre – together with Deakin University, Federation University, La Trobe University and Agriculture Victoria.

Doctor of Medicine (Rural Pathway)

As part of the University of Melbourne's commitment to rural health, the Melbourne Medical School in the Faculty of Medicine, Dentistry and Health Sciences is offering a Rural Pathway option within the Doctor of Medicine (MD Rural Pathway). The first cohort of students to undertake the entire Doctor of Medicine (Rural Pathway) in a rural setting began studying at the University of Melbourne's Shepparton Campus in 2022.

The degree is offered as part of a collaboration between the University of Melbourne and La Trobe University to provide regional students an end-to-end rural medical pathway and retain the graduates in the regions. Previously, students completed their first year of study in Melbourne. The students will be required to work for at least three years in a recognised rural area within 18 years of graduating. They have all lived for at least five years consecutively or 10 years cumulatively in a rural location.

Potential support from the Victorian Government

Regional precincts

Regional areas within Victoria would benefit from strategic government leadership, convening education providers, industry and local communities to create regional precincts that can sustain economic development. To support the establishment of these regional precincts, the Victorian Government should fund the development of regional education and research infrastructure (such as the Agricultural College Modernisation Program), facilitating training and education in the regions.

Goulburn Valley Strategy implementation

The Goulburn Valley Strategy will generate a range of teaching, research and community engagement initiatives in support of skills provision in the region. There is an opportunity for the Victorian Government to partner with the University of Melbourne, La Trobe University and GoTAFE to support

the implementation of the Strategy. Ultimately, the Goulburn Valley region could be supported to establish an Australian-first regional precinct – a globally recognised centre of high-tech agriculture, food processing and manufacturing, creating thousands of new jobs.

Recommendations

The University of Melbourne recommends that the Victorian Government:

- *Provide funding for regional post-secondary education infrastructure, such as the Agricultural College Modernisation Program.*
- *Support the University of Melbourne, La Trobe University and GoTAFE in the implementation of the Goulburn Valley Strategy.*

FACT SHEET

Universities in the State of Victoria, Australia



Victoria has ten universities, which are formed under their own individual acts. The Minister for Higher Education administers the acts that establish the universities and their governing bodies and accountability requirements.

Snapshot (finalised end of 2020 data)

University	Campus presence					Students (EFTSL) ¹			Staff (FTE) ²
	Metro	Regional	Online	Interstate	International	Domestic	International	Total	
ACU (Vic campuses)	√	√	√	(√)		7,735	1,109	8,844	857
Deakin	√	√	√		√	32,967	10,941	43,907	5,223
Divinity	√		√	√		547	111	657	190
Federation	√	√	√	√		5,676	6,141	11,817	1,346
La Trobe	√	√	√	√		21,040	6,393	27,433	3,224
Melbourne	√	√	√			30,736	21,456	52,191	9,667
Monash	√	√	√		√	35,216	32,736	67,951	9,101
RMIT	√	√	√	√	√	29,347	23,176	52,524	4,674
Swinburne	√		√		√	19,071	7,605	26,676	2,840
Victoria	√		√	√	√	13,021	8,141	21,162	1,603
Victorian (10)						195,356	117,809	313,162	38,725
National (43)						733,399	319,952	1,052,543	137,808

Funding – Federal Government of Australia

The majority of public university funding sits with the Australian Government's Department of Education, Skills and Employment, which provides regular funding to universities through four main programs:

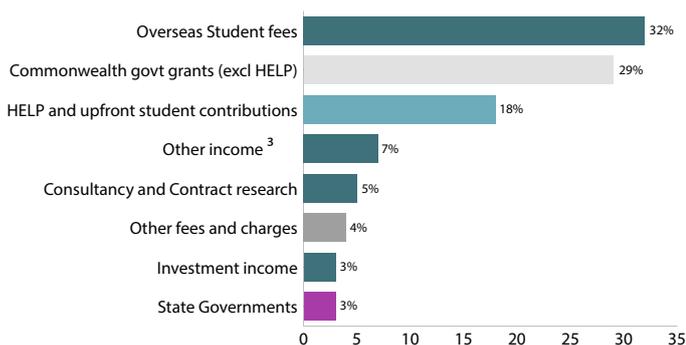
- *Commonwealth Grant Scheme (CGS)*: supports a range of university activities, principally teaching and learning for Australian domestic students. The level of funding for 'Commonwealth supported places' (CSPs) is capped and any student load over the cap attracts no further CGS support
- *National Competitive Grant Program*: research block grants that support research and research training
- *Higher Education Support Act 2003*: grants made to support equity and participation in higher education
- *Higher Education Loan Program (HELP)*: under the HELP scheme, the Australian Government pays student fees to higher education providers, which are income-contingent loans repaid by students through the taxation system.

Funding – State Government of Victoria

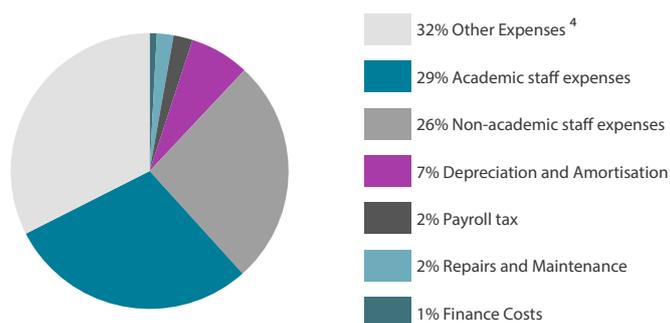
- *The Victorian Higher Education State Investment Fund*, announced in 2020, supports universities with capital works, applied research and research partnerships
- A combination of capital and non-capital contributions

Other funding sources include overseas student fees, investment income and income from contract research and consultancy. Each year, philanthropy contributes increasingly significant funds that enable universities to undertake vital work in education and research.

Sources of university revenue, 2020 - Victorian institutions (\$10.2b)



Categories of university expenditure, 2020 - Victorian institutions (\$9.9b)



1 EFTSL: Equivalent full time student load [DESE, Student Load Pivot Table](#)

2 FTE: Full time equivalent [DESE, Staff Pivot Table \(inclusive of FT/PT and casuals\)](#)

3 Includes philanthropy, royalties, trademarks and licences and the share of net result of associates and joint ventures accounted for using the equity method.

4 Includes impairment of assets, investment losses and deferred superannuation expenses.

The two activities at the heart of Victorian universities are education and research.

Education

Through educating students of all ages and at every career stage, Victorian universities make a strong contribution to the state and nation's social wellbeing and economic prosperity. University educators prepare students for careers, as well as nurture inquisitive minds which are open to change, a life of learning and personal development.

Course Completions By Broad Field of Education, 2020

Broad Field of Education	Course Completions		% of total		
	Vic universities	National	Vic universities	National	Vic as % of national
Agriculture Environmental and Related Studies	1,003	3,719	1%	1%	27%
Architecture and Building	3,491	9,793	3%	3%	36%
Creative Arts	5,936	16,779	6%	5%	35%
Education	7,524	25,443	7%	7%	30%
Engineering and Related Technologies	7,902	23,588	7%	7%	34%
Food Hospitality and Personal Services	0	35	0%	0%	0%
Health	13,672	60,200	13%	18%	23%
Information Technology	11,213	27,384	10%	8%	41%
Management and Commerce	30,628	90,692	29%	27%	34%
Natural and Physical Sciences	9,150	25,975	9%	8%	35%
Society and Culture	16,642	57,554	16%	17%	29%
Totals	107,161	341,162	100%	100%	31%

Research

Research conducted by Victorian universities drives economic growth and productivity, creates and stimulates innovation, and improves the wellbeing of all Victorians. It leads to new products and industries, informs public debate, adds to our collective understanding and helps solve complex problems; it also develops valuable local and international networks.

Throughout 2020, Victorian universities secured a total of more than \$1.5 billion in research funding, from across Government, industry and other sources. However, universities also provide considerable funding for their own research. On average, every dollar of external grant funded research requires an additional dollar to cover the full cost of the research.

Engagement and Impact Assessment 2018 (Australian Research Council)⁵

The inaugural Engagement and Impact Assessment took place in 2018 (EI 2018), one of the initiatives under the Australian Government's National Innovation and Science Agenda. It assessed how well researchers are engaging with end-users of research and shows how universities are translating their research into economic, social, environmental, cultural and other impacts.

Note: UoA stands for 'Unit of Assessment'

(E.g. Biological Sciences; Economics; Environment and Design; Mathematical Sciences; Technology...)

Measure	Description	Ratings for Units of Assessment (UoAs)					
		High		Medium		Low	
		All Institutions	Vic Universities	All Institutions	Vic Universities	All Institutions	Vic Universities
Engagement	Ratings based on an engagement narrative, a small suite of quantitative indicators and an indicator explanatory statement.	215 (34%)	60 (42%)	317 (51%)	55 (38%)	94 (15%)	28 (20%)
Total number of UoAs rated		626	143				
Impact	Ratings based on the qualitative impact studies that detailed the impact and the research that was associated with the impact (contribution the research made to the economy, society, environment or cultures, beyond the contribution to academic research).	277 (43%)	56 (41%)	284 (44%)	62 (45%)	78 (12%)	19 (14%)
Total number of UoAs rated		639	137				
Approach to Impact	Ratings based on qualitative studies that detailed approach to impact. Institutions described the strategies implemented by the institution, its colleges, faculties, groups, department and/or centres that facilitated the impact.	159 (25%)	33 (25%)	325 (51%)	67 (50%)	154 (24%)	33 (25%)
Total number of UoAs rated		638	133				