



VICTORIA'S VIRTUAL INDUSTRY
CAREER EXPERIENCES
'YOUR CAREER IN SIGHT'

Virtual Reality Workplaces

For students and teachers to explore
career options in growing industries



spiire 

A photograph of a woman with long brown hair, wearing a dark baseball cap and a dark jacket over a grey t-shirt. She is smiling and looking towards the right. A dog's head is visible on the right side of the frame. The background is a bright, outdoor setting with a fence and trees. A large yellow diagonal shape is on the left side of the page.

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Welcome to Virtual Reality workplaces!

BEC COSTA-LOWE CEO

Welcome to our Virtual Reality (VR) workplaces, developed to help students and teachers explore career options in growing industries in Victoria.

Students can literally step inside eleven industries and look around. “Touch points” allow them to experience something that typically happens in workplaces. Our VR experiences not only show an ‘obvious career’, but give insight into a range of associated jobs, young people might never have thought of.

The evaluation of our pilot has shown:

- » **Young people enjoy the VRs** (98%).
- » **They are a powerful tool for engagement** with most trying it because it was VR (68%, while only 31% tried it because it was an industry they were already interested in).
- » **They help industry find interested young people for further engagement** (after trying, 22% were interested in a real-life work experience, nearly half of whom had not considered the industry before).
- » **They make some young people feel more optimistic** (33% reported seeing a VR workplace made them feel more excited about work and their future).

We aimed to break down gender stereotypes and we did. There were no gender associations in who liked the VRs or went on to consider work experience in the industry.

We also tested it on teachers who reported it was a good teaching tool. Everybody pulls off the head set and wants to talk about what they have seen which makes it a great conversation starter for a classroom lesson. It also offers a way to upskill teachers about modern opportunities and practices in priority industries, so they can incorporate these into other curriculum subjects to support young people’s pathway choices.

Industry exposure is important for young people to make informed choices about their subjects and pathways. It can, however, be difficult for many young people to get. This can be because employers do not have the resources to provide experiences to 500,000 young people across Victoria, or young people live a long way away from workplaces of interest, or gender attitudes shape what should be explored.

Virtual Reality solves these problems.

VIC VICE is a free, age appropriate, non-gendered, accessible addition to careers education, available to every school in Victoria.

Come give it a try!



“LLENs are committed to ensuring students have clear connections to the world of work through school-employer engagement.”



1. Young people need exposure to more industries

Young people do not know what is available

Dramatic changes in work over past decades mean young people can choose from a much wider range of higher skilled careers than were available in the past. Careers education, however, has not kept pace with change, and young people do not know how to find out about the careers on offer.

An OECD study¹ – repeated in Victoria by Monash University in 2022² – has shown young people’s thinking about the labour market is “narrow and confused”. Most choose from only ten popular occupations, whether they suit them or not (doctors, teachers, business managers, engineers, lawyers, police officers, ICT professionals, nurses/midwives, designers, psychologists).

The Grattan Institute, has also shown it is common for lower ATAR young people to choose university because parents and other advisors expect it, rather than because it matches their aspirations.³ This leads to:

- » **Costly dropouts, with 23% of university and 45% of non-university higher education students not completing their qualification,⁴ and**
- » **Higher education students ending up in lower paid occupations than they could have achieved with vocational training.³**

In 2021, GMLLEN sent young interns out to interview employers about what jobs are available in regional economies and what young people need to get them.⁵ The interns were surprised to find more opportunities than they thought, in a wide range of industries. Their survey of nearly 1,000 young people also showed their interests matched the jobs on offer, but they did not know about the opportunities, and employers did not know how to tell young people about them.

Work exposure can be difficult for employers to provide

It is a significant challenge for employers to build awareness of their industry in schools.

In school-industry roundtables undertaken across northern Victoria in 2022, employers reported that the standard careers education activities they were involved in, such as classroom talks, were labour intensive and did not always yield students interested in their industries. Feedback from the LLENs across Victoria in 2021 and 2022 also found businesses were finding it difficult to supervise students in their workplaces due to staff shortages, staff working from home, or COVID safe practices.

Addressing employer’s challenges requires careers education that puts employer effort in the most effective place. VR lets LLENs build awareness of careers in schools, referring students who are interested on to real-world work experiences through their School to Work Portal (which lists all the opportunities with industry).

In Victoria we know:

- » **Over 519,000 secondary school age students (13-19) need to explore careers**
- » **The *Firth Review* found careers education is inadequate, especially for vocations.⁶**
- » **42% of 18-29 Australians do not get work experience, and they are more likely to be the low income and regional young people who need it most.⁷**
- » **Many industries are experiencing costly skills shortages and want to engage young people, but don’t know how to find them.⁸**

1 Mann A et al. (2020) [Dream Jobs: Teenagers' Career Aspirations and the Future of Work](#). OECD: Paris.

2 Gleeson, J et al. (2022) [Young women choosing careers: who decides?](#) Monash University: Melbourne.

3 Norton A (2019) [Uni vs TAFE: the gender divide](#). Grattan Institute: Melbourne.

4 Australian Government Department of Education (2020) [Completion rates of higher education students-cohort analysis 2009-2019](#).

5 Pope J (2020) [How Work Works: getting young people employment in our growing industries](#). NCLLEN, CCLLEN and CRLEN.

6 Firth J (2020) [Review into vocational & applied learning pathways in senior secondary schooling](#). Victorian Government: Melbourne.

7 Oliver D et al. (2016) [Unpaid Work Experience in Australia: Prevalence, nature and impact](#). University of Technology: Sydney.

8 Victorian Skills Authority (2023) [Employment Forecast Dashboard](#). Victorian Government: Melbourne.

“GMLLEN wants every young person to understand the opportunities in our vital and growing industries.”



2. Virtual Reality is accessible and effective

VR can reach all schools to give young people the opportunity to explore where their interests might lead, prevent mismatches in education pathways, and address gender stereotypes.

Research has shown VR is an effective education tool because:

- » **Students are enthusiastic users of it** and like it more than other learning methods
- » **It increases motivation, interest and engagement** in a given subject matter⁹
- » **It improves learning outcomes**, including in teaching basic training activities¹⁰, and can evoke emotional responses, including feelings of connection and empathy
- » **It encourages social interaction with demonstrators and other students.**^{11 12}

Our pilot evaluation confirms much of this research.

“VR can transport young people to new environments they have never explored or visited.”

⁹ Di Serio A et al. (2013) Impact of an augmented reality system on students' motivation for a visual art course. *Computers and Education* 68 Oct: 586-596

¹⁰ Lin TJ et al. (2013) An investigation of learners' collaborative knowledge construction performances and behaviour patterns in an augmented reality simulation system. *Computers and Education*. 68 Oct: 314-321

¹¹ Phillips M (2017) [How virtual reality technology is changing the way students learn.](#)

¹² Lege R & Bonner E (2020), Virtual reality in education: The promise, progress, and challenge. *JALT CALL*.16 (3): 167-180.



3. VIC VICE: Your career insight

Eleven virtual workplaces to explore

To date GMLLEN has created eleven 360° VR interactive workplaces (in box below).

Each VR runs for approximately 6-8 minutes, has 3 interactive touch points, and showcases up to 3 careers within an industry.



FOOD AND FIBRE

1. **Dairy Farming** – Two teenage farm hands show the difference between a traditional rotary dairy and a high-tech automated farm and dairy
2. **Meat Processing** – The meat industry is more than you think, learn elements of various roles including, quality assurance, product preparation, packing, tracking and distribution.
3. **Cropping** – Be taken inside a protective cropping grow house, hear how to care for the crop, pick at the perfect time and ensure you pack correctly for the buyer.

TRANSPORT AND LOGISTICS

4. **Diesel Mechanic** – Hear from both female and male apprentices on what a typical day working on trucks looks like.
5. **Forklifts and logistics** – The transport industry just isn't about trucks, there are forklift drivers, reach stackers and fleet controllers, supporting the transport industry to move containers and goods around the country.
6. **Distribution Centre** – A look inside Cotton On's massive distribution Centre at Avalon, see how online orders are processed.

HEALTH AND COMMUNITY SERVICES

7. **Early Childhood and Education** – Hear what excites the educators of our earliest learners, it's where it all begins.
8. **Aged Care** – Looking after the elderly to extend their life involves many things, including creating a caring and stimulating living environment.
9. **Working with Disabilities** – Hear from job coaches and their clients on how to work together and engage people with disabilities in work life.
10. **Dental and Myotherapy** – Navigate the nooks and crannies of dental care or get hands-on with myotherapy.
11. **VR Health** – A gamified interactive experience that allows students to explore health settings which sometimes can be difficult to assess:
 - Communication in Health - Learn how to engage with patients that can sometimes be difficult to communicate with due to medical conditions.
 - Infectious control – Provides basic exposure to some scenarios you may encounter, with opportunities to explore PPE and safe infection control procedures.
 - Rehabilitation - Work as an Allied Health Assistant under the supervision of a Physiotherapist to assist a client through a rehabilitation session.

Over time, we will add more workplaces.

Objectives

VIC VICE's objectives are to:

- » **Expose more young people priority industries**, particularly students who may have 'edited out' options based on gender, or who cannot access real workplaces because of geographic distance, patient confidentiality, workplace safety, or even incarceration.
- » **Increase the number of young people who aspire to, and take up pathways to, priority industries**
- » **Counter gender bias by breaking down work related stereotypes**
- » **Develop a platform that every school, training institution and advisor has access to.**

Principles and benefits

We want young people to be excited about their futures. Our VR experiences are therefore underpinned by principles to ensure they are:

- » **Active** and **iterative** (i.e., supported by other careers education activities).
- » **Joyful** and **engaging** rather than distracting (only include bells and whistles that are important to the narrative).
- » **Meaningful** as part of a broader careers education that helps them understand their interests, skills and helps them aspire to skilled careers.
- » **Encourage social interaction** outside of the experience, so young people talk to teachers/advisors, parents, and employers in real life about potential careers.¹³

¹³ Modified from Hirsh-Pasek et al. (2022). [A whole new world: Education meets the metaverse, February 2022 Policy Brief](#). Centre for Universal Education at Brookings Institution.



4. Summary evaluation findings



In the process of building our VR experiences we pilot tested two on:

- » **163 YOUNG PEOPLE** in two settings:
 - **careers expos:** 2 metropolitan and 2 regional (n=138)¹⁴
 - **classes:** one of young women (n=10), and one of students at risk of disengaging from school (n=8).
 - Of 163 responses:
 - 58% were young men and 37% young women
 - 59% were in Melbourne and 41% in regional localities
 - 62% were in Year 9-10 and 37% Year 11-12.
- » **13 TEACHERS** from a VET cluster (10 women, 3 male).
- » **10 REPRESENTATIVES** from the industries showcased.

VR is popular and students enjoyed it

The VR experiences were popular and there were queues at the expos to try them.

- » **98% OF STUDENTS** liked (89%, 145) or 'somewhat' liked the experience (9%, 14).
- » **2% OF STUDENTS** (4) did not like the experience, mostly (3) because they were not interested in the industry.
- » The VR experiences were **EQUALLY LIKED** by:
 - **Young women and men** (X2 0.234, df 1, p=0.628).
 - **Regional and metropolitan** young people (X2 0.572, df 1, p=0.449).
 - **Year 9-10 and Year 11-12 students** (X2 1.405, df 1, p=0.236).

VR is a good way to engage young people

VR is a powerful engagement tool for young people with:

- » 68% (83) trying it because it was VR
- » 31% (50) trying it because they were already interested in the industry.

“Great experience”

“It was really fun. I got to see so muchhhh and learnt a lot!!”

“Very real”

“I liked it so much because I do gaming”

“It was a great way to learn and see about dairy farming”

“The VR is absolutely perfect.”

“I liked how you could look at the full 360”

— A sample of student survey responses

¹⁴ 2023 testing: Whittlesea Careers Expo 23rd March; Box Hill Gateway Career Expo 28th March; Echuca Beacon Foundation Career Event 9th May; Shepparton Careers Day Out 10th May; Melbourne Trade Fit Expo (an event for girls) 11th May

“It let me see a job I wouldn’t normally get to experience.”

– Student survey response

VR finds those interested in an industry

Employers report it is difficult finding those who might be interested in their industry in general groups of students. Our evaluation showed that VR can help. A fifth of our pilot students reported they would like a real-world work experience in the industry because of the VR, nearly half of whom had not considered the industry before. A further fifth could rule the industry out.

Post the VR experience:

- » 42% (69) were interested in the industry.
- » 27% (50) said it made them consider an industry they hadn’t thought about.
- » 22% (36) would be interested in a real-life work experience in the industry.
 - 44% (16) of whom had not previously thought about the industry
 - Interest in work experience was equal in:
 - Young men and women (X2 0.145, df 1, p=0.703).
 - Regional and metropolitan young people (X2 0.525, df 1, p=0.468).
- » 18% (29) reported that they would not want to work in the industry.

Are there other workplaces you would like to see with VR?

“As many as possible to see how you would work in the career you want to pursue and try others.”

“There would be lots of work fields I would like to see in VR.”

“Everything.”

– Student survey response

VR can make young people more excited about the future

The experiences appear to build young people’s optimism with:

- » 33% (43) reporting that the VR workplace made them feel more excited about work and their future.

Most young people didn’t think it could be improved

Most students thought it was a good learning tool:

- » 59% (75) reported VR was a good way to explore careers.

Most (85%) students said they had no feedback for improving it or just wanted more VRs (only one per event was tested in the pilot). Young people are savvy users of technology and some gave feedback on technical issues and these were addressed by the final version.

Eighty-three students suggested other workplaces they would like to see in VR, some of which are now on offer in the final set (see word cloud below).





Teachers will use it and would recommend it to others

All but one of the teachers liked the experience (one felt dizzy but would still use it in class).

Reasons teachers liked it included it:

- » Would be useful for young people coming up to subject selection
- » Is knowledge building – it shows a range of options in the one industry and can cover places that young people cannot get into because of privacy or safety
- » There are things they could follow up with in class
- » Was about the right length of time.
- » Was good to see a women worker when you were expecting a man.

Most of the teachers did not think there would be barriers that would prevent groups of young people from trying the VR.

It is a good tool to build industry awareness in more students

Not all industries had their VRs finished at the pilot, but all of those that had seen their experience were happy with the product, learned something new, and would recommend it to others.

Industry stakeholders liked it because it:

- » Is a new and different method for learning that is “real life”, interactive, visual, “cool”
- » Gives a closer representation of a career than what other media can
- » Highlights the diversity of roles in an industry that young people may not be aware of
- » Allows industry to target more young people in more schools, increasing awareness in “untapped markets”
- » Showcases careers without the expense and time needed for supervision.

Industry stakeholders reported they learned about new technology doing the project, which they reported would be valuable for education and marketing in the future.

“It was fun, engaging, I was a skeptic, but it’s good!”

“[The farm would be an] amazing experience for city kids.”

“It’s like going on an excursion, but you don’t have to go anywhere.”

– Teacher responses

5. How to get involved

VIC VICE will ensure every student in Victoria can experience the priority industries by offering the platform free to all schools through the VicLLENs State-wide network (31 LLENs). It is also available for use by further education (TAFE) advisors, job agencies and other employment programs.

Your local LLEN has the headsets and trained facilitators to run sessions.

We are also interested in adding more industries to the platform, if your industry is interested.



Contact us

Contact your Local Learning and Employment Network (LLEN) or go to the VIC VICE website (www.vicvice.com.au), click on 'Get Involved' and leave your details.



“VR can transport young people to new environments they have never explored or visited.”

“It’s cool. Better than sitting down and reading about a career.”

— Student in prototype evaluation



vicvice.com.au