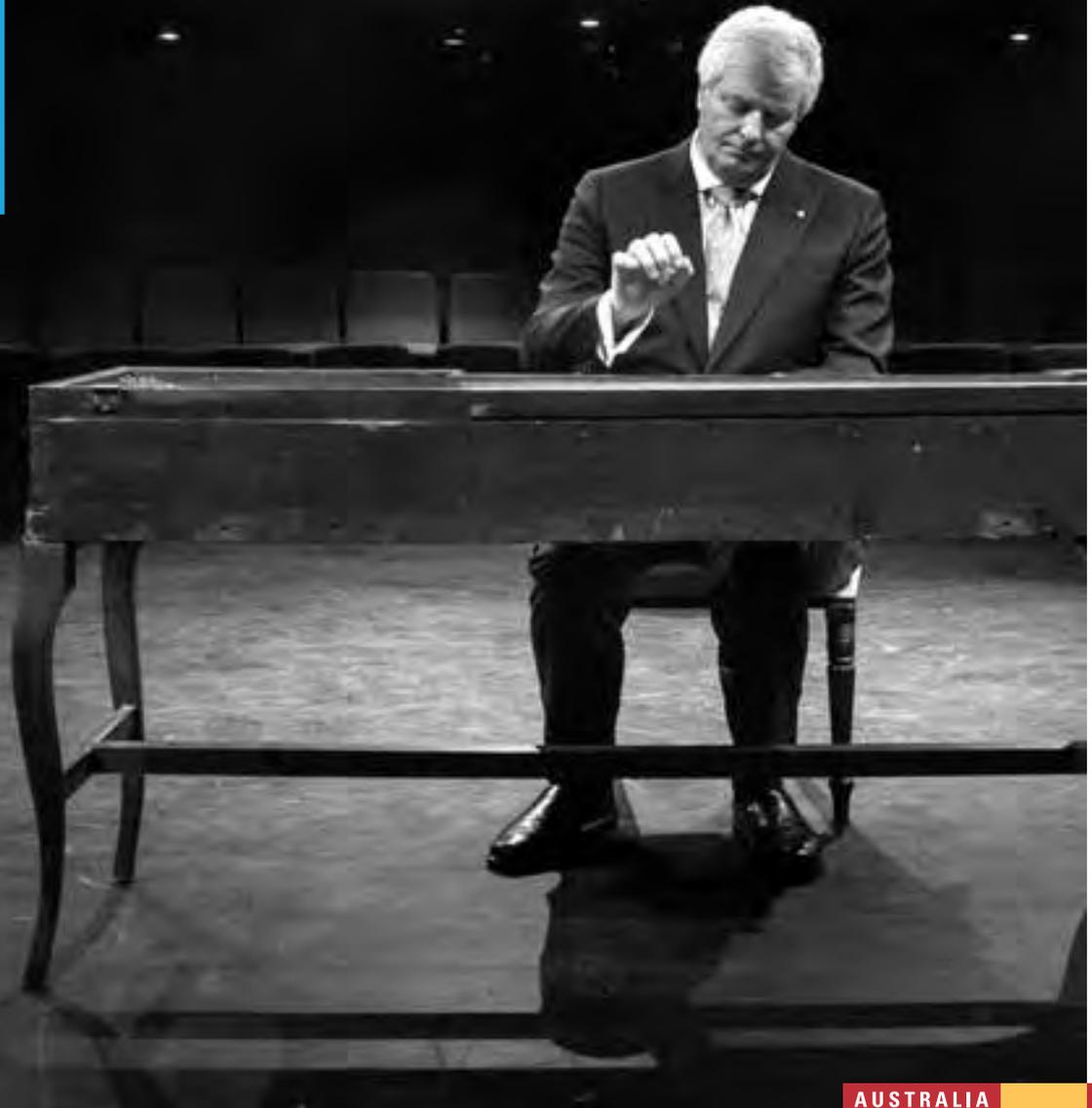


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When prevention is better than cure

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Are farmers our greatest innovators?

DEAD END JOB:

It's time to rethink work

The workplace of the future will look radically different from what we are familiar with today. Kim Cousins investigates how universities and industry are preparing for this shift.

Dead end job



At first glance, the next generation of workers face a pretty bleak future – digital disruption of business, the automation of work and inevitable loss of many jobs.

In fact, around 40 per cent of Australian jobs that exist today could vanish within 20 years, according to a recent research report by the Committee for Economic Development of Australia.

But there are silver linings in the shift taking place in the way we think about and do our daily work.

And for universities, the mission of preparing a workforce able to cope with such shifts can offer interesting opportunities.

Building an adaptable workforce

The youngest Millennials (also known as Gen Ys), and their younger siblings Gen Z, are expected to have up to 17 jobs each across their careers.

That means they need high levels of adaptability and a willingness to be self motivated, says futurist and author Gihan Perera.

"Most workplaces still carry over baggage from 200 years ago, when offices were invented," he says.

"But people are becoming much more entrepreneurial. You no longer need to be in an office and can work remotely while still being part of a creative and productive team.

"Distributed work will become the norm, not the exception, with more offsite workers such as freelancers used."

Preparing Gen Ys and Zs for this kind of work has already seen changes in the style of university teaching, from putting a greater emphasis on team work in assessments to encouraging students in greater use of industry-grade technology.

It's designed to upskill students for the kind of fluid working environment they are likely to face on graduation.

Perera says the future of work, especially for knowledge workers, will be about seamlessly blending work and personal life, using digital technology such as cloud computing and augmented reality rather than the traditional office working structure.

That will require both the physical infrastructure necessary to allow remote working as well as a significant shift in thinking from employers.

He predicts one of the biggest challenges will be the new management styles needed to operate and supervise work in fast-changing environments.

"The best people for the job will do the work but this doesn't always happen in the traditional workplace," Perera says.

"The whole concept of diversity expands – and we don't think of diversity in work patterns.

"Some people are early-birds, others are night-owls. There are different countries and time zones, and even differences in people's motivation.

"Digital technology changes the whole concept of workplace culture."

Already companies are beginning to embrace the change.

Some Perth technology companies report the option of working remotely from far flung parts of the globe is now the price required to attract the best employees.

Others have disbanded the idea of a CBD central office for a network of operatives working from their own homes, coffee shops or on the go.

Director of Datacraft Technologies Chris Pudney says the beauty of the changed work scenario is the flexibility it offers.

"The work can happen anywhere and everywhere. The technology is ubiquitous," he says.

"We can work from home, while we're out and about or on the move. Face-to-face (in person) meetings will be thought of as expensive, slow and inefficient and only done as a last resort."



Embedding innovation in daily life

Beyond a change in the style of work is a shift in how quickly industries and businesses learn and adapt — and here universities have another role to play.

To navigate a landscape where technologies can be born, grow and become obsolete almost overnight, additional priority is being placed on research and development.

As an example, Deloitte predicts that one third of the Australian economy will experience imminent and substantial disruption by digital technologies and business models by 2025.

By the same date, it is anticipated that disruptive digital and internet technologies could impact Western Australia's economy to the tune of \$76 billion a year — or about 25 per cent of gross state product.

The answer lies in finding new ways to at least keep up with the pack — and ideally lead the way.

Professor Fang Zhao, the Associate Dean (Management) in ECU's School of Business and Law, says that around \$9.7 billion was due to be invested in R&D by the

Australian Government alone in 2015-16, according to the National Innovation and Science Agenda.

Around \$6.5 billion of those funds were earmarked for supporting research in universities and research agencies such as CSIRO.

Zhao says this level of investment provides opportunities for university researchers to obtain funding and work towards increasing Australia's innovation on a global scale.

"Although ranked as the 17th most innovative nation in the world, Australia still lags behind New Zealand and some of its Asian counterparts such as Singapore, Hong Kong and Korea," she says.

"In the Global Innovation Index, Australia is ranked lower in knowledge and technology outputs.

"This is further evidenced by a recent OECD survey that found Australia has the lowest level of industry-research collaboration in the OECD countries, even though it boasts some of the highest quality scientific research organisations in the world."

Zhao says that to address the problem of low innovation, universities and researchers need to focus on engaging with end users and industry and conveying the impact of their research.

"Frontier research outcomes will not provide much value to the economy if they are not transferred to industries or commercialised," she says.

"Universities have a crucial role to play in fostering an entrepreneurial mindset and culture as well as delivering training and education to help entrepreneurs to take research outcomes and innovations to the markets."

Connecting future workers with employers

One way Western Australian universities are helping to bridge the gap between research and industry is through iPrepWA, an ECU-led initiative that supports research collaboration between the university sector and WA industries.

PhD graduate Miriam Brooker recently completed the six-week program and landed a job with the industry partner for her team — global ICT service provider CingleVue.

She says iPrepWA gave her the opportunity to get industry experience as well as build her skills in collaboration.

"The practical aspects of the program reminded me about working in a team, which is very different to working alone or with supervisors on your thesis," Brooker says.

"We had to negotiate and assign tasks in order to get the tasks completed on time, with people that we'd never interacted with before.

"It helps to know yourself and to be aware of how others like to work to achieve shared goals."

Brooker says iPrepWA allowed her to look at the concept of work in a different way, thinking of herself as an entrepreneur, even as she worked for a potential employer.

It had also helped her make the shift from studying to being ready to sell her services to industry.

"We've all heard stories about PhD students that complete their degree and then have to take on unskilled employment to make ends meet, or who are overqualified for many jobs and yet there are no opportunities in their area of specialisation," she says.

"Working for a company that develops and sells educational software has required me to think about the commercial value of my work and how my work contributes to the development of the product that I have been hired to support."

Making the workplace part of the classroom

To prepare the next generation of workers means looking at what industry really needs — and that's a core principle behind work-integrated learning or WIL.

Another way of bridging the gap between research and business, WIL sees students embedded into workplaces as part of their studies, so they learn alongside existing employees and develop the right skills to adapt to professional life.

It's a process now integral to preparing students for the workplace, says Dr Denise Jackson, Senior Lecturer and Coordinator of WIL programs in ECU's School of Business and Law.

"It's about developing self-awareness," Jackson says.

"Some of the students are very green — they've never walked into an office.

"It gives them a big insight into their profession that they can't get from a textbook."

WIL sees students spend 100 to 150 hours in a workplace, and is open to around 60 undergraduates and 10 postgraduate students each semester.

It is a lower barrier for employers and students than an internship, which can see students carry out up to six months of full-time work.

As part of these closer ties, students are exposed to workplace etiquette, the use of tools like LinkedIn and networking, and they engage with industry speakers who can share vital experience.

But just as demands for those already working have changed, so too have the expectations of employers in the five years Jackson has been overseeing WIL.

She says employers are now seeking students who can demonstrate independence and entrepreneurialism, with an eye towards their role as leaders of the future.

"Students are now expected to show leadership skills," Jackson says.

"Employers want to see leadership through captaining school sports teams for example, and whether they have done volunteer work."

When even work experience becomes competitive, it shows just how different the standards will be in the future workplace — where graduates will face a very different world of work.