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Recover, Rethink, Rebuild: **All Eyes on VET**
19–23 April 2021



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Don't think of a robot! Improving parents' knowledge of the future of work to positively influence young peoples' attitudes towards apprenticeships

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ABOUT THE AUSTRALIAN APPRENTICESHIPS AND TRAINEESHIPS INFORMATION SERVICE (AATIS)

- ▶ AATIS provides up-to-date information and resources for VET sector stakeholders, job hunters and school-leavers
- ▶ Funded by the Department of Education, Skills and Employment to deliver the Australian Apprenticeships Pathways website www.aapathways.com.au
- ▶ This presentation: early findings of a research project started at AATIS in 2019-20 (continuing post-COVID-19)

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OVERVIEW

- ▶ Research Background/Review of Literature
- ▶ Methodology
 - ▶ Survey of parents and further stages of research
- ▶ Early findings (research in progress)
- ▶ Implications for further research and policy

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BACKGROUND

- ▶ Technology is transforming the world of work
 - ▶ A so-called 'fourth industrial revolution' (4IR)
 - ▶ Whole new skills required for work transformed by digital technologies
- ▶ The 4IR is premised on a revival of manufacturing industries and a broadening range of related services
 - ▶ Trades and apprenticeship-based careers critical to digital industrial transformation
 - ▶ Despite this, problematic narratives about VET persist... why?

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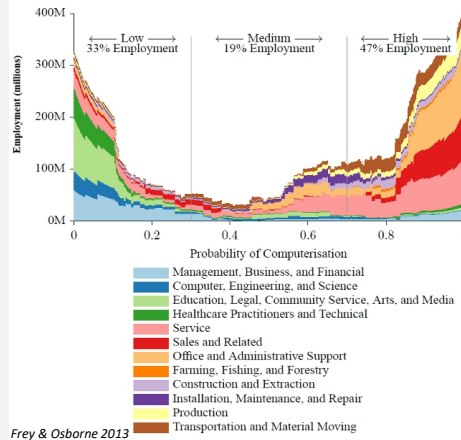


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MAJOR STUDIES POSIT A PHENOMENON OF 'JOB POLARISATION'

- ▶ Influential Oxford study of occupational susceptibility to automation¹
- ▶ Between low-income, low-skilled and high-income, high-skilled jobs
- ▶ Huge impact on perceptions



Frey & Osborne 2013

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BEYOND THE 'JOB POLARISATION' THESIS

- ▶ Methodological shortcomings of occupation-based analysis
 - ▶ Oxford study assessed susceptibility of *whole* occupations, not *tasks* within them, alongside other limitations²
- ▶ Task-based analysis of US labour market
 - ▶ 9% of US jobs automatable³
 - ▶ Across 32 countries, an average of 14% of jobs at high risk of automation (most in manufacturing)⁴

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PEOPLE STILL BELIEVE ROBOTS ARE TAKING JOBS: WHY?

- ▶ Persistent media hype around notion of ‘robots taking jobs’
 - ▶ Public perceptions narrowed to a belief in job polarisation destroying middle-income jobs⁵
 - ▶ Including skilled manual work (i.e. trades)
- ▶ This despite convincing arguments that ‘the robots are NOT coming’^{6, 7}

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TECHNOLOGY AND THE FUTURE OF WORK: THE REALITY

- ▶ We've been here before
 - ▶ We do not live in special times (COVID-19 pandemic aside)
 - ▶ Humans over-appreciate technological changes in their own lifetime⁸
- ▶ But public discourse and perceptions of an automated future of work favour tertiary career pathways at the expense of VET
 - ▶ The professions considered 'safe' whereas vocations are 'risky'
 - ▶ Contrary to evidence that indicates technology affects *all* work⁹
- ▶ Yet VET is critical to providing the skills needed for the future of work¹⁰

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BARRIERS TO EQUIPPING VET FOR THE FUTURE OF WORK

- ▶ VET's status has diminished in recent decades compared with tertiary education pathways¹¹
 - ▶ Yet top growth occupations relate to significant skills shortage in VET-related occupations
- ▶ Preference is shown for tertiary education-related career pathways across the board^{12, 13}
 - ▶ Controlling for socio-economic background and parents' education

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BARRIERS TO EQUIPPING VET FOR THE FUTURE OF WORK

- ▶ VET's role in providing skills required for the future of work is not reaching young people
 - ▶ Career aspirations are rooted firmly in workplaces of the 20th century¹⁴
 - ▶ Young people have limited awareness about the impacts of new automation technologies on work¹⁵
- ▶ A range of influencing factors but parents have the greatest influence on young peoples' perceptions and attitudes¹⁶

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EXPLORING PARENTS' PERCEPTIONS: THE IMPACT OF TECHNOLOGY ON WORK AND THE ROLE OF VET

- ▶ A more complete picture of influences on young peoples' career pathway aspirations is essential to better target careers information – parents may hold a key
- ▶ What is the influence of parents on the career aspirations of young people in the digital era?
 - ▶ What levels of knowledge do parents have of VET?
 - ▶ What are parents' perceptions of the future of work?

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METHODOLOGY

- ▶ An online survey of Australian parents
 - ▶ Preliminary, small-scale survey using Alchemer (formerly SurveyMonkey)
 - ▶ Initial pilot study (pre-COVID-19)
 - ▶ Additional study (during COVID-19 pandemic)
 - ▶ 15 survey questions
- ▶ Later stages of research (post-pandemic)
 - ▶ In-depth interviews with parents
 - ▶ Focus groups with groups of parents

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METHODOLOGY

- ▶ Project gained ethics approval from Victoria University Human Research Ethics Committee
- ▶ Our preliminary findings report survey of approx. 50 parents
 - ▶ Small sample size – obvious caveats, but indicates future research directions
 - ▶ Results de-identified

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FINDINGS: IMPACT OF THE MEDIA ON PARENTS' PERCEPTIONS/ATTITUDES

3. Which of the below are your three main sources of information about technological change, the future of work and the impact of digital technologies on jobs? (Tick any 3 that apply)

Item	Overall Rank	Rank Distribution	Score	No. of Rankings
Online - the internet	1		103	46
Mobile phone news apps	2		53	27
News programs (TV)	3		52	27
Online streaming (i.e. documentaries, news programs)	4		50	24
Radio	5		19	11
Newspaper	6		13	6
Podcasts	7		11	8
News programs (radio)	8		7	4
Other - Write In	9		5	3

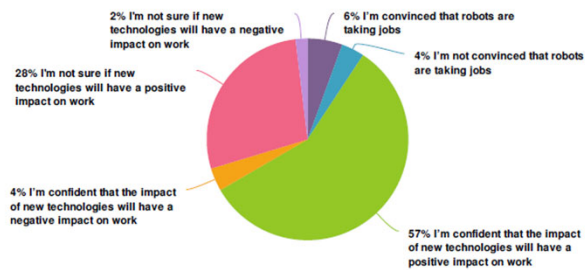
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When parents access information about technology change and the future of work, the majority do so online and via news sources. This leaves them vulnerable to skewed messaging from media, including sensationalist stories about ‘robots taking our jobs’.

PARENTS' KNOWLEDGE ABOUT THE IMPACTS OF NEW TECHNOLOGY ON WORK

2. Which statement below best describes your knowledge of the impact of digital technologies on work?



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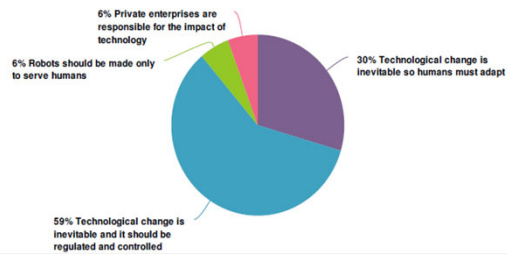
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Despite this, parents are generally positive about the effects of new technology on work. 85% of parents thought that new technology would or might have a positive impact on work, with only 11% holding negative views about this and the remainder unsure.

PARENTS' ATTITUDES TOWARDS TECHNOLOGICAL CHANGE

8. Which statement below best describes your thoughts about technological change, especially the arrival of robots?



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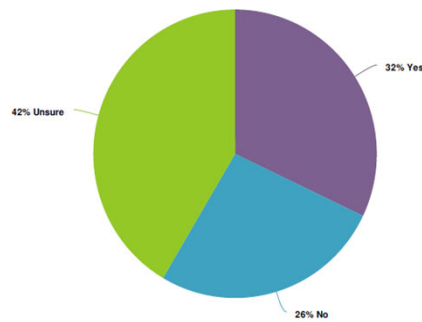
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Parents accept that technological change is inevitable, with 59% believing the government should regulate this, and 30% believing that humans simply need to adapt.

PARENT'S PERCEPTIONS OF THEIR CHILDREN'S UNDERSTANDINGS

4. Do you think your child or children have a good understanding of technology and the jobs that will be available in the future?



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While parents are accessing information about technology and the future of work, and generally have a positive view, they are generally less confident about their children's understanding of the same topic.

A third of participants reported that their children have a good understanding of technology and jobs available in the future, with over a quarter believing their children do not have a good understanding and the remainder unsure.

OTHER THEMES EMERGING FROM THE RESEARCH

- ▶ Younger children/teens have lower/less-developed understandings

“For my older children in the work force I suppose they are aware, for My current high school student I feel his school has the biggest impact”

- ▶ Lack of linkages in education between tech use and its application to careers/workplaces

“My child uses computers, apps and technology regularly, but I am unsure if she knows and / or understands the impacts or applications in the workforce”

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When asked to discuss their children’s understanding, several themes emerge:

OTHER THEMES

▶ Limited future-oriented careers education in schools

- ▶ *"I do not believe that schools prepare students for the working world, Little relevance is placed on work related courses, no mechanical courses etc."*
- ▶ *"I don't believe that technology has been a consideration in their job direction."*

▶ Rapid change of technology and work related to it, particularly affecting younger students with distant horizon to commencing work

- ▶ *"I think that Changes are rapidly occurring and there will be so many new jobs that kids are unable to know what jobs will be available in 10 years time."*

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OTHER THEMES

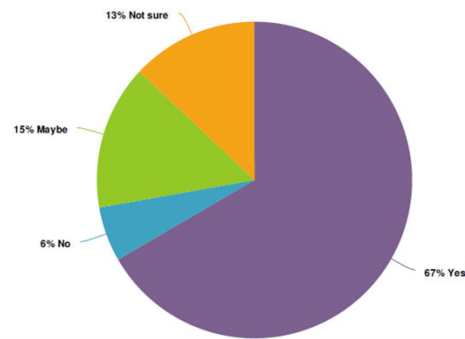
- ▶ A lack of confidence/lack of understanding that there is information about future work trends
 - ▶ *"Confusion, no timetable of how technology is emerging and when things fit."*
 - ▶ *"The future is unclear. Manufacturing is gone in this country along with many other jobs."*
- ▶ Some students have a good grasp of how technology relates to their future career and are proactive about understanding
 - ▶ *"He has a great understanding of technology and wants to future his knowledge."*
 - ▶ *"My son listens to a lot of podcasts that relate to his chosen vocation of cybersecurity."*
 - ▶ *"My children are digitally advanced and this will prepare them for the future in technology. They understand not all jobs are known of now and a lot of skills i.e. problem solving are paramount to any job."*

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MOST PARENTS WOULD ENCOURAGE A VET QUALIFICATION/CAREER PATHWAY

6. I have encouraged or would consider encouraging my child to pursue a VET/TAFE qualification



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Overall the impression of VET by parents was that it is a strong education pathway (26%) and a good pathway for career focused students (19%).

Some parents believe that it is for under-achieving students (9%) or focused on trades (17%), which is a well-known problem around myths associated with the Australian VET sector.

LOOKING TO THEIR CHILDREN'S WORK FUTURES

- ▶ Many parents (57%) believe children will need to continue learning new skills but without specifying an education pathway for this
 - ▶ Lifelong learning
- ▶ Some (15%) believe favour a university pathway
- ▶ Only 9% believe VET is the best pathway
 - ▶ An Australian Apprenticeship pathway for their children preferred by 13%

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Looking to their children's future, many parents believe that their children will need to continue learning new skills but without specifying an education pathway for this (57%).

15% believe that a university pathway is the best option for their children, with only 9% believing that VET is the best pathway and 13% preferring an Australian Apprenticeship pathway for their children.

RECOGNITION OF OTHER INFLUENCING FACTORS

▶ An individual's preferences, skills and experience

- ▶ *"Depending on their career aspects, what motivates them and their interests, either University or VET can meet their needs."*
- ▶ *"I think it depends on the individual as I can't see both my children taking different directions to suit their individual qualities."*
- ▶ *"Take a pathway that best suits their interest."*
- ▶ *"If my child love animals and care about them I will encourage him to go for it."*

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ENHANCING CAREERS INFORMATION ABOUT VET PATHWAYS

- ▶ Overall support from parents (89%)
- ▶ 77% believe government should play a major role in this
- ▶ Reflects how most careers information is being presented – through schools and involving government
- ▶ Many parents surveyed had children at school-leaving age
 - ▶ Thinking may be different for older job hunters/career changers

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Parents overall supported enhanced careers information about VET and Australian Apprenticeships career options. 89% of parents believe that schools should provide additional information, and 77% believe that the government plays a role in this.

This overall reflects most careers information in Australia being presented through schools, and the role that government has to play in this.

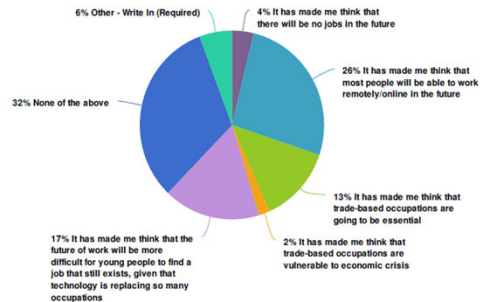
Most parents in this survey had children at or recently having left school, so this may be different when talking with older job hunters and career changers.

IMPACT OF COVID-19 ON PARENT'S VIEWS ABOUT VET & THE FUTURE OF WORK

▶ Did COVID-19 change your mind?

- ▶ Yes (45%)
- ▶ No (40%)
- ▶ Unsure (15%)

14. If you answered yes to the last question, has the COVID-19 pandemic made you think about the future of work in any of the following ways? Select any one option that applies most.



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45% of parents reported that the COVID-19 pandemic had changed their mind about the future of work, while 40% reported it hadn't affected their opinion.

Of those who did change their mind, 26% reported that they can see more people working remotely in the future, 13% reported that trades will be essential, and 17% think that the future of work will be more difficult and that technology is replacing jobs. Close to a third of parents reported that they had changed their mind, but were unable to specify what this change is.

CONCLUSION AND FURTHER RESEARCH

- ▶ Parents are overall optimistic about the future of work
 - ▶ COVID-19 pandemic may have changed some peoples' minds emphasising the impact of technology on work/the pace of technological change
 - ▶ VET pathways (particularly apprenticeships) highlighted
- ▶ Careers information needs to emphasise the importance of humans to work
 - ▶ Not helpful to think of robots as simply replacing humans
 - ▶ Careers information should reflect this
- ▶ Further research into better targeting VET careers information
 - ▶ The positive impact of tech on trades and apprenticeships

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CONCLUSION AND FURTHER RESEARCH

- ▶ Parents display a level of “techno-determinism” in their thinking
 - ▶ Technological change is something “done” to society – implications for democracy and social institutions
- ▶ The importance of government mitigating technology’s impact on work and society
 - ▶ Importance of industry policy linked to skills and training policy

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