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A student-centred approach: Understanding higher education pathways through co-design

Mollie Dollinger, Andrew Harvey, Ryan Naylor, Marian Mahat and Belinda D'Angelo

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A student-centred approach: Understanding higher education pathways through co-design

2022

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Abbreviations

ABS	Australian Bureau of Statistics
ACARA	Australian Curriculum, Assessment and Reporting Authority
ACTSSC	Australian Capital Territory Senior Secondary Certificate
ADF	Australian Defence Force
AQF	Australian Qualifications Framework
ASGS	Australian Statistical Geography Standard
ATAR	Australian Tertiary Admission Rank
CICA	Career Industry Council of Australia
COAG	Council of Australian Governments
DESE	Department of Education, Skills and Employment
DET	Department of Education and Training
EMA	Education Maintenance Allowance
HECS	Higher Education Contribution Scheme
HELP	Higher Education Loan Program
HEPPP	Higher Education Participation and Partnerships Program
HSC	Higher School Certificate
ICSEA	Index of Community Socio-Educational Advantage
KESO	Koorie Engagement Support Officer
LEA	Low Educational Advantage
NCI	National Careers Institute
NCSEHE	National Centre for Student Equity in Higher Education
NERA	National Education Reform Agreement
NTCET	Northern Territory Certificate of Education and Training
QCE	Queensland Certificate of Education
RRATRC	Rural and Regional Affairs and Transport References Committee
RRR	Regional, Rural, and Remote
RTO	Registered Training Organisation
RUC	Regional University Centre
RUN	Regional Universities Network
RYA	Rural Youth Ambassador
SACE	South Australian Certificate of Education
SES	Socioeconomic Status

SFO	Student Family Occupation
TAFE	Technical and Further Education
TCE	Tasmanian Certificate of Education
USQ	University of Southern Queensland
VACCA	Victorian Aboriginal Child Care Agency
VCAL	Victorian Certificate of Applied Learning
VCE	Victorian Certificate of Education
VET	Vocational Educational Training
WACE	Western Australian Certificate of Education

Executive Summary

Provision of equitable access to higher education has never been simple. Disparities continue despite over 25 years of ongoing and directed efforts in policy and practice to improve participation across equity groups (Burke, Bennett & Bunn, 2019; Harvey, Burnheim & Brett, 2016). Recent policy reviews and research have highlighted the need for urgent policy reform (Halsey, 2017; Napthine et al., 2019) to address structural inequities in access, especially for those students from regional, rural, and remote (RRR) areas (Naylor & Mifsud, 2020; Pollard, 2018). In response to these commissioned reviews, the Australian Government has announced a series of policy changes including the reformulation of the Higher Education Participation and Partnerships Program (HEPPP) (Australian Government, 2020). In the new formula, 45 per cent of funds will be specifically distributed to universities based on their share of students from a rural or regional area. Additional funding will also be directed into financial assistance for students from rural and regional areas, known as the Tertiary Access Payment, to support the costs of relocation. The future allocation of annual growth places to regional campuses (3.5%) is also substantially higher than the allocation for metropolitan campuses (1%). Such policy reforms are designed to increase rural and regional enrolments and may encourage universities to conduct further outreach to RRR schools and communities.

Raising the RRR participation rate, however, requires not only greater engagement activity but strategies that are directly informed by rural and regional Australians and tailored to local perspectives and aspirations. One productive approach is to understand the views and aspirations of rural and regional community members through a process of participatory co-design. Co-design enables the perceptions of students, teachers, and carers to be authentically captured and compared. Importantly, co-design also promotes student autonomy, improves the perceived value of initiatives and solutions, and enables new programs and resources to be collaboratively re-designed (Beer & Lawson, 2017; Dollinger & Lodge, 2020; Watson et al., 2017).

This report summarises key research findings and recommendations of a 2019–20 National Centre for Student Equity in Higher Education (NCSEHE) funded project entitled, “A student-centred approach: understanding higher education pathways through co-design”. Through the project, we worked closely with RRR stakeholders, including students, school staff (e.g., teachers, principals, career practitioners), and carers (e.g., parents, guardians) to understand the barriers and motivations around postsecondary pathways and careers advice. The project team utilised a participatory design methodology that integrated stakeholder workshops to uncover participants’ perceptions, experiences, and ideas on what resources or interventions could help to inform students’ decision-making in postsecondary educational pathways and careers. Our workshops used a series of scaffolded activities aimed to generate user ideas such as mind maps, role-playing, and storyboarding that helped stakeholders reflect and communicate to the research team.

Two major events impacted the fieldwork component of this study: the 2019–20 Australian bushfires and the COVID-19 pandemic. The results presented here, as a result, stem from four outer regional school visits in Western Victoria prior to travel restrictions put in place by the Victorian State Government. At each school, three workshops were held for the various participant cohorts (i.e. students, school staff, carers) (n=101). Previous research has

highlighted the importance of early-stage interventions (e.g., Gore et al., 2017; Raciti & Dale, 2019), particularly starting in Year 7 and Year 8; hence we chose this age group as our focus for exploring students' perspectives and experiences. To further investigate stakeholder perspectives, we also held 10 interviews with RRR principals across Victoria and Queensland.

The aim of our project was to utilise a co-design approach to create fit-for-purpose, relevant resources that could benefit RRR communities. Working with our participants, the research team was able to create several key outputs including a toolkit for teachers and carers, a series of ten careers and pathways lesson plans and learning activities, and a recommended template for school-university partnerships. In this way, our adopted participatory design methodology allowed us to capture both empirical insights about participants' perspectives on the optimal nature of intervention and/or outreach programs and resources and to translate those insights into tangible outputs that could be distributed across the community after the completion of the project.

Our findings reveal a remarkable diversity of views among different stakeholders, including students, carers, and school staff. For example, students frequently perceived the major barriers to university to be related to academic difficulty or costs, while carers instead highlighted safety, distance, and cultural issues related to the transition from regional to metropolitan life. School staff, meanwhile, often felt the major barriers were around a lack of information on tertiary options and predicted industry growth areas. Findings convey the need to work both individually and collaboratively with these groups to develop strategies that are informed and mutually supported by students, their carers, and teachers. Higher education institutions and the government also need to address these unique perspectives in both substantive reforms and future messaging and continue to utilise co-design as a mechanism to elevate student voices. Our report illustrates how both participant-generated ideas can help reform policy and practice and how the use of participatory design may facilitate improvement in engagement and communication between government, higher education institutions, industry, schools, and communities.

Our major findings, organised by research question, include:

I. What is the optimal nature, delivery, and timing of early-stage interventions (Year 7 and Year 8) for students from RRR backgrounds?

Participants advocated for context-specific and community-driven initiatives that preserve the integrity and desirability of RRR communities, clarify how traditional RRR jobs (e.g., farming) are being modernised, and articulate the benefits of discipline-based knowledge to excel in these careers. School staff also indicated that learning activities could be designed to enable hands-on experiences that are more culturally aligned to how RRR students learn and live. It was also suggested that delivery of interventions occur more regularly, as determined through partnership with the schools, and potentially consider scaffolded and scalable models of engagement that promote celebratory milestones along the way. Finally, participants felt that industry engagement in interventions was critical towards helping clarify future pathways.

II. What are the motivations and barriers of students and key influencers in aspiring to/supporting higher education pathways?

Significantly, we found that participant cohorts (e.g., students, carers, school staff) held varying perceptions of the barriers to university. Students predominantly identified major barriers as costs and difficulty of study, carers expressed barriers stemming from perceptions of a rural-urban cultural divide as well as safety concerns, and school staff more readily referred to barriers around informational gaps (e.g., available course options) and industry engagement. Across cohorts, participants further noted the importance of family and/or peers in influencing students' decisions to pursue postsecondary study. Other key findings in regard to this question included perceptions that regional campuses or online study options were of lesser quality than metropolitan-based universities and that participants felt there was a pressing need to better communicate the value of a university degree, especially for students who wished to stay in RRR communities.

III. What resources can be co-designed with key stakeholders to support interventions and higher education pathways?

Despite a range of information available on the internet, participants expressed the need to develop context-specific resources that articulated evidence-based findings. In particular, participants requested information that presented all postsecondary education options and compared benefits of each objectively. School staff also suggested creating university-school partnership templates that clarify roles, timelines, expectations, and shared goals. Numerous participants also shared their confusion and frustration over the information provided by Centrelink, as well as university websites, and indicated a need to co-design resources with participants in the future to ensure they are comprehensive and clear.

Based on these findings, we offer the following recommendations:

Recommendations for higher education institutions:

- Strengthen RRR outreach programs and interventions that cater to early year levels (Year 7 and Year 8), potentially by redirecting HEPPP funding consistent with the new formula.
- Utilise RRR mentors and local industries to help students visualise their futures through peers, following the 'nothing about us without us' principle.
- Utilise online strategies to deliver scalable initiatives, including the development of online programs that are compatible with low-speed internet access to help disseminate key information and context-specific support.
- Adopt and expand co-design activities to explore and compare different stakeholder voices, especially student voices, which are too often filtered through others.
- Specifically address concerns of cost and difficulty in the development of RRR outreach activities to students, highlighting the operation of income-contingent loans, strong graduate outcomes, and growth mindsets.
- Develop resources and initiatives that address carers' concerns about safety and travel.
- Utilise co-design activities with diverse stakeholders to redesign confusing or outdated resources, as well as university websites, to ensure information is accessible and clear.
- Work with carers, schools and industry to profile and raise the reputation of their local higher education campuses and/or online offerings.

- Develop and promote more alternative entry pathways, including open access and tuition-free enabling programs.

Recommendations for the Australian Government and Departments:

- Consult with higher education equity and evaluation experts to develop a thorough review of the impact on the Higher Education Support Bill (Job-ready Graduates and Supporting Regional and Remote Students) (DESE, 2020) that includes the impact of any legislation on equity group postsecondary education participation, including RRR and Indigenous students.
- Utilise participatory design methods with students from equity groups and other relevant stakeholders to further develop reforms and understand the impact of any changes to course costs, student income support, and access levels.
- Review future policy consultation processes to ensure adequate and authentic input from any impacted stakeholders, including students, school staff (principals, teachers, career counsellors), and carers (parents, community members).
- Collaborate with RRR communities to redesign and improve messaging around transfer payments and services, including Centrelink payments, relocation scholarships, youth allowance, carer payments, and ABSTUDY (the group of payments for Aboriginal or Torres Strait Islander students or apprentices).
- Modify Centrelink services in RRR communities to allow community members to book in-advance appointment times.
- Ensure that Regional University Centres (RUCs) include a strong focus on collaboration among vocational education and training institutions, higher education institutions, industry, and schools and to support ongoing collaboration through clear goals and targeted outcomes. Ensure that students and carers are directly involved in the operations of such hubs.
- Extend funding for regional research initiatives that explore diverse participant voices and support co-design of future programs and policy to ensure relevancy.
- Create funding opportunities for local communities to develop context-specific initiatives and programs.
- Support participatory design methods to co-create with schools and communities context-specific career guidance and postsecondary pathway information in early-stage interventions (e.g., Year 7) to raise students' awareness and confidence.
- Modify existing Department of Education and Training (DET) (e.g., Research in Schools and Early Childhood setting (RISEC)) guidelines to allow for researchers to provide gift cards to community members and carers that will support greater participation and acknowledge the travel time and/or loss of work that participants may undergo in order to participate in studies.
- Leverage the new National Careers Institute (NCI) to promote regional careers connected to tertiary education, ensure that careers education with RRR perspectives is embedded within the Australian Curriculum, promote professional development resources for career advisors and teachers, and advocate for schools to have a strong ratio of careers teacher per student (which currently varies by state and sector).
- Support greater partnership with the Career Industry Council of Australia (CICA) to promote professional standards, offer RRR-specific online careers professional development opportunities, and benchmark practice.

Part 1. Rationale for the Study

1.1. Introduction

The opportunity to study at university is not equal. Data have consistently shown that students from equity backgrounds such as low socioeconomic status (SES), regional/remote, and Indigenous communities are disproportionately disadvantaged in their educational opportunities (Naylor & Mifsud, 2020; NRRR, 2019). These discrepancies continue despite sustained research and significant attention from educators and local and national government bodies (e.g. Pitman, 2017; Pollard, 2018). The *National Regional, Rural and Remote Tertiary Education Report* (2019) found that, compared with their metropolitan peers, individuals from regional, rural and remote (RRR) communities are less than half as likely to gain a university (bachelor or above) qualification by the time they are 35 years old (Napthine, Graham, Lee & Willis, 2019, p. 5).

The challenge to rectify the ongoing inequity of educational opportunities speaks to the complexity of the issue. Factors that can impact on the support and encouragement of a student going to university can range from their socioeconomic background, culture, and school environment, with many of these factors overlapping and intersecting (Gale et al., 2010; Zacharias et al., 2018). Simply put, the task of creating comprehensive interventions or resources that are suitable across a range of contexts and individuals is difficult due to the diversity of individual experience, as well as their strengths, barriers and motivations. The challenge of creating successful and positive change is further compounded by the traditional way programs or resources are designed, typically without direct input from stakeholders. Therefore, we sought to reposition stakeholders (i.e. students, teachers, carers) as co-designers of not only our findings and recommendations, but also the resultant outputs. As part of this project, we utilised our stakeholder workshops to also create three key outputs, including 10 lesson plans for Years 7 and 8 students (nuanced for RRR communities), a Victorian-specific toolkit for carers and school staff on postsecondary pathways, and a school-university partnership template. While our project was focused on providing information and useful recommendations to improve higher education pathways, we also sought to include information on alternative options such as Technical and Further Education (TAFE) and Vocational Education and Training (VET). Ultimately, our goal was to collaborate with stakeholders to create relevant and useful resources that could ensure every student and family had access to the right information and support to inform their careers-related and postsecondary education pathways decision-making.

While other studies have explored motivations and barriers of student pathways (e.g., Cardak et al., 2017; Raciti, 2019; Zacharias et al., 2018), our study was unique in our application of participatory design. Participatory design, rather than seek only to explore participants' experiences and feedback, also aims to collect and evoke participants' suggestions and ideas (DiSalvo, Clement & Pinek, 2012; Gannon & Naidoo, 2020). We identified three specific participant cohorts whose voices we wanted to highlight, including early Middle Years students (i.e. Year 7 and Year 8), school staff (e.g., principals, career advisors, teachers), and carers, such as community leaders, parents, or other family members. By hosting a series of co-design workshops, we engaged participants in a sequence of design-thinking activities encouraging collaboration and the generation of novel ideas. These activities included mind maps, storyboarding, and role-playing (see the

corresponding co-design handbook, Dollinger & D'Angelo, 2020). We also provided participants with a copy of our handbook on co-design, which further provided examples of how they could apply activities in their own contexts to solve issues or support collaboration across stakeholders.

Our findings highlight not only relevant ideas on how to improve and innovate support for student pathways, but also showcase the power of collaboration in community-based research. By utilising a participatory design approach, we helped to ensure that participant voices were authentically integrated into the project and we were able to strengthen community buy-in for the resources we subsequently created. Our workshops further acted as an intervention, as they provided an opportunity for participant reflection and helped to build ownership of the project's findings.

1.2 Regional, Rural and Remote Education in Australia

Education is one of the largest sectors in the Australian economy (Dawkins, Hurley & Noonan, 2019; Reserve Bank of Australia, 2020). Several Australian universities are considered world class and attract students from across the globe (Arkoudis et al., 2019; Moodie, 2017; Zajda, 2020). However, not all domestic students have an equal opportunity to engage with these homegrown educational opportunities. In particular, there are specific barriers for RRR students, including logistical, geographical, financial, and emotional difficulties that can hinder their ability or motivation to study at university (Burke, Bennett, Bunn, 2019; Stevenson & Clegg, 2017; Halsey, 2017).

People from RRR backgrounds comprise approximately 28 per cent of the Australian population, but only 20.6 per cent of the Australian university population (Australian Bureau of Statistics [ABS], 2018; Koshy, 2019). This indicates an access ratio (the ratio of students from RRR backgrounds to the proportion of the Australian population from RRR areas) of only 73 per cent. If students from RRR backgrounds were not underrepresented in higher education, they would comprise 28 per cent of the total student population and have an access ratio of 100 per cent.

In 2008–17, when Australian higher education adopted a demand-driven system and lifted caps on student numbers across the sector, RRR participation did not improve (Burnheim & Harvey 2016; Napthine, Graham, Lee & Wills, 2019). Increase in student participation in other equity groups, including students from a low SES background and Indigenous students, improved only modestly in terms of percentage points (for example, an increase of 0.4 percentage points among Indigenous students; 1.2 percentage points for low SES students; and 1.8 percentage points among students with disabilities, Koshy, 2019). This growth is relatively minor against a background of what was then a rapidly expanding sector, equating to approximately 40,000 students from these groups between 2013 and 2018. In contrast, the proportion of students from regional backgrounds has decreased over the same period from 20.7 per cent of the total student body, to 19.8 per cent, and those from remote backgrounds have decreased from 0.84 per cent to 0.79 per cent (Koshy, 2019). Interestingly, the largest proportional decrease has been among members of the Regional

Universities Network (RUN)[1], which saw a decrease of regional students from 53.4 per cent to 48.7 per cent of the student body between 2013 and 2018, which may suggest that increased interest from students from metropolitan backgrounds in the RUN universities may have displaced students from RRR backgrounds. Recent analysis has also suggested that attrition at regional universities is greater than metropolitan universities (Beer & Lawson, 2017; Nelson et al., 2017).

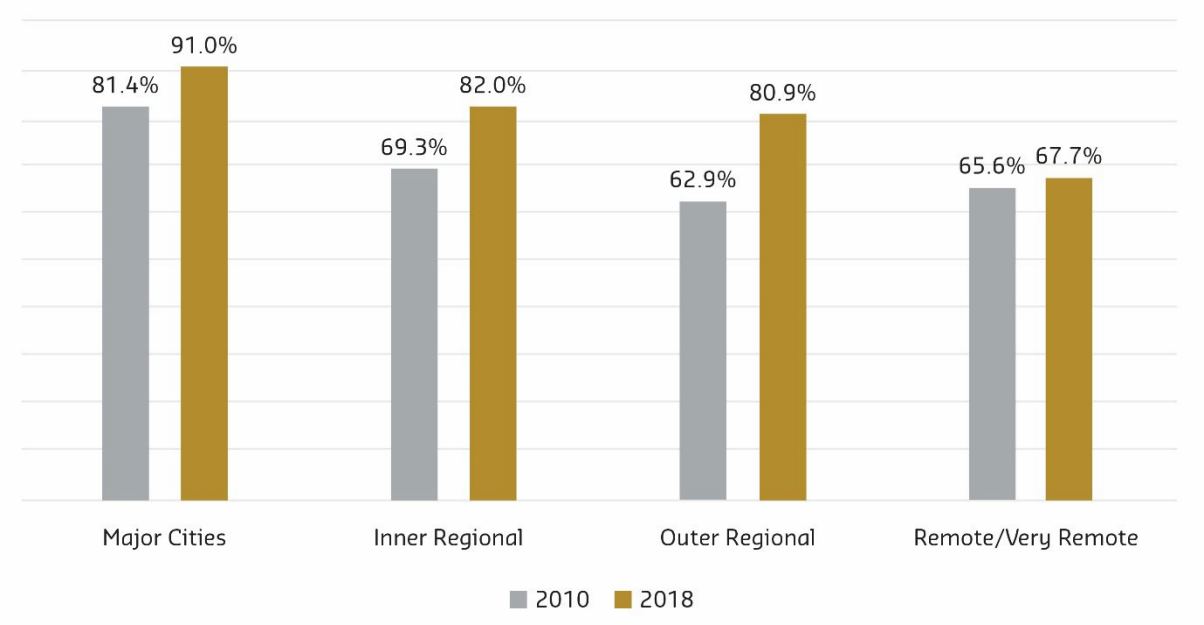
In actual student numbers, there has been growth in RRR participation—11,000 among regional students and only 400 among remote students (Koshy, 2019)—but the decline of proportional access in the face of concerted policy interest and funding projects—while most other student cohorts have seen improvement—is concerning. Even as significant government funding and support initiatives (e.g., HEPPP) have helped improve outcomes in specific cases, overall widening participation has not improved outcomes for RRR students. The overlap and intersectionality between these equity groups (students from RRR backgrounds, low SES backgrounds, and Indigenous backgrounds) suggests that the proportional growth in those groups has been almost entirely due to increased access for metropolitan members from low SES or Indigenous backgrounds. RRR students who are also low SES, Indigenous, or are studying with a disability may be particularly likely to face an increased disadvantage in access to university and to have been excluded from the student growth numbers (Napthine, Graham, Lee & Willis, 2019). The lack of easily accessible data on the educational trajectories of students who represent multiple equity groups potentially obscures these findings and is a symptom of the relatively poor understanding of intersectionality in Australian higher education (Dollinger et al., 2020; Naylor, Coates & Kelly, 2016).

The participation gap noted above can also be traced in the attainment of Year 12 certificates across Australia's regional areas and highlights a profound inequity based on geographic location. In 2010, 81.4 per cent of individuals from Major Cities aged between 20 and 24 had successfully completed Year 12, while their regional and remote counterparts were significantly behind: Inner Regional areas at 69.3 per cent, Outer Regional at 62.9 per cent, and Remote/Very Remote areas at 65.6 per cent (Figure 1, ABS, 2018). To address this disparity, the National Education Reform Agreement (NERA) was implemented at the 2010 Council of Australian Governments (COAG), making schooling compulsory (although see below for the range of acceptable activities within this agreement) for all Australian children up to at least 17 years of age (Council of Australian Governments, 2010). The aim of the NERA was to lift the Year 12 or equivalent attainment rate for 20–24-year-old Australians to 90 per cent by 2020. Based on the 2018 data, there has been an increase overall to Year 12 attainment across all geographical locations, yet regional and remote students continue to experience the most disadvantage. The 90 per cent NERA target for Major Cities students has already been met, with a 91 per cent Year 12 attainment rate, constituting a 9.6 percentage point increase from 2010 figures; while Inner Regional and Outer Regional rates, 82 per cent and 80.9 per cent respectively, have seen substantial

[1] The Regional Universities Network (RUN) is comprised of seven universities who each have a regional headquarters: CQUniversity, Southern Cross University, Federation University Australia, University of New England, University of Southern Queensland, University of the Sunshine Coast, and Charles Sturt University. They deliver several programs with the broad aim of making higher education accessible and achievable for regional students.

improvement and appear to be nearing the 90 per cent target with 12.7 and 18.0 percentage point increases respectively. The most severely disadvantaged group consists of Remote and Very Remote individuals at 67.7 per cent, amounting to the smallest increase across all geographical locations of 2.1 percentage points between 2010 and 2018 (see Figure 1, ABS, 2018).

Figure 1: Year 12 or equivalent attainment for individuals aged 20-24 based on geographical location (ABS 2018)



NERA mandates that students remain in school until they are 17 years of age (the typical Australian student reaches this age in the last half of Year 11 or some time in Year 12). Nonetheless, there is a range of acceptable educational, training and work-related activities students can undertake apart from Year 12 studies that satisfy the NERA policy. For instance, most states and territories permit their students to apply for senior secondary-equivalent training or work after Year 10. Those students can apply for an exemption from attending traditional schooling and instead enrol in approved education or training and/or undertake 25 hours of work per week until they reach the NERA requirement of 17 years of age. Although education in Australia is compulsory up to 17 years of age, Figure 1 shows that students from Inner Regional, Outer Regional, and especially Remote/Very Remote students often opt to undertake alternate activities rather than complete a Year 12 qualification and therefore do not obtain an Australian Tertiary Admission Rank (ATAR), which can impact their access to higher education in the immediate-term (Burnheim & Harvey, 2016, Cardak & Ryan, 2009; Wilkinson & Pickett, 2010; Gale, 2012). To keep students of all academic and vocational abilities and interests engaged with school, every state and territory in Australia offers alternative pathways toward senior secondary certificates. For instance, VET subjects/courses are available to students from Year 10 until the end of Year 12 and contribute to the student's overall completion of their respective state's senior secondary certificate whilst also ensuring that the student remains within their traditional school setting.

The inclusion of VET subjects within the Year 12 curriculum provides students with opportunities to participate in vocational training in areas such as agriculture, hairdressing, childcare and aged care to name a few, while simultaneously completing their Year 12

qualification. In Victoria, students in Year 11 and Year 12 are given an option to complete the Victorian Certificate of Education (VCE) or the Victorian Certificate of Applied Learning (VCAL). While the VCE enables students to obtain an ATAR and therefore apply to university immediately after secondary school, students who opt for VCAL do not receive an ATAR, but rather receive a Foundation, Intermediate or Senior VCAL certificate. Students enrolled in VCAL undertake subjects that develop practical and applied knowledge while also completing VET subjects and obtaining VET qualifications. The binary system of VCAL and VCE may distort students' views on who can enter university and may not sufficiently promote the numerous alternative pathway options. In a recent review, commissioned by the Victorian State Government, recommendations included that VCAL certificates should be replaced with an integrated senior secondary certificate, with vocational and industry-focussed experiences embedded within the VCE (DET, 2020). This would help reduce the stigma for students who choose to focus on vocational learning, as well as help students create a strong profile to highlight their capabilities and achievements when they finish school (DET, 2020).

State and federal governments have crafted policies, standards and initiatives to keep students in school to the end of Year 12. Despite this significant investment, there is a large disparity among school outcomes based on geographic location (e.g., as noted in Figure 1). The reasons for this are likely to be complex, but potential factors at a structural level include school funding, quality of available educational resources, teacher shortages, and access to a broad range of high-quality academic curricula (Burnheim & Harvey, 2016; Pollard, 2018; Naylor & James, 2016). That is, schools in RRR areas are less likely to attract high achieving teachers or replace them in emergencies, less likely to be able to offer a range of engaging and motivating disciplinary subjects, less likely to provide access to career and pathway advice for students, and may not be able to provide access to the core academic curricula required for access to university (Burnheim & Harvey, 2016; Naylor & James, 2016). These factors also contribute to lower university entrance scores, which have been shown to correlate strongly with the SES of individuals and schools (Cardak & Ryan, 2009; Wilkinson & Pickett, 2010; Gale, 2012), all factors which may further exclude RRR Year 12 students from higher education. Although universities do provide bonus ATAR points in recognition of the disparity between ATAR and performance at university for these students, and are increasingly promoting non-ATAR access pathways, lower levels of academic preparation, limited sub-bachelor places, unconscious bias in interview processes, and preparation of applications for non-ATAR access pathways still present opportunity costs and chokepoints towards providing equitable access to university for RRR students. This is particularly the case for the elite Group of Eight institutions (Go8)[2], and elite fields such as medicine, law and engineering which tend not to offer non-ATAR pathways. It should be noted, however, that universities are making adjustments to their entry requirements following the COVID-19 disruptions to senior secondary school students in attaining a true ATAR.

[2] The Group of Eight (Go8) comprises eight high-ranking Australian universities: The University of Melbourne, The Australian National University, The University of Sydney, The University of Queensland, The University of Western Australia, The University of Adelaide, Monash University and UNSW Sydney.

With these factors in mind, it is unsurprising that studies have found that RRR students are less likely to express a desire to pursue postsecondary study, including university (Cooper, Baglin & Strathdee, 2017; Vernon et al., 2018) and are also less aware of alternative school-leaver university entry pathways (Harvey et al., 2016). Further troubling is evidence that RRR students have a greater likelihood of attrition and study-related challenges in higher education institutions, even when they choose to study online and remain in their local communities (Nelson et al., 2017; Stone, 2017).

Equitable higher education attainment is a critical issue with long-term economic consequences. Studies show that individuals with a bachelor degree will likely earn more than those whose formal education ended at Year 11 or lower (Cardak et al., 2017; Cassells et al., 2012). Most recent statistics show that, over the course of their working life, an individual who does not hold any formal qualification will earn approximately $900 a week, as opposed to an individual with a bachelor degree, who will earn $1400 a week (ABS, 2016). Further, students who have a graduate as a parent may be more likely to complete postsecondary studies themselves, highlighting the generational effect of inequity (O'Shea et al., 2018). Scholars have also highlighted that rising unemployment and job automation will only increase the need for young people from low SES and/or regional and rural backgrounds to become aware of educational options that can help them in their future careers (Raciti, 2019). Areas projected to suffer job losses due to technological advancements include agriculture, forestry and fishing, while jobs expected to rise, which often require a postsecondary degree, include health care, education and training, and scientific and technical services (Department of Education, Employment and Workplace Relations, 2018). Participation in university courses in health care (particularly nursing, although not medicine, dentistry or allied health), education, and agriculture amongst RRR students tends to be relatively robust (Burnheim & Harvey, 2016); however, long-term forecasting and impact analysis is difficult. Industrial losses in areas such as agriculture, forestry and mining could further have impacts on regional communities that lead to indirect educational disadvantage (CEDA, 2015). The female-dominated nature of nursing and education also suggests that outcomes may not be equivalent for males from these communities (McGrath & Van Bergen, 2017; Nursing and Midwifery Board of Australia, 2020).

In recent years, solutions to combat inequity in higher education include a focus on creating more geographically accessible study locations and campuses, as research has shown that close proximity to a campus may positively impact students' decision-making processes (Webb et al., 2015). Metropolitan school-aged children may have incidental encounters with universities (e.g., driving or walking by one) which could normalise the prospect of attending university. On the other hand, students from outer regional areas in Victoria, for instance, can be located over 100 km away from their nearest regional campus and, in remote Queensland, over 700 km away. Cooper and colleagues (2017) have highlighted that these proximities can impact on university aspiration, noting succinctly that "as distance increases, the likelihood of students reporting intent to study at university decreases" (p. 4). The National Regional, Rural and Remote Tertiary Education Strategy (Napthine, Graham, Lee & Willis, 2019) aims to halve disparity between regional and metropolitan areas and

recommended creating additional Regional University Centres (RUCs)[3] that may help encourage students to pursue a university degree while staying closer to home. There are currently 16 centres established across Australia (Department of Education, 2019). Following the national review, the government has announced plans to invest an additional $21 million over four years to establish nine additional RUCs and strengthen the existing support network and evaluation of the program (Australian Government, 2020).

The National RRR Strategy (Napthine, Graham, Lee & Willis, 2019) also highlights that almost 30 per cent of all public submissions on how to improve RRR education and pathways are related to the quality and availability of careers and pathways information and advice. In particular, these submissions suggested that current school resources and staff insufficiently support students' higher education pathways and career decision-making (Napthine et al., 2019). Our study, therefore, was specifically focused on co-designing resources, through lesson plans and toolkits that would support informed careers decision-making.

1.3 Barriers and Opportunity to University Access

A range of studies has previously identified barriers to higher education for students from equity backgrounds. As discussed above, there are considerable structural barriers for students from RRR backgrounds, including economic, geographical, informational and cultural barriers created by the broader social context of Australia, policy decisions made by universities and governments, the makeup and opportunities available to regional communities, and the structure of the education system. Raciti (2019) has also identified further barriers which include individual, rather than structural, risk factors that span a diversity of areas including financial, psychological, social, wellbeing, and competency.

To overcome these barriers, numerous outreach and widening participation programs have adopted a wide variety of approaches aimed at addressing both structural and individual factors (Bennett et al., 2015; Raciti & Dale, 2019). Recent work has framed students' trajectories in higher education as the outcomes of a long series of decisions (Hass & Hadjar, 2020); and the intent of outreach and widening participation to influence those decisions to promote or enable behaviours and opportunities that lead to a successful educational trajectory (Walton & Carrillo-Higueras, 2020).

Particularly important in this decision-making process are the attitudes to higher education held by individuals at each stage. These include their perceptions of the likely outcomes and consequences of the decision, the influence of the opinions from valued others, their understanding of how to achieve their desired goals, and their sense of agency or control over their decision and its outcomes (Ajzen, 1991; Hass & Hadjar, 2020). That is, at each decision point, an individual's choice is influenced by their understanding of the consequences of the decision, the likelihood of those consequences, and what they can do to influence that likelihood, and how the likely consequences align with their goals and the values of those around them.

[3] Regional University Centres (RUCs) are facilities funded by the Australian government located in 25 regional centres across Australia. The facilities provide tertiary students in these regional areas with support ranging from study spaces and internet access to academic skills assistance.

Many outreach and widening participation interventions aim to increase an individual's agency and study skills to achieve educational outcomes (Bennett et al., 2015). These skills and access to information are important, since the loss of agency, anxiety, and poor grades have been shown to have significant negative outcomes for students' mental health and the likelihood of retention (Naylor, Baik & Arkoudis, 2018; Naylor, 2020). Just as important, however, is seeing the value in accessing and completing a university education. Aspiration for higher education among equity groups has been widely studied (James, 2002; Alloway & Gilbert, 2004; Morris, 2012; Stone, 2017), and it is clear that, although children and young adults from RRR areas are no less likely to aspire to university, particularly when young, they are more likely than other students to be motivated by potential employment outcomes and financial benefits (Morris, 2012; Stone, 2017). Given the overlap between RRR areas, low SES areas and financial insecurity, it is unsurprising that students from RRR areas are more keenly aware of the financial risks and opportunity costs involved in a multi-year investment in higher education, and more likely to choose (or be forced to choose) more immediate financial security (Stone, 2017).

Arguably, however, the role of communities to inform and support aspirations for higher education have been relatively understudied, although the importance of rural parents' lower educational expectations of their children should not be under-emphasised (Byun, Meece, Irvin & Hutchins, 2012; Carrillo-Higueras & Walton, 2020). Community influence has certainly been more rarely the subject of university outreach programs, with the most recent breakdown of funding allocation revealing less than two per cent of HEPPP funding was being directed to these projects (Naylor, Baik & James, 2013). This neglect of community influence and funded support may contribute to lower access and participation rates for students from RRR communities. Scholars have suggested that the positive messaging about university that is disseminated by outreach programs may not sufficiently 'disrupt' students or other stakeholders' plans or assumptions about higher education because they are focussed on individual action as opposed to community action (Zacharias et al., 2018).This is potentially due to a deficit mindset where RRR communities may not believe their students are as suited to university life, or misunderstand who belongs in higher education and thus refrain from engaging with the positive messaging of university outreach initiatives (Welch, 2007). Research also suggests that RRR students may hold lower perceptions of their own academic ability which may feed into local perspectives about the suitability of students attending university (Watson et al., 2016; see also Gore, Fray, Patfield & Harris, 2019 who review the impact of community perspectives to university aspirations).

Highlighted in our research was also the widespread assumption the students needed to leave their RRR communities either to engage in university study or to pursue potential career options. Our participants recommended a need to adopt a positive narrative around RRR communities and way of life. Too often, the idea of 'success' for students is linked to the preconception that they must leave their local community (O'Shea et al., 2019; Ronan, 2020). Breaking down these assumptions, as well as highlighting regional or online-based study options and potential location-independent careers, may be key to showcase to RRR communities how a university can fit into their societal and cultural expectations.

Another possibility of why interventions may experience barriers could be related to timing. Appadurai's (2004) 'narrow windows' theory acknowledges that advice and support matter but recognises that timing and delivery are also critical (cited in Bernard, Taffesse & Dercon, 2008). Growing research has indicated that careers curricula and interventions may need to

come earlier in a child's education (Napthine et al., 2019). Indeed, research has demonstrated that students as young as senior primary school can realistically evaluate their career choices and university pathways (Tomaszewski, 2017; Raciti & Dale, 2019; Gore et al., 2017).

One of the key aspects of our study was the focus on early-stage interventions and support in Year 7 and Year 8. Substantial empirical evidence already suggests that career and pathways interventions need to start much earlier than their typical Year 9 and later timeframe (e.g., Gore et al., 2017; Raciti & Dale, 2019). For example, Fleming and Grace (2014) found students' career interests relative to aspirations were highest in Year 7, while other studies have found career interests can begin in Year 5 (Gore et al., 2017). Gore and colleagues (2015) also challenged the assumption that younger students only hold 'fantasy' aspirations, and in fact found that their aspirations were very similar to older students, with older students choosing slightly more prestigious occupations. Perhaps the most compelling motivation in directing our focus on early-stage interventions was the recognition that patterns of disengagement from school in regional and rural communities begins at Year 7 (Guenther et al., 2015).

Drummond and colleagues (2011) highlight that barriers to students' higher education pathways need to be closely considered in relation to their specific context. Their study found that the difference between attending university or not may come down to such simple factors as whether the student could still play football at their local club. In our study, we often noted or defined these stories or factors as 'nudges'. While overarching frameworks for barriers are useful, often students' individual choices in careers or continuing education hinged on the various 'nudges' they had or had not received from carers, teachers, peers and other stakeholders. A study of 15 disadvantaged secondary students indicated that low SES students cannot be homogenised into a single cohort and that even after taking into account differences in gender and prior academic achievement, there are still additional factors that shape students' desire for careers and continuing education (Gore, Fray, Patfield & Harris, 2019). Pollard (2018) and others have also come to similar conclusions about the risk of homogenising RRR students. As findings from our study showcased, nudges can range from students hearing negative/positive experiences about postsecondary education from siblings or friends to being exposed to a visiting or guest teacher (e.g., Teach for Australia, industry mentor) who emphasises a specific career or university pathway. These nudges are by nature inconsistent across individual student experiences and therefore difficult for researchers or practitioners to capture and attribute. However, by acknowledging the importance of cues and word-of-mouth recommendations, outreach efforts can attempt to create more nudges through programs.

As work from Barnes and colleagues (2019) also showcases, there is also growing research exploring the positive and enabling community factors that can contribute to equity in students' success. This research is critical as community contexts have been shown to be influential in student decisions to participate in higher education (Skattebol & Redmond, 2019). Their survey findings from over 3,000 regional and remote students revealed that family, friends, teachers and school staff were commonly cited as supporters and contributors of information, thus highlighting the importance of community-wide initiatives and support structures and access to information. Other studies have also emphasised the role of teachers and friends (Watson et al., 2016) and carers (Cuervo, Chesters & Aberdeen, 2019; Butler, 2015).

1.4 Adopting a Co-Design Lens

As previously indicated, increasing participation in higher education across equity groups, including RRR students, has proven to be a complex issue. As stated within the National RRR Tertiary Education Strategy, the "…. barriers facing individuals in RRR areas are multifaceted and require culture and social shifts that cut across government, communities and families" (Napthine, Graham, Lee & Willis, 2019, p. 6). As noted in other 'wicked' issues in contexts such as healthcare and public policy (see DiSalvo, Celment & Pipek, 2012; Donetto et al., 2015), it is likely that effective solutions need to be co-designed with participants (Buchanan, 1992). In a study exploring how the similarly wicked issue of student attrition can be addressed at one regional Australian university, Beer and Lawson (2017) suggest that classic approaches to problem solving, such as analysing information gathered through surveys or desktop reviews, are unsuitable for complex issues which include factors such as isolation, family circumstances, financial circumstances and variability of academic interest and capabilities. They instead suggest collaborative strategies through networked approaches where decision-making powers are distributive and the development of solutions is shared across participant groups (also see Hamshire et al., 2018).

Therefore, this study adopted the use of participatory design methods to explore how access to higher education can be improved for RRR communities. Through working closely with the participants of this study, we sought to celebrate participant voices in our data collection strategy so they could shape our final informative and curricular outputs and resources. Our school visits also sought to help bridge the divide between metropolitan-based researchers and regionally-based practitioners, to not only elucidate the research and analytical process for our participants but to also give us the opportunity to experience and observe firsthand the many nuances of individual regional communities rather than glean such knowledge abstractly. By interacting with people through authentic activities, our research strove to build relationships with our participants and transition them from being simply 'sources of feedback' to the role of 'co-researchers'.

Part 2. Research Design

2.1 Overview

Our study sought to position relevant stakeholders such as students, school staff, and carers as the co-investigators, rather than objects of research (Abebe, 2009; Christensen & James, 2000). We wanted to leverage their experiences and expertise in helping us to uncover gaps in information and support as well as generate new and innovative ideas on how to support students from marginalised and/or regional communities to consider higher education pathways. We were guided by three overarching research questions:

1. What is the optimal nature, delivery, and timing of early-stage interventions (Year 7 and Year 8) for students from RRR communities?
2. What are the motivations and barriers of students and key influencers in aspiring to/supporting higher education pathways?
3. What resources can be co-designed with key stakeholders to support interventions and higher education pathways?

The study used a participatory design methodology as the main mechanism to collect data. We hosted a series of co-design workshops (also known as CoLabs, see Dollinger and Vanderlelie, 2020) where stakeholders worked together to discuss, reflect, and generate solutions. Participatory design methodology is aimed to help support user-generated ideas or suggestions that can help address complex and context-specific issues. Research has shown that the use of participatory design can help increase the authenticity of findings, address ethical concerns (as participants are engaged in the research), and improve subsequent implementation of findings, as participants have co-ownership of the project (Elberse, Caron-Flinterman & Broerse, 2011). Participatory design is especially useful for researching in marginalised communities who may be distrustful or pessimistic about outsiders observing or judging their community and issues (Bonevski et al., 2014).

Three separate workshops for various participant cohorts were undertaken at each of the RRR schools we visited: Year 7 and Year 8 students, school staff (including teachers and career practitioners), and carers. Each workshop featured specifically curated design-thinking activities for the cohort (e.g., student-specific). Workshops for students were held during school hours for 50 minutes to align with school periods. Workshops for school staff were either held during a break period or after school, and carer workshops were also held after school hours for between 60 and 90 minutes.

Two major events impacted the fieldwork component of this study. In planning for the fieldwork, considerations were taken to exclude schools that may have been impacted by the 2019–20 Australian bushfires, as these communities were already under significant stress. Once plans were in place, fieldwork was further impacted by the rapid spread of COVID-19. The initial objective to visit 20 schools (i.e. five schools in four states: New South Wales, Queensland, Victoria, and Western Australia) was unable to be realised. We were, however, fortunate to be able to visit four schools in outer-regional Victoria before the pandemic led to restricted travel. We also supplemented our data by conducting 10 interviews with RRR school principals across Victoria and Queensland to further help inform outcomes.

The workshops and corresponding activities were aimed to generate solutions or ideas to improve existing services, programs, and resources. The range of activities we adopted

often led to what some researchers have called ‘messy’ data (Frauenberger et al., 2015; Sanders & Strappers, 2014) such as worksheets, voting slips, drawings, comic strips, and mind maps, drawn across whiteboards. Taken together, however, participatory design data can effectively present participants’ thoughts, feelings, and aspirations. As can be seen from Table 1 and Table 2 below, participatory design activities break down larger questions into a series of scaffolded ideas that encourage participants to focus on specific aspects (e.g., barriers) that can later spark novel ideas through ideation activities (see Lifeboat Exercises, Table 1). Workshop activities are scaffolded and typically begin with brainstorming activities such as mind maps and progress to more detailed problem-solving activities such as storyboarding, ending with ideas that are pitched to the group.

Below are examples of workshop schedules for student and adult participant cohorts. Please note that minor modifications occurred and not all activities were conducted at each site visit.

Table 1: Student Workshop Activities

ACTIVITY TYPE	DESCRIPTION	RESULTING ARTEFACT
Mind map	Students are asked to name potential jobs they may be interested in, then asked to elaborate what education and/or skills are needed for the job.	Whiteboard activity (as a group)
Role Playing	Students break into pairs playing out the roles of teacher/carer and student. They act out scenes of what they have heard about university.	Script; observational notes
Personas	Students are given a blank figure. They are asked to depict a typical university student and describe their interests and characteristics.	Worksheet
Storyboard	Students are given a blank storyboard with the starting point in Year 7 or Year 8 and the end point entrance to university. They are asked to draw/write what steps or significant events go in between.	Storyboards on butchers’ paper
Voting	Students are given slips of paper that are words used to describe university. They are asked to vote if they agree or disagree and also given blank pieces of paper to write other words they’d use to describe university.	Voting tallies
Voting	Students are provided flash cards with typical support, comments or advice about university. They are asked to sort “Yes, I’ve heard this” or “No, I haven’t heard this”.	Voting tallies
Lifeboat Exercise (i.e. Idea Pitch)	Students work in groups to design a ‘Learn About University Day’ they will pitch to class. They are asked to describe what topics, speakers, and activities the event would include.	Worksheet, butchers’ paper, observational notes

Table 2: School Staff and Carers Workshop Activities

ACTIVITY TYPE	DESCRIPTION	RESULTING ARTEFACT
Storyboard	Participants are instructed to create a storyboard of ways students gain entrance into higher education. There is no set start time, as they are asked to think when support/advice should begin.	Storyboards on butchers' paper
Mind map	Participants are to complete a mind map on the barriers to applying/attending higher education for their context and school.	Worksheet
Personas	Worksheets are given to participants with different student personas. They are asked how support/advice might differ according to their persona.	Worksheet
Flash thinking / Brainstorm	Participants are asked to brainstorm all the advice or information they wish they could provide students.	Worksheets; observation notes
Role Playing	In pairs or small groups one participant plays the role of the Prime Minister. They are then asked to imagine they could be granted three wishes from the Prime Minister, what would they ask, how would the Prime Minister respond?	Scripts; observation notes
Lifeboat Exercise (i.e. Idea Pitch)	Groups are asked to pitch the ideal higher education pathway intervention. Details are required and they are told to think big.	Worksheet, butchers' paper, observational notes

The interview protocol, developed due to the team's inability to visit more schools, was designed to match the overarching research questions of the study and to continue to explore major themes and issues that arose in the earlier workshops. In particular, we used the interviews as an opportunity to discuss with principals our major findings around the need for a transition pedagogy to support students from primary school to secondary and to further explore what schools were currently doing to support students' career identity and postsecondary education pathway awareness. All interviews were held using the video conferencing service Zoom and participants had the option to turn on or off their camera depending on preference and internet connection quality. Interview questions included:

1. What kind of activities or support does your school provide for students transitioning from primary to secondary school?
2. In your opinion, what type of advice or guidance is beneficial for students transitioning to secondary school?
3. What are the barriers to embedding pathways and/or careers education in the secondary school curriculum?
4. What information or advice would be useful to school staff and/or carers to help them support students' decision-making around whether to attend university?
5. Are there any good practice tips or program ideas that have worked well in your school towards supporting students' career aspirations that you'd like to share?

The interview questions outlined above were purposefully crafted to offer participants the scope to expand on topics they considered to be significant. Following a composite of semi-structured and unstructured approaches (see Roulston & Choi, 2018), we initially asked each interview question, but allowed participants to guide the follow-up questions in each instance. The combination of the two interview methods created a comfortable environment for participants to express their thoughts about the questions asked (Yin, 2003). Moreover, the approach provided participants with the freedom to move between themes and share their anecdotes, which were otherwise unanticipated by the interviewer, thus generating new ideas for further exploration (Corbin & Strauss, 2008).

2.2 Participant Sample

Several variables were considered to determine which schools to include within our workshop and/or interview samples. To begin the shortlisting process, we consulted the Australian Statistical Geography Standard (ASGS) to identify all Victorian government schools located in areas that are classified as 'Outer Regional' (ABS, 2011). However, student enrolment censuses are conducted in February and August each year, thus, the details available to the study reflected 2019 figures (Table 3). In 2019, students with primary residential addresses from outer-regional Victoria totalled 35,678, constituting 3.6 per cent of the total per cent of Victorian students, while the Australian percentage equated to 7.93% of the national student cohort. As Victoria is a predominantly urban area, 419 students were classified as 'Remote', with no 'Very Remote' student populations, while no secondary schools in Victoria are classified as 'Remote' or 'Very Remote'. Thus, in terms of geographic location, the most remote Victorian schools available for this study are classified as 'Outer Regional' and therefore specifically targeted.

Table 3: Contextualising Victoria: Geographical distribution of primary and secondary school students in Victoria (adapted from ABS, 2019; DET, 2019)

	VICTORIAN STUDENT NUMBERS	PROPORTION OF VICTORIAN STUDENTS	AUSTRALIAN STUDENT NUMBERS	PROPORTION OF AUSTRALIAN STUDENTS
Major Cities	764,963	77.3%	2,842,765	72%
Inner Regional	188,153	19%	713,809	18%
Outer Regional	35,678	3.6%	313,048	7.9%
Remote	419	0.04%	44,348	1.1%
Very Remote	0	0	29,608	0.75%
Total	989,215	100%	3,943,578	100%

Our approach to contacting suitable schools also took into consideration the recent aftermath of the 2019–20 Australian bushfires, where some school communities were highly impacted and unable to participate in the study (such as those located in Gippsland and High Country). Schools were also assessed for suitability based on the size of their student population, as we sought to have at least 10 students in Year 7 and in Year 8 to conduct interactive workshops. As the study also required consent from carers, we understood that not all students in these year levels would be able to participate. We also considered the school's Indigenous student population as we sought to include as many Indigenous voices as possible. Given students identifying as Aboriginal and/or Torres Strait Islander constitute 1.74 per cent of Victorian student enrolments, schools with an Indigenous cohort of at least two per cent were preferred (ABS, 2019; see Table 4). We also invited Indigenous Koorie Engagement Support Officer who were known to students to attend all our workshops through consultation with each individual school.

Table 4: Demographics related to participating schools

NAME	ICSEA	INDIGENOUS ENROLMENT	SIZE OF SCHOOL	ASGS
School 1	959	2%	252 (P-12)	Outer Regional 75 km to regional centre
School 2	982	3%	179 (P-12)	Outer Regional 114 km to regional centre
School 3	975	2%	170 (P-12)	Outer Regional 48 km to regional centre
School 4	905	16%	122 (7-12)	Outer Regional 94 km to regional centre

This study used the Index of Community Socio-Educational Advantage (ICSEA) to initially determine the SES of candidate schools. The calculation equation for ICSEA values takes into account parents' occupations, parents' level of educational attainment, geographical location and proportion of indigenous families per school to ascertain a school's level of educational advantage (ACARA, 2015). The ICSEA value of a school is the average score as calculated by the equation, with schools in Australia ranging from about 500 to 1300. The national mean value is 1000 and schools below that figure were considered low SES for the purposes of this study.

This, and other, studies have used the ICSEA values to identify low SES schools. However, there are some limitations to this approach (see Goss et al., 2018). For example, there are concerns that other data such as Student Family Occupation (SFO) and Education Maintenance Allowance (EMA) contradicts the ICSEA values (Australian Primary Principals Association [APPA], 2010). The values also do not consider factors such as students' backgrounds or home environment, which may also affect educational advantage. There is well known research that discusses the intersectionality between educational opportunity, race, environment, background, and socioeconomic factors (see Tefera et al., 2018), yet at the time of the study, such nuanced data about Australian students were not yet publicly available.

We recruited a total of 101 participants across all cohorts, consisting of 66 student participants, 30 school staff, and nine carers (see Table 5). Important to note was the difficulty in finding carer participants in our study. To offset any inconvenience for carers in attending our workshops, we obtained university ethics approval to provide gift cards to carers, but the Victorian Department of Education denied this request when applying for ethics approval and instead approved for us to use the money to provide catering. In the future, however, it might be relevant to discuss other ways carers, who juggle work and carer responsibilities, can be supported to participate in studies like this.

Table 5: Overview of Participants

PARTICIPANT COHORT	SCHOOL 1	SCHOOL 2	SCHOOL 3	SCHOOL 4	TOTAL IN COHORT GROUP
Students	31	16	11	8	66
School Staff	6	4	17	3	30
Carer	4	0	1	0*	9
Total Participants in School Visit	41	20	29	11	101

*The local community experienced a traumatic event the night before our visit and carer workshops were cancelled.

The research team consulted with the Victorian Aboriginal Child Care Agency (VACCA) to ensure all aspects of the project were appropriate for Indigenous participants. In particular, we liaised with the district's Koorie Engagement Support Officer (KESO) for all workshops. However, as advised by VACCA, we were asked not to separate or exclude in any way identified Indigenous students or Indigenous student data therefore there is no breakout data on solely Indigenous perspectives. Additionally, gender was balanced across student participants (34 male students and 32 female students). However, all carers and the majority of school staff (22 females compared to eight males) were female.

A similar methodology was also employed to identify candidate schools to participate in our interviews. A shortlist of schools was created based on their ICSEA value, Indigenous student enrolment (identifying schools with two per cent Indigenous student population or above) and overall student enrolment. The school's remoteness based on their ASGS classification was also considered but due to the abovementioned lack of 'Remote' and 'Very Remote' schools in Victoria, schools classified as such in Queensland were preferred to balance the regional data. The relevant education departments had approved an introductory letter about our co-design workshops which was then emailed to the principals of the shortlisted schools; schools that accepted our invitation to participate in the research were then recruited and arrangements were made to prepare for site visits. However, the COVID-19 pandemic still posed several logistical challenges for our study. For example, the rapid shift to remote learning for schools across the country meant that many schools were unable to participate, even in interviews, because they had other critical priorities. We were, however, able to conduct 10 interviews with principals across RRR communities in Victoria and Queensland.

All principals who had agreed to a site visit pre-COVID-19 were forthcoming with approval to conduct teleconferencing interviews in the middle part of 2020 after they had adequate time to respond to COVID-19 related obstacles in their school community[4].

As can be seen from Table 6, our sample for interviews included five principals, each from Victorian and Queensland RRR communities. The average ICSEA across participating schools was 942, while Indigenous student enrolment ranged from two per cent to up to 27 per cent in several Queensland schools. Schools also ranged in size as well as distance to nearest regional centre.

Table 6: Demographics related to schools participating in interviews

NAME	ICSEA	% INDIGENOUS ENROLMENT	SIZE OF SCHOOL	ASGS
VIC 1	959	2%	252 (P-12)	Outer Regional 75 km to regional centre
VIC 2	982	3%	179 (P-12)	Outer Regional 114 km to regional centre
VIC 3	975	2%	170 (P-12)	Outer Regional 48 km to regional centre
VIC 4	905	16%	122 (7-12)	Outer Regional 94 km to regional centre
VIC 5	938	12%	544 (7-12)	Outer Regional 14 km to regional centre
QLD 1	960	18%	200 (7-12)	Very Remote 687 km to regional centre
QLD 2	958	11%	157 (7-12)	Outer Regional 210 km to regional centre
QLD 3	903	27%	42 (P-10)	Very Remote 439 km to regional centre
QLD 4	915	27%	232 (7-12)	Very Remote 617 km to regional centre
QLD 5	927	27%	79 (P-10)	Very Remote 603+ to regional centre

2.3 Data Analysis

Data were analysed following three steps: organisation and reduction, data display and comparison, and finally drawing conclusions about how the data related across groups and to other research findings (see Bazeley, 2009; Creswell & Creswell, 2017). As data were collected at separate points in time, and interview questions were designed to further investigate findings from the workshops (see above), our first steps included writing summaries of each of the four school visits based on the participatory design activity or exercise we introduced. See Table 7 for examples of how specific co-design activities informed findings. Examples of artefacts created from the workshops are included in the Appendices.

[4] We did not conduct workshops or interviews in New South Wales or Western Australia due to the Department of Education requests to allow for schools to focus on the transition to online learning during the first COVID related lock-down.

Table 7: Examples of Co-Design Methods Linked to Findings

FINDING	LINKED CO-DESIGN METHOD(S)	DETAILED FINDING
Participant cohorts (e.g., students versus carer) have varying perceptions of the barriers to university	Mind map and voting exercises with students versus mind map exercises with school staff and carers	Students often suggested grades were a major barrier to university pathways, while adults felt the barriers were more related to culture and lifestyle changes from regional to city life
Information gaps on life at university and availability of courses, and entry and funding options	Lifeboat exercise with various cohorts where they pitched their idea for a 'learn about university day' Further asking adult participants to discuss major questions they would like to ask government, universities, and/or career advisors	Pitches from various cohorts often stressed daily life at university, in-person visits, careers awareness from an early age, and highlighting how degrees can lead to RRR jobs While carers had few questions, school staff participants highlighted key information gaps around course offerings, funding options, and alternative pathways
Community-driven and context-specific careers events/interventions	Storyboarding and role-playing exercises with school staff and carers about 'optimal' nature, delivery, and timing of early-stage interventions; for example, to draw out the steps/stages of a 'ideal' intervention	Participant responses indicated importance of hearing from RRR students and professionals, going on visits around the local community to understand career options, hands-on learning activities, and developing student confidence

The data arising from these workshops, consistent with participatory design, included participants' knowledge or awareness of current practice and resources, their ideas or suggestions for the future, as well as feedback on specific design ideas (see Hansen et al., 2019). To begin, we took all data, which included researcher observational notes, artefacts such as butchers' paper, mind maps, voting tallies, and worksheets, and transcribed/typed all data in a master reference document. We then used thematic analysis to allow for emergent themes to arise through pattern findings (see Fereday & Muir-Chochrane, 2006). We analysed data to explore similarities and differences both between cohorts (e.g., students versus carers) as well as within cohorts over varying sites (e.g., students from one site to another). While there were only minor differences detected within cohorts (likely as our data collected was limited to only Victorian schools due to COVID-19), there were significant differences between cohorts. In particular, and as will be discussed below, participant groups held vastly different perspectives on the barriers to higher education access. Once themes were set, all data were checked and re-coded by at least two members of the research team to help establish trustworthiness (see Hruschka et al., 2004).

Interview data were first organised and analysed separately to workshop data and then later compared. All interviews were transcribed and then coded using Excel. The list of codes expanded and were modified as more data was inserted, and different themes arose. Quotes in particular were coded and themed, to be later displayed using tables that allowed the research to reflect on findings (see Gioia, Corley & Hamilton, 2013). Similar to the workshop data, all data were also checked by several members of the research team.

Part 3. Our Findings

The findings presented below stem from four outer-regional schools visits in Victoria. At each school, we held three workshops (approximately 60 minutes) — one for students in Years 7 and 8, one for school staff (including principals, teachers, and career advisors), and one for carers. To further explore our research questions, we also held 10 interviews with RRR principals across Victoria and Queensland. To discuss our findings, we have organised results by the related research question and attributed data to either a school site visit (School 1 to 4) or a principal interview (Participant 1 to 10).

3.1 What is the optimal nature, delivery, and timing of early-stage interventions (Year 7 and Year 8) for students from RRR backgrounds?

A key theme to emerge concerning optimal interventions or resources was around the importance of ensuring programs were context-specific and adopted a positive narrative about pursuing locally available careers. Through a series of activities where carers or teachers storyboarded ideal intervention programs, participants often reflected on what type of interventions they would like to attend or recommend for their students. Common themes to arise included improving career awareness, such as through local excursions or guest speakers and having authentic RRR mentors and industry partners to help run and/or co-design future programs and resources.

To illustrate the theme of careers awareness, as an icebreaker for the student workshops, the research team held an activity where students were asked to call out professions they had heard of or considered for future employment (see Appendix 1). This exercise quickly affirmed comments from carers and school staff concerning students' limited understandings of careers available. Most common responses included: hairdressers, shopkeepers, farmers, teachers, nurses, veterinarians, dentists, chefs, truck drivers, doctors, and butchers. When asked if students wanted to pursue these options, many indicated interest in farming and veterinary medicine, but the majority indicated that none of these options were of interest to them despite not being able to name other careers. Three teachers and the principal from VIC School 2 were in agreement that this was an ongoing problem in supporting students towards future careers and felt that one of the most important aspects in any future intervention and/or resource should be exposing students to different jobs. At VIC School 1, two teachers spoke highly of a former program run by the Australian Defence Force (ADF) that used to tell students about various careers. "They showed kids that there were alternative avenues for learning and by visiting us showed they were sincerely interested in us" (Teacher, VIC School 1). These members of staff further noted that ADF visits would later spark interest in these jobs from students and that having more site visits to showcase specific professions would be ideal.

At another school, where multiple students had named 'astrophysicist' we asked staff why so many students had known about this specific career. We were told that these students had a teacher with an interest in space that had then led many students to enquire about related careers. This anecdote further emphasises the carry-on effect of equipping teachers with greater career awareness through professional development opportunities. In an interview with a principal, we heard how the lack of careers awareness can manifest:

> *One day my daughter came home talking about speech pathology, I am not even sure how she had heard of it, I think we were discussing ways she could work with kids. We do have speech pathologies come to school, but she has no experience of it. So how do you choose a career, and go to university, if you haven't actually experienced that? We're going to have to work on that… that's not an uncommon thing here, kids embarking on a university career when they've never really seen it* (Principal, VIC School 2).

As indicated from the quote above, the lack of career awareness creates an additional barrier for students and carers because they may be unsure how to pursue the career or if their limited understanding of the job is actually suitable for the student. Six teachers from VIC School 3 also discussed the importance of linking careers students did know about, such as farming, to postsecondary education. They agreed that members of the community were not aware of how much technology and modern engineering practices had shaped farm work. By stressing how postsecondary education can improve farmers' success, the six teachers identified dual benefits. On the one hand, students could learn about advancements in farming, which is increasingly important as farmers can fix their own computers and software linked to advanced farming equipment, while on the other hand, students who want to be farmers but also go to university should "put something behind them" (Teacher, VIC School 1) in case something changed, like environmental factors.

Among adult participants, a frequently voiced concern was also around regional-metropolitan 'brain drain'. The principal from School 2 indicated that similar to the other schools we visited, their school was shrinking. "Ten years ago we had 300 students, now we're down to 170." One carer with a child attending VIC School 2 felt strongly that regional communities and careers should be given a more positive narrative in interventions and resources. They indicated that families were not necessarily against universities but wanted to know that students could return home afterwards to work if they wanted to. As one interview participant voiced:

> *Believe it or not, many of our kids don't like [city] life. They seriously don't. I've got students who went to uni in Brisbane and they come back here… Or they'll go to Brisbane and they'll transfer back to USQ, which is in Toowoomba, which is more rural. So, they want the uni, but we are fools if we think that because we loved our uni life and we were urbanites that that's what they like. Because a lot of them don't and they need to learn how to translate their employment back here* (Principal, QLD School 1).

Another teacher felt that she didn't like recommending university to students because she perceived the former to be too focused on study abroad programs. She felt that a few of the brightest students in their community had left to study or work in the United Kingdom stating, "I don't want my students leaving Australia. We need to strengthen our nation, not send them to England" (Teacher, VIC School 3).

School staff also frequently voiced concerns that too many intervention programs are designed for only 'passive' interaction. They stressed that interventions and learning activities should be hands-on because that is how RRR people live their lives. A few teachers hypothesised that TAFE was more popular in the regions because "Students in TAFE are actually given the opportunity to be exposed to hands-on learning in trade… Universities should adopt something like this, instead of try a trade, try a profession" (Teacher, VIC School 1). They also stressed that learning activities should develop a 'whole

of person' growth through building students' confidence and self-awareness. Suggested activities from school staff (across all site visits) included:

- exercises that ask students to reflect on what they good at
- important to highlight to students that their ideas of careers will change as they go
- provide students tangible examples of how careers link, 'Farm to Plate' activity, who's involved?

As one teacher indicated, "Interventions need to emphasise creativity, critical thinking, adaptability, maybe it links to a career, maybe it doesn't." (VIC School 1). They also indicated that to keep academically low-performing students engaged, and support them to graduate Year 12, there is a need for programs that stressed other types of 'achievement' and provide a positive narrative about TAFE or VET options. As one principal in an interview further explained, "Students have no motivation for learning until they get to Year 11 and maybe they think about postsecondary options. They need a milestone earlier in their academic career to make them more focussed and to keep them engaged." (Principal, QLD School 2).

Across conversations, another common theme to arise was that intervention programs need to shed light on former or current regional students or professionals and help to connect them with local students as mentors. As the workshops were conducted in Victoria, participants frequently referred to the Rural Youth Ambassador program, hosted by the Country Education Partnership, that allows for Year 11 students to apply to visit Melbourne and join forums with other regional students. As one principal noted, "Nothing builds credibility with the students like having your own [credibility]." (VIC School 1). However, participants indicated that this likely occurred too late and that most of the participants in this program are those that would pursue postsecondary education regardless of whether the program existed. Two teachers from VIC School 1 suggested that an ambassador program like this should be expanded to have students host more workshops and informal talks with younger students in Year 7 and 8 to provide guidance and positive role models. These teachers also raised feedback about when RRR students should visit Melbourne and university campuses. They pointed out that typically students go on visits when the university is not in session and, therefore, the trip does not provide a realistic understanding of what campus may be like. They also suggested that students could also be matched with regional university students to help highlight how they can belong at the university themselves one day.

The juxtaposition between participant comments that students need more exposure to diverse career paths and that local mentors or guest speakers would be best suited to motivate students, speaks to the need to explore online scalable outreach programs that may complement in-person activities. Emerging career paths that may not be represented in students' local communities could be highlighted through online programs that allow students to explore work environments and/or hear professionals' personal stories, while local peer mentors or professionals can help to answer student questions about university study and available pathways.

Teachers were also quite vocal that career guidance should come from guest speakers and other community leaders whenever possible. One teacher group (VIC School 3) pitched an idea for a career intervention that began in primary school, starting with monthly guest speakers from the local community discussing their jobs. They indicated that it was important

for students to first hear about careers in a relaxed way and based on their interests and skillsets. They felt that teachers' roles in setting goals or discussing plans should only occur after initial interest was sparked.

Interestingly, another rationale used to support the idea of guest speakers in promoting careers, rather than teachers, was to avoid conflict within the school. These dynamics were highlighted by a deputy principal participating in the co-design workshop:

> *Expert teachers are hesitant to listen to newly minted teachers about what they should be doing around careers. There's so much workplace politics, and they don't want to be told how to do their jobs. While there does need to be more openness to collegial learning, having an outsider broach the first conversations is probably better* (VIC Deputy Principal, School 4).

The topic of carer involvement also occurred frequently in both school visits and interviews. School staff often shared the view that parents not being "on board along the way" (Teacher, VIC School 2) was a key obstacle in supporting students' pathways. In creating ideal interventions or programs, school staff almost always indicated it would be best if carers were also present, for example, if carers also went on excursions to universities. One teacher from VIC School 2 summarised the issue of carer engagement by saying, "We run a parent information night for Year 7s, same night as a BBQ, but nobody really comes. Or worse, sometimes they come for the food and leave right after. Sure, one or two of the same faces are always around, but it's very hard to get new people in." They advised that if future interventions wanted to get carers on board, they had to explicitly link university study to 'worth', as one teacher suggested, "Demonstrate the pathways, maybe parents will listen then" (VIC School 2).

One quirk of our school visits was that occasionally upon our arrival schools would be unsure which university we were from or the purpose of our visit, given they had so many ad hoc visits. When we spoke to school staff about which universities they had been visited by or whom they worked closely with they often named numerous programs, "We had a visit from [regional university], maybe a few, we also have had two teachers sent from Teach for Australia, that was positive. In the past, I think we've been visited by [other regional university] too, and of course some local TAFEs" (Teacher, VIC School 2). School staff often expressed to us that it was difficult to keep track of who had come and how the interventions and/or advice fitted together. They suggested that in the future it would be preferable to work closely with one or two universities and have regular visits or collaboration with them. As one principal summarised, "We don't need a drop in the pan, it's not good enough, we need sustained engagement" (VIC School 4).

3.2 What are the motivations and barriers for students and key influencers in aspiring to/supporting higher education pathways?

A major finding linked to our second research question was the varying perceptions of the barriers to university across participant cohorts. Specifically, we found that while students often highlighted barriers around costs or difficulty of study, carers felt the most critical barriers were around cultural divides and complications arising from students moving from RRR communities to metropolitan areas, such as travel and safety. Further, school staff had yet another perspective on the most important barriers, noting that the major issue was

around a lack of information and a need to better communicate the value of a university degree.

In an exercise where students voted on comments they heard most frequently when the topic of university came up, students in all four school visits voted ‘expensive’ as the most frequently heard adjective, followed by ‘far away’. Further, when students role-played to each other advice they had heard from adults about university many student scripts heavily reflected student perceptions that university would be ‘hard work’, ‘tiring’, and ‘difficult’. Students also frequently overstated the costs of university, estimating the costs upwards of $300,000. When probed about the sources of their information, the majority of students said they heard from carers or social media, such as, “YouTubers say university is expensive, I’ve heard it a thousand times” (Student, VIC School 2). Further, while some students had heard of scholarships, many indicated these were unobtainable. A student at a workshop stated, “I won’t get a scholarship because I’m not smart or good at anything” (VIC School 1).

However, across site visits, students generally indicated that they believed universities to be inclusive places. Using informal voting games, often done in groups and therefore not attributable to specific numbers, the majority of students indicated that they agreed that ‘anyone could go university’. Yet students were divided on other statements such as ‘you can do a university degree online’, ‘I believe I would make a good university student’, and ‘university is valuable’. Notably, the majority of students disagreed with the statement ‘Teachers help you make decisions about going to university’; however, this finding might be linked to the cohort sampled, as careers education does not typically occur in Years 7 and 8. What these informal comments do indicate, however, is that students as young as 12 generally understand universities to be open, inclusive environments, but struggle to see how they would ‘belong’ in such spaces or how universities would be valuable to them.

Another activity asked students to map out a path to university. The majority of students could not articulate their pathways in great detail, with typical plans highlighting graduating secondary schools and receiving acceptance letters (Appendix 2). When describing a ‘typical university student’, students were invited to draw pictures, provide adjectives, or describe hobbies. Students often drew pictures of people wearing glasses, carrying backpacks, and other study-related objects like calculators or rulers. Most students described university students as ‘smart’ and ‘hard-working’, and often joked that their hobbies must be studying, reading, or going to school. Clear in this activity was that student participants had a strong belief that university students likely excelled in school and would have had a consistent history of high marks. This observation directly linked to our conversations with students about the barriers to university where the majority of students felt they were not smart enough to attend.

Alternatively, carers rarely mentioned costs or difficulty of study as barriers, but rather shared reservations regarding geographical distance or urban-RRR cultural and societal differences. For example, one participant who had completed an online university degree and was a parent of a recent VIC School 1 graduate, felt that urban areas were less supportive and less friendly than RRR communities, noting, “Kids are going from a nice community to being just a number” (Parent, VIC School 1). The other carers in the same workshop were in agreement and added that urban living was not safe or desirable (e.g., adjectives used included *“crowded”* (Parent, VIC School 1) and “smelly” (Parent, VIC School 1). In particular, carers voiced concerns about transport, either the travel from city to regional areas or within the city itself. When the topic of transport, for example, arose in carer

workshops it often led to participants having lengthy discussions on the safest and/or cheapest way to travel to Melbourne, highlighting the importance of this consideration within the group. One carer noted, “When I sent my first son to university [in Melbourne] we had to drive to the nearest regional town, then wait for a train, often times, when he was coming home the train would drop him off in the middle of the night. Couldn’t send a daughter that way…” (Parent, VIC School 1).

Conversely, school staff viewed the most significant barriers to university were around a lack of knowledge or understanding of courses available, study options (online, in-person), and how degrees could link to regional employment. Principals also frequently mentioned that they felt there was an overall disregard for university education in regional areas and that many adults in the community did not see the value in a university degree. As one principal noted, [in the regional towns], “University is an abstract idea… parents don’t value education because they didn’t go themselves” (Principal, VIC School 1). Teachers from another site visit also commented that they had previously tried to host university information sessions but cancelled sessions from consistently low carer attendance (VIC School 2).

The varying perceptions on the barriers to university across groups underscore the need for not only context-specific but cohort-specific support, advice, and interventions. Students require resources and activities that build their confidence and inform them of the various alternative entries into university. Early interventions in Year 7 and Year 8 should also broadly discuss the costs of university and how these might be mitigated through part-time employment or potential scholarships. Programs should also highlight where students can access additional support or guidance, such as from teachers, regional mentors, or informational websites.

Information and advice for carers, however, should instead be focused on demystifying city living, building social networks, and perhaps highlighting the benefits of living in an urban centre. Resources could include overviews of transport options and ideas on how students can stay safe (e.g., ride with a buddy). Materials could also showcase examples of regional university successes as a viable alternative, such as highly ranked courses on regional campuses, and programs at regional universities that either build community engagement or provide peer support.

Discussion with participants also reinforced the importance of family and/or peers in influencing students’ decisions to pursue postsecondary study. Carers noted that individuals in the community who had attended university were usually “open-minded and supportive” (Parent, VIC School1) towards postsecondary study but that others in the community held a “don’t bother” attitude (Parent, VIC School 1). Many carers also pointed out that many of the affluent members of their community were farmers, who often had not attained a postsecondary education, and did not perceive higher education as a valuable endeavour toward financial success. School staff from VIC School 3 also stressed the importance of carer engagement as they noted, “Parents are a massive influence, everything starts from them.” (Teacher, VIC School 3). One principal in an interview added, “There might be about 20-30% of people in the country that support children going to uni; but there is a big culture that says it's a waste of time, it’s not practical, they don't believe education is of any value” (Principal, QLD School 1).

The influence of peers was also a theme that arose. Teachers from School 3 noted that they typically lose about a third of students by the end of Year 10, as “one student leaves to do an apprenticeship, makes good money for that age I suppose and others follow” (Teacher, VIC

School 3). This teacher suggested that maybe if careers guidance came earlier, for example in the earlier Middle Years, students would feel more comfortable with their decision to pursue studying when their friends disengage. Further, it was also noted that completing secondary school was pertinent to their town, as local employers were starting to require Year 12 certificates, while also running literacy and numeracy tests. Our participants were concerned that those students who had decided to leave prior to completing their final examinations might struggle to find employment one day.

While not the original intention of the research team, we quickly realised that when we asked participants to discuss university, participants assumed we spoke only of metropolitan campuses. As we progressed in the study, we began to more frequently ask participants how they perceived regional or online university options. One carer suggested, "[Regional university] is letting us down, the quality isn't the same as [the metropolitan-based campus]. They don't even offer much in agricultural studies… but they are for regional students, right?" (Parent, VIC School 3). Another carer in the same session added that their nearest regional university campus was, "a ghost town." Carers also seemed sceptical of online courses, as many had done these themselves in the past, and felt like online courses were not comparable to in-person experiences, especially as they did not support enough hands-on, practical learning activities. One teacher from VIC School 4 who participated in the workshop noted, "Online study is more appropriate for adults, I wouldn't recommend it to students."

Another sentiment that arose in workshops was that the communication around the value of a university degree was not clear. One carer noted, "I know lots of people who went to university and didn't need to be there, or shouldn't have been there, and vice versa." (Parent, VIC School 4). One principal explained:

> *When we're talking to the kids about their future and about their career pathways there's still sometimes a fight. You know, with these smaller communities, they question the value of even going into Year 11 and 12. You have parents who left at the end of Year 10 and, you know, they were really successful so therefore why do students need Year 11 and 12? You're going to inherit the property so why do you need to go to Year 11 and 12?* (Principal, QLD School 2).

We heard numerous suggestions on how the value of higher education could be better communicated, including links to specific jobs, jobs of the future, lifetime earnings, as well as notions of civic development and 'education for education's sake'. Participants also stressed that the delivery of information could also be improved. One principal noted, "I haven't ever seen a university website that is user-friendly" (Principal, VIC School 3).

3.3 What resources can be co-designed with key stakeholders to support interventions and higher education pathways?

As alluded to earlier, information gaps were a key theme across our workshops. Participants often pointed to a lack of information or exposure for students on what university was like, clarity on how students could apply and enrol, and what courses were available, as well as how these courses linked to potential RRR jobs. To uncover participants' specific questions, we ran two separate activities. For students and school staff, we ran an activity called 'Learn About University Day' where students and staff could design a series of workshops, guest talks, or other activities (like a campus tour) that they thought were important to inform

students' decision-making (Appendix 3). For school staff and carers, we also ran an activity where participants worked in pairs to complete a worksheet with two columns, 'Information about university that I already have access to' and 'Information I wish I had access to'.

In student workshops, students often designed 'Learn About University Day' to be centred around the lifestyle differences that would occur if they went to university. In these responses, the students wanted to see what it was like to sit in a lecture hall and test out what doing lab experiments would be like. Students also had many questions about daily life such as what they would eat, how much they would have to study, what their living situation would be like, what facilities or co-curricular experiences were available and how to make friends. Students voiced concerns about changes in their lifestyle, a selection of quotes from VIC School 2 included:

- "Where would I sleep? I need space, I have a large room…"
- "I don't want to go to university if there's lots of students in the classrooms".
- "I heard university students sleep all day, but I don't want to be in my bed all day, I'll need friends".

Table 8 is a compilation of notes from VIC School 2 of students' co-designed 'Learn About University Day'.

Table 8: Notes on 'Learn About University Day'

DESIGN QUESTION	SUMMARY OF STUDENT RESPONSES
What would you learn during the day?	• What university is like • Pros and cons to going to university • How to deal with homework • Difference between university and high school • Various living arrangements to choose from • Taste test the food options
What questions would be answered?	• Where would I live? • What do university students eat? Is it good? • How long is a day? How much sleep will I get? • How can I make friends? • What are the teachers like? • What are the classrooms like? Will they have many students?
Who would lead the sessions?	• Current university students • Someone that had been successful after university • University leavers • Katy Perry or someone else that I'd like to meet
Other than you, who else do you think should attend?	• My parents • My siblings and relatives • Friends • Animals like dogs and cats

Student ideas from 'Learn About University Day' were similar to those from school staff. Staff also felt students should walk around the campus (especially in a gamified way such as an 'amazing race' game) and that the activities should be led by current students, rather than

university staff or teachers. Staff also felt students needed information sessions and workshops to prepare them and help inform their decision-making about the university being the right choice for them. These workshop ideas included budgeting, self-care and surviving out of the home, cross-cultural tasks where students had to do group work with international students and managing public transport.

In one workshop (VIC School 3) teachers (n=17) also identified that a lot more could be done to promote alternative pathways. They jointly discussed stories of students not receiving the ATAR they wanted and just giving up any hope of going to university. To remedy this, teachers (n= 6) on one table suggested that information guides should not only include information on alternative pathways but normalise this pathway as some students might view other avenues into university as reflecting negatively on their capabilities.

The other activity we ran in relation to this theme was to uncover information gaps for both school staff and carers. This activity yielded many suggestions, with school staff and carers alike wanting more information on the range of postsecondary options (not just university) across factors such as time, cost, discipline choices, and distance from home. Adults also voiced their frustrations over state differences in enrolment pathways, especially as two schools were located in Victoria but preferred their students to study in Adelaide rather than Melbourne. Moreover, although VIC School 2 is located in Victoria, travel time to Adelaide is one hour less (3.5 hours) than it is to Melbourne (4.5 hours) and contributes to their students' preferencing of Adelaide-based institutions. It is also informative, that VIC School 2 is located approximately 1.5 hours' drive from a regional Victorian campus, yet students were more likely to be interested in a further away, metropolitan campus perhaps reflecting their perceptions about the quality of regional campuses and the university experience they provide. Carers also suggested that more resources should inform adults about where potential skill shortages would be in the future and what courses/jobs would allow for students to return to their regional hometown if they wished. Teachers in particular also felt that careers activities and postsecondary pathways information should be embedded within the curriculum.

Carers and school staff also frequently noted their dissatisfaction with Centrelink — the national agency responsible for the delivery of advice and high-quality, accessible social, health and child support services and payments. When the topic arose, participants also shared their knowledge about youth allowance or student payments with each other. Across all school visits, all workshops with carers and with parents remarked on confusion about information put out by Centrelink. They also noted this issue was compounded for regional communities, as there was no online appointment system, and some would drive hours to the nearest Centrelink branch only to find that they would not be seen that day. At VIC School 1, school staff told us that a local man had essentially created a job for himself as the Centrelink 'accountant' and helped to recommend specific welfare payments for various families and assist with their Centrelink applications. Participants suggested that improvements could include Centrelink regional visits to hold community information sessions, allowing for online appointments (at least for RRR communities), and working with participants to re-design the youth allowance program to ensure it is not encouraging students to take a gap year.

Another theme that arose in regard to this research question that needs further exploration is around industry involvement. Teachers and principals frequently mentioned that they would like to see more industry pathway interventions. For example, a program called 'Cows

Create Careers' that was run by the dairy industry was discussed in one interview. The participant explained:

> *Cows Create Careers is just an amazing thing put up by the dairy industry. The kids actually look after calves, bring them to school. Then they go somewhere and do a research project, all that sort of stuff. At the end there's a big gala. And it really works on getting students interested in the dairy industry. I think, why in the hell don't the wool industry or sheep meat industry do more of that?* (Principal, QLD School 1).

Another principal (Principal, QLD School 3) also spoke highly of a Queensland University of Technology program called 'World of Wonders of Science'. Similarly, they indicated it involved an excursion and research project where students also worked closely with university students.

Linked to this theme was also ensuring the students had access to information and support for a range of careers, educational options, or trades. This especially came out through interviews with principals where comments included:

> *Let's be real, 25 per cent of kids in a high school will eventually put their foot inside a university. That's not graduate, that's just put their foot inside. You know, we can't exclude the 75 per cent of kids who won't* (Principal, QLD School 1).
>
> *We're fools if we think the university experience is the only experience. Oh look, I loved it, I'm an urban girl… but you know, for most of them, it doesn't seem to be for them* (Principal, QLD School 2).
>
> *In an ideal world, I'd like to see a return to more apprenticeships. These kids from the bush are very hands-on, so give them an opportunity to go straight from a welding course I'm running here to a welding or boiler making apprenticeship somewhere. There aren't enough of those jobs left anymore, and there's too much study probably attached to them* (Principal, QLD School 5).

As described in the next section, the research team was careful to ensure information resources and learning activities that were developed in this project included guidance not only on universities but also Registered Training Organisations (RTOs), TAFE, VET and apprenticeship options.

Part 4. Practice-Based Outputs

Arising from our study were two practical outputs for school staff and carers, as well as a co-design handbook that can assist future researchers or teachers interested in participatory design methods (Dollinger & D'Angelo, 2020). The first output for participants was the development of a toolkit for school staff and carers that helps address some of the information gaps we encountered through our data collection. The second output was a series of 10 lesson plans that teachers could use to help embed pathways information and career guidance to students in Year 7 and Year 8. In this section, we will summarise both outputs. Readers can also find online copies of these outputs on the NCSEHE website.

4.1 Context-Specific Informational Toolkit

Through co-design workshops and follow-up interviews, the project team was able to identify several key information gaps specific to RRR communities. We translated these information gaps into headings or sections for a subsequent informational toolkit for teachers and carers. In Table 9 we have outlined the broad sections of the toolkit as well as provided detail on the various information or questions covered in each section. All of the content was informed by conversations with school staff or carers. Participants also expressed that any informational toolkit or booklet should be easy to read and provide ideas for activities that teachers or carers could later do with their students. While we originally envisioned the toolkit to focus on information just about university, it became clear in our conversations with participants that it also needed to include information about other postsecondary options. Therefore, we included information on apprenticeships, traineeships, VET, TAFE and RTOs. Please note, that as the project team was only able to conduct workshops in Victoria, the toolkit was designed with a Victorian focus (as requested by participants).

Table 9: Summary of Toolkit

TOOLKIT SECTION	OVERVIEW OF TOPICS INCLUDED
Comparison of postsecondary school options	• VCE vs VCAL • ATAR and alternative pathways • Comparison of postsecondary options across time, cost, entry requirements, available courses • Information on apprenticeships, traineeships, VET, TAFE, and RTO • List of nearby universities • Information on transport around Victoria
Jobs in Regional Australia	• Information on future skills shortages • Key regional employment sectors • Location independent jobs
Frequently Asked Questions about University	• Information on various class formats (e.g., lectures, labs), extra-curricular options, support programs and services, managing the cost of university • University versus secondary school • Debunking negative myths about university
Helping Students with Career Choices	• Tips to support student success • Age-appropriate careers advice for students (Years 7–12)

The toolkit was designed to be accessible for students, carers and teachers and driven by the needs of our participants. To encourage wide usability, the text was kept informal and was supplemented with image-rich infographics. The toolkit was written without the presumption of the reader's prior knowledge so common acronyms that carers, students and teachers are likely to encounter when exploring careers were fully elaborated; for instance, Vocational Educational Training (VET), Registered Training Organisation (RTO), Technical and Further Education (TAFE), Australian Tertiary Admission Rank (ATAR), Victorian Certificate of Education (VCE) and Victorian Certificate of Applied Learning (VCAL). Concepts such as distance learning, apprenticeships and traineeships were articulated as well as differences between VCAL and VCE including their outcomes and what pathways are available to students after completing those qualifications.

Of immediate interest among participants was knowledge about the differences in both further educational options and employment prospects thereafter, with many carers and students unable to identify the differences between, for instance, attending TAFE or university, or between attaining a diploma or a degree. Based upon suggestions from participants, we displayed this information in a user-friendly way with infographics that provided text-light, at-a-glance information. Several themes that were identified during the course of this study were presented in this way, including the duration and cost of courses, the average earnings based on the level of qualification (i.e. non-school qualification to a postgraduate degree), and the differences in types of qualifications according to the Australian Qualifications Framework (AQF).

Carers also voiced the importance of having a clear pathway to employment after university. They underscored the financial and emotional impact that sending a child away to university

can have on both the family and the child. To define the advantages of further education, our toolkit included the average salary differences between university graduates and non-university graduates, the kinds of jobs different qualifications usually lead to within industries and their salaries, to highlight the financial advantage university graduates have in the long-term. Other areas of financial uncertainty included the cost of university courses, and while providing the cost of each university course available was impractical in the toolkit, an average figure was provided as well as an explanation about HECS-HELP (loan to pay for students' studies) and 2020–21 repayment rates as well as useful web links for further information.

Most of the participants showed little concern for university rankings but rather sought to visualise university life in practical or more personal terms, such as food and lodging quality, friends, transport and safety. To address these concerns, we provided a Frequently Asked Questions (FAQs) section based on their questions, candid images of campus life (e.g., Figure 2) and vibrant checklists about safety on campus and public transport. In addition, a guide about 'How to make the most of university open day' was also included to draw carers' attention to these programs where they could visit and explore aspects of university life firsthand. Some participants were also unaware of the variety of universities in metropolitan and regional Victoria, so a map was created with all Victorian universities plotted as well as regional and major train routes across the state. Practical information was also included throughout the toolkit and in this case, information about securing bicycles at train stations and purchasing tickets for public transport was provided.

Figure 2: A candid 'daily-life' image of the bus stop within the campus grounds at La Trobe University



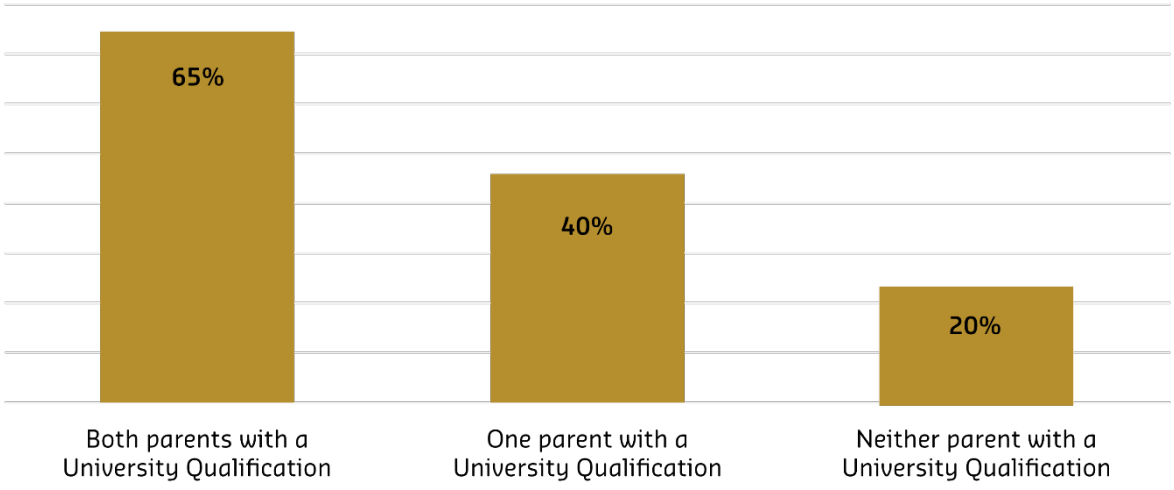
Other questions about university were centred on the levels of academic merit required for acceptance into university, how hard the subjects would be, social networking and 'free time'. To collate these questions, we devised a 'debunking the myths activity' liftout that listed myths and reality. Readers are able to cut the various myths and realities and sort

them, play a game of jeopardy or simply discuss them among each other (the answers are also provided; see Appendix 4).

Participants sought assurance that university was a worthwhile undertaking, particularly when perceived easier paths to work were available locally through either immediate employment in local industries or via apprenticeships. Moreover, students and carers alike also made it clear that they would more likely seek employment locally rather than move to a metropolitan area regardless of attending university and often associated university degrees with city jobs. The toolkit, therefore, included trends on job growth in industries that are projected to be key regional employers which demonstrated the growing demand for university-level qualifications in regional areas. We also included a description of the changing nature of traditional regional industries such as farming, where growth in scientific and engineering innovation will likely mean future farmers will require formal qualifications. The rapidly changing localities of work such as remote or location-independent occupations (such as web designer), were also explained, to give readers a sense of the breadth of jobs available to them in regional areas.

Our study also identified a discrepancy among carers and teachers regarding their respective roles in careers education and advice. Namely, students from low SES backgrounds usually intersect with Low Educational Advantage (LEA), that is, they have little access to educational capital, and this is exacerbated in regional and remote areas (Drummond et al. 2011; Rural and Regional Affairs and Transport References Committee [RRATRC], 2009). During workshops, carers and teachers expressed that some students could be disadvantaged by their carers' lack of university experience. This is reflected in ABS (2013) statistics where students with both parents holding university qualifications are more likely to be enrolled at a higher education institution (65 per cent) compared with students with one parent holding a university qualification at 40 per cent and neither parent holding a university qualification at 20 per cent (ABS, 2009; Figure 3). The toolkit in its entirety aims to act as an accessible reference for all carers, but particularly those from LEA backgrounds. A section of the toolkit is devoted to carers by including information about the career education their child receives in Year 7, Year 8, Year 9 and Year 10, and tips on how to support and scaffold conversations with their children about careers, as well as links and references to further information.

Figure 3: Likelihood of university enrolment based on parent levels of education (ABS, 2009)



4.2 Careers Exploration for Country Kids

Our workshops and interviews found that many school staff felt pathways and career knowledge needed to be embedded within the existing curriculum, rather than be added through extracurricular programs (also see Bennett et al., 2015). An embedded curriculum would ensure that all students have equal access to resources, information and support at the same stage in their secondary education. Therefore, our research team created lesson plans that teachers could easily integrate into the curriculum either as one-off lessons or as a set. The topics of the lesson plans were informed through co-design workshops and interviews. We also aligned the learning activities to be smoothly implemented alongside the existing strands of the Australian Curriculum and the 'Discover' and 'Explore' phases as outlined in the Victorian Careers Curriculum Framework (see Table 10). The lesson plans are also designed to simultaneously address the specific disciplinary knowledge of Learning Areas while exploring careers-related content. Most activities can be done without internet access, as many teachers also noted that the internet connection within the schools was poor and access to computers was not always easy.

Table 10: Framework Aligned to Victorian Careers Curriculum Stages

	PATHWAYS	CAREERS
Discovery	Available pathways ranging from online study, TAFE, regional-based university, and metropolitan-based university	Identifying skills or hobbies students enjoy doing or like to do, reflecting on preferences when it comes to learning and lifestyle
Explore	Students discuss what jobs require different pathways and learn more about how different pathway options compare across basic factors such as costs and required number of years	Students are given examples of regional community members' careers and backgrounds, helped to begin to reflect on what careers with which they identify

All 10 lesson plans were also reviewed by volunteer experts including regional teachers, career counsellors, and higher education and pathways researchers. The activities were also reviewed by the Victorian Aboriginal Child Care Agency (VACCA). In particular, we aimed to design these activities to help students understand the various career options and opportunities available to them both in regional locations and metropolitan areas and what school options were necessary or recommended if they wanted to pursue those careers. We also sought to 'demystify' what university was like by including learning activities that elucidate the university experience.

The 10 lesson plans related to a range of curriculum topics including sciences, civics and citizenship, English, economics and business, and geography. Each activity provided a short overview as well as linkage to the Australian Curriculum through alignment to the strand, sub-strand, focus area, and cross-curriculum priorities (e.g., Sustainability or Asia). Table 11 provides an overview of the activities.

Table 11: Overview of Learning Activities

YEAR LEVEL	TITLE OF LESSON PLAN	KEY ACTIVITIES
Year 7	Becoming a Community Leader (Civics and Citizenship)	Students brainstorm what makes a leader. They then read a series of personas of different leaders and discuss who they identify with. Finally, they reflect on what contribution they'd like to make to their community.
Year 7	Looking Out For One Another: Careers in Health Services (Civics and Citizenship)	Students are presented with career summaries of healthcare workers and identify the qualifications and skills required to do these jobs. Students are also encouraged to identify the value of each profession and reflect on their own interest in the sector.
Year 7	Living and Working in Rural Places (English)	Students explore how rural communities are represented in the media and learn about jobs that are important to keep small towns alive. They will explore the pathways to work in growth industries and use terms such as ATAR, TAFE, and HECS.
Year 7	Careers in Renewable Energy (Science)	Students learn about various renewable energy jobs and reflect on the skillsets they need if these jobs are of interest to them. Students then use an educational pathways worksheet to explore various education options to support science related jobs.
Year 7	Creating A Successful Business in My Town (Economics and Business)	Students examine the characteristics of entrepreneurs and then work together to create a business they believe would thrive or is needed in their local area.
Year 8	Farming Technologies and Scientific Innovations (Science)	Students learn about technological advances in farming such as aerial crop imaging. Students then reflect on whether they would like to be a farmer and discuss how innovation takes place.
Year 8	Looking After Our Parks and Wetlands (Geography)	Students consider various jobs in nature conservation by reading profiles of individuals that work within the industry. Finally, they are asked to reflect on which jobs they think would match their own skillsets and explore the educational pathway for each career.
Year 8	Preserving and Promoting Heritage (Civics and Citizenship)	Students learn about important cultural sites such as Uluru-Kata Tjuta National Park and the QANTAS Hangar. They then discuss potential jobs linked to maintaining these sites.
Year 8	Careers that Work for the Community (Civics and Citizenship)	Students learn about jobs in the legal and justice system such as police inspector and lawyer. They then reflect on what skills are needed for these roles and their interest in this area.
Year 8	Local Jobs: What does it take? (Economics and Business)	Students discuss what jobs they know about as a brainstorm activity. They then use online government resources to consider the growth outlook of these jobs and their applicability to the community.

During our workshops, schools staff identified the lack of exposure to a variety of careers as one of the most pressing barriers impacting their students' consideration of university. One principal remarked that students need to "see the breadth of education and work out there"; indeed, we cannot expect students to strive for careers that they do not know exist. This report has addressed the disadvantage low SES equity groups in regional areas face due to the lack of educational capital, but we must attach a lack of occupational capital to this concept; where students have no way of interacting with education and careers outside of

the school setting. In an attempt to address this, the majority of lesson plans were designed to include case studies of businesses or persona profiles such as pharmacists, innovative farmers, heritage and parks officers and physiotherapists, to name a few. These profiles were not only based on real people but also specifically selected to tie in with the Australian Curriculum as well as the projected demands for regional employment.

Our study revealed that the majority of students in outer regional areas were more likely to engage in employment within their local communities rather than move for employment to metropolitan areas. Perhaps reflecting this, teachers highlighted the changing nature of traditionally regional work as an essential focus area in career-related lesson plans. As a consequence of these changes to work, the lesson plans consisted of activities exploring scientific innovation in agricultural practices, the connection of tourism and heritage management, as well as different ways to use vast tracts of land, such as wind farms. Additionally, the lesson plans encouraged students to explore new careers based on job growth projections and consider how these careers would benefit their community.

Participants in our study called for a ‘whole-of-person’ approach that gives students an opportunity to reflect on their own skills and interests while undertaking any careers-related learning. The use of persona profiles was a deliberate choice to incorporate this advice; by presenting students with positive role models such as professional tennis player Ashleigh Barty and regional-based business owners, students are encouraged to identify the common characteristics of successful individuals, such as dedication, resilience, creativity, while also considering how they can develop those traits and apply them to their career goals.

While school staff participants (n = 30) agreed that more education around careers is needed across all year levels at secondary school, they also made it clear that the curriculum is “packed” and individuals indicated that they were too time-poor to adapt their existing lesson plans to include careers content. It is hoped that the lesson plans created by our research team can be utilised easily by school staff with practical considerations acknowledged in the design of the lesson plans. The lesson plans include a ‘Teacher Brief’ outlining all the logistical and curriculum-based details of the lesson plan such the learning intention, compliance with the Australian Curriculum (with clearly articulated strands, sub-strands, elaborations, focus areas, general capabilities and links to cross-curriculum priorities), information and communications technology (ICT) and photocopying requirements as well as the timing of the learning activities to be delivered. As identified earlier, we were cognisant of ICT access issues faced by many regional schools, so only one learning activity requires internet access. Worksheets for each lesson plan immediately followed the ‘Teacher Brief’ for easy photocopying. It was essential to design these worksheets to be engaging and informative, so expert reviewers were engaged to ensure their appropriateness and applicability. Finally, as requested by participants, the entire document can be uploaded to a smart device via a QR code. The rationale and design of the curriculum is further detailed in a forthcoming publication (Mahat et al., under review).

Part 5. Conclusions and Next Steps

This report summarises the findings of our research into RRR community perspectives on optimal early-stage interventions, motivations and barriers to postsecondary education and career pathways. By adopting a participatory design methodology and hosting activities where students, school staff, and carers could co-design solutions with the research team we have presented several key insights into how interventions and resources could better support communities and yield a greater impact.

Our study comes at a time when, despite a sustained effort and funding into improving higher education participation for RRR communities, inequity continues to exist (Burke, Bennett & Bunn, 2019; Harvey, Burnheim & Brett, 2016). While recent policy and funding changes highlight the government's commitment to improving RRR student participation in higher education (DESE, 2020; Napthine et al., 2019), the issue cannot be solved by increased funding and engagement alone. As highlighted in other 'wicked' problems, such as healthcare or public policy formation, government and universities need to pursue a partnership approach with stakeholders to ensure fit-for-purpose programs and policies and the relevancy of proposed solutions. Our study aimed to model a participatory design approach by creating a direct line of communication between communities and the research team. We adopted the stance that, in order to deeply understand the motivations and barriers, we needed to provide spaces for the participants to co-create the solutions with us.

Our findings point to several areas of improvement for practice, for universities, widening participation practitioners, and government bodies and departments. To illustrate, we uncovered several key findings related to participant perspectives on the optimal nature, delivery and timing of early-stage interventions. Participants suggested that for interventions to work in RRR communities, the content and resources need to showcase positive narratives about the types of work available in RRR communities and how university degrees can enhance or support critical skills in these potential careers. Participants further stressed the importance of authenticity, both in terms of better including RRR speakers and peer mentors, but also designing programs in line with their value-based systems, for example, to be hands-on and to support a 'whole of person' development. Participants also indicated that outreach programs should take a sustained, scaffolded approach, rather than one-off program delivery, that supports consistent engagement and age-appropriate learning opportunities.

Another key finding of our study was the varying perspectives of what the barriers to postsecondary education are across cohorts. For the students in this study, perceived barriers included costs and academic difficulty; for carers, it was navigating a perceived cultural divide and safety concerns; and for school staff, the barriers largely related to a lack of information about university pathways and the value of university. These findings reveal the necessity for nuanced cohort-specific interventions and resources that directly address each cohort's perceived barriers.

Interestingly, across our cohorts, we found that participants sometimes perceived online or regional universities or campuses to be of lesser quality than metropolitan campuses. As the government continues to embark on the creation of RUCs as a mechanism to support RRR communities, it is likely that this finding demands more unpacking. In essence, how do we build physical and digital infrastructures for RRR communities that are not perceived as

substitutes or alternatives, but seen as comparable to the campuses of brick-and-mortar metropolitan-based universities? This does not mean replication of what works in one context and simply applying this to another context, but rather demands a deep understanding of specific communities' needs and desires.

While our initial goal was to visit 20 schools across four states (New South Wales, Queensland, Victoria, and Western Australia) to capture a diversity of RRR community perspectives and explore differences across contexts, we were limited to just four schools in Victoria due to the COVID-19 pandemic. However, from our four school visits, and supplemented principal interviews (n = 10), we still uncovered rich data about the importance of early-stage interventions and the need for context-specific approaches and resources. Therefore, while we were only able to create a single state-specific toolkit (for Victorian students, school staff, and carers) our study provides a useful blueprint for future studies to co-design with stakeholders to create nuanced programs and resources. Our participant-informed outputs also included learning activities for Middle Years students in RRR communities and a university-school partnership agreement template. In the future, there needs to be a more concerted effort to design interventions, programs, and resources collaboratively with the intended audience. Future education policy formation, especially policies that are directed to improve RRR postsecondary participation and support, could also adopt co-design approaches to inform new policy and ensure relevancy.

Through co-design, we offer here a rebuke against the 'deficit model' found too commonly in discussions of equity groups and instead redefine participants as experts of their own experiences. By repositioning participants as experts and co-researchers, rather than sources of feedback, we challenge traditional assumptions that students must be the ones to change or adhere to university-set expectations (O'Shea, 2016). If the university sector truly wants to see an increase in RRR student participation, we must stop assuming what stakeholders need or want and instead modify the system, from early-stage outreach programs to on-campus student support initiatives, to foster an authentic partnership between students, staff and stakeholders.

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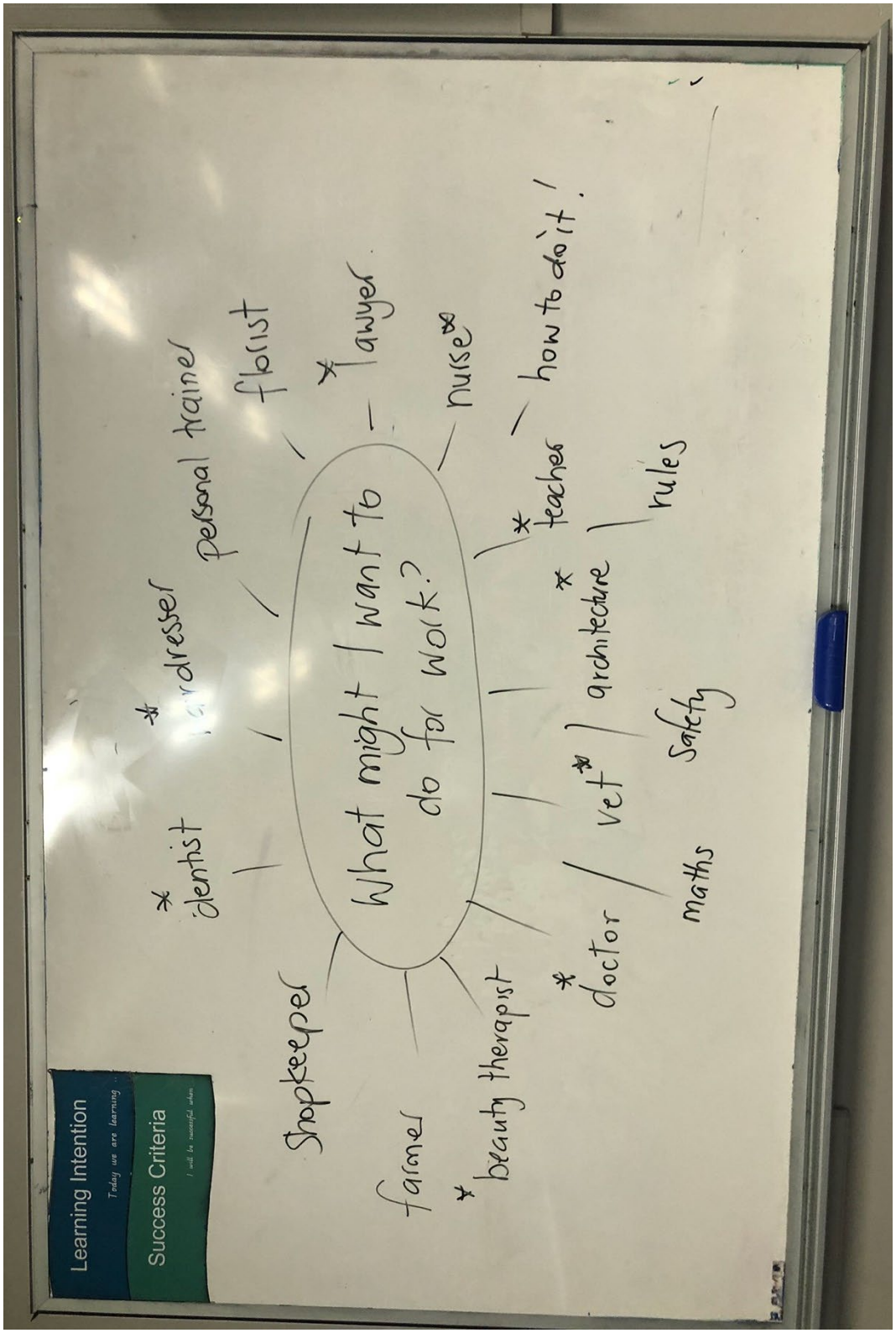
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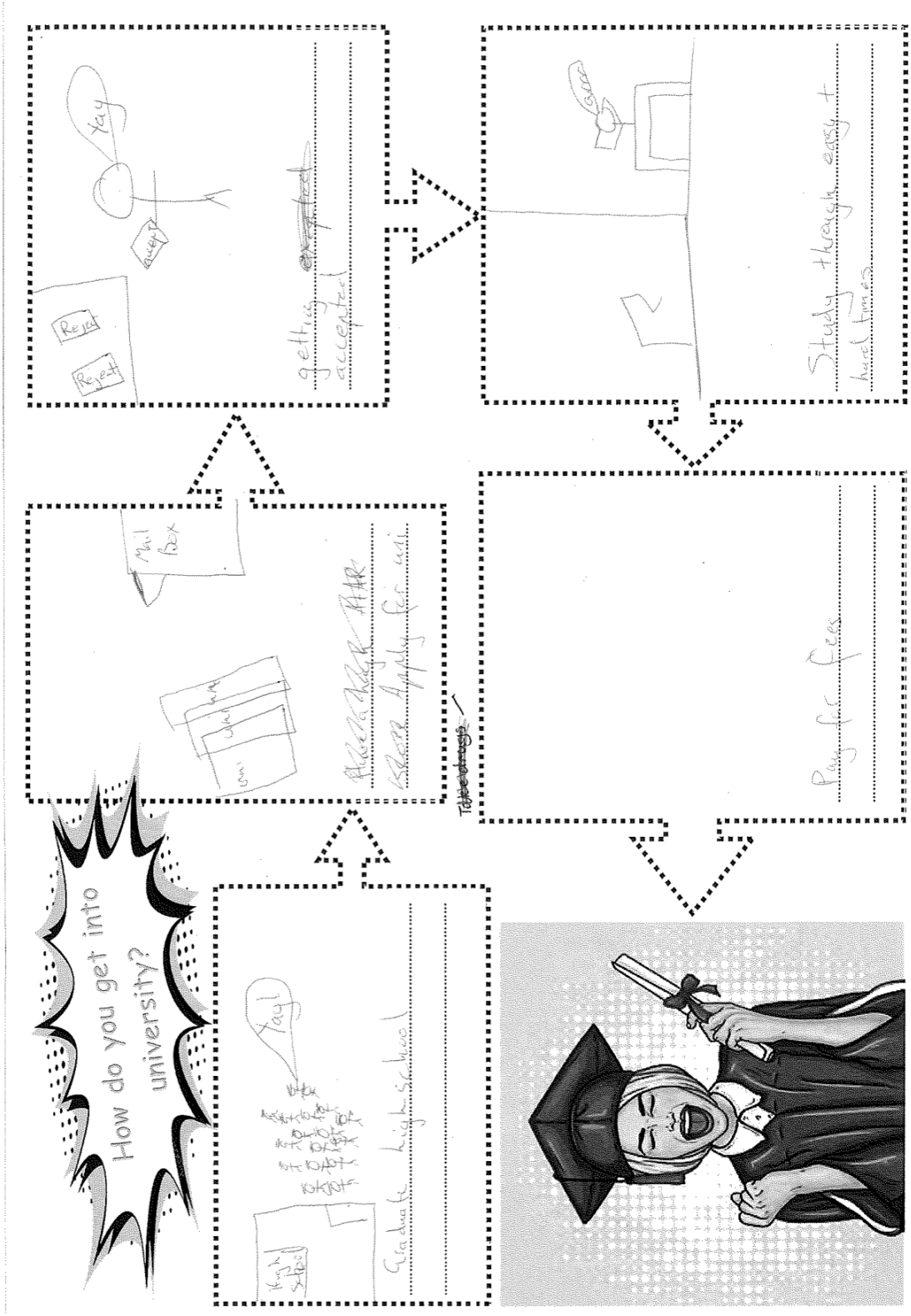
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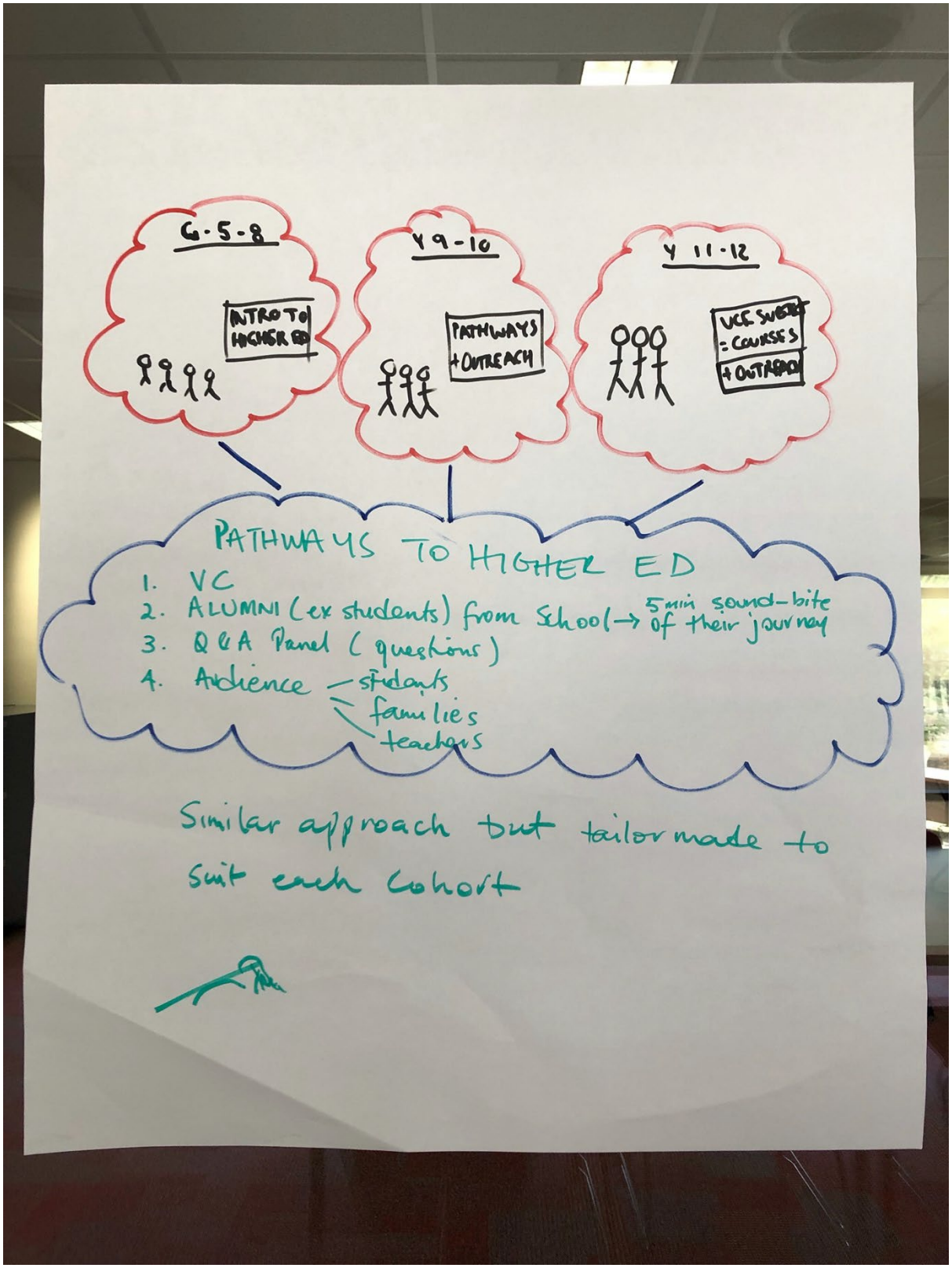
Appendix 1: Student Brainstorm about Potential Jobs



Appendix 2: Student's Depiction of Pathway to University



Appendix 3: Teacher's Pitch on a Pathways Program for their Context



Appendix 4: ‘Debunking the Myths’ Activity in the Toolkit

Activity: **Debunking the Negative Myths**

This toolkit contains a lift-out activity 'Debunking the Negative Myths'. You can adapt this activity in many different ways: you can match the activity to the fact, play jeopardy (read the fact and think of what a myth might be) or just simply sort them into two piles. Cut them out and get creative with your game. The answer key can be found below (Table 4).



Table 4: Debunking the Negative Myths

Myths	Facts
University is hard and boring; all you do is study.	University is fun and exciting. Yes, there is study but if you are doing a course in something you enjoy, this shouldn't be a chore. Classes also include practical-based and provide hands-on learning.
I won't have any time for friends or family.	Finding the right balance between study and your social life is possible. There are times and ways to include your family and friends. You also have the chance to make lifelong friends on campus.
Living on campus will be just like what I see in the movies.	Universities hold events for students and there can be the occasional party but it's nothing like what you see in the movies. There is no pledging to fraternities and sororities and the level of pranking is rather subdued.
If I fail a subject, I can't graduate, and my university journey is over.	Failing a subject can be disheartening but it's not the end of the world, or your university journey. There are plenty of support services to get you back on track and help you find alternative graduate pathways.
I can do it all my own and won't need any help.	All students will need some sort of help at some point in their university journey. Whether its personal or academic, support is there to be used. Nobody expects you to do it all on your own so don't be afraid to ask for help when you need it.
You will just be a number and face in a sea of students.	Regional and small campuses feel very communal and everybody gets to know everyone pretty quickly. For bigger campuses, anonymity is up to the student. There are ways to make yourself known.
A university degree is worthless or won't lead to a good job.	University degrees are valuable in finding professional work in a specific field. Jobs requiring a university degree are often higher paying and potentially more fulfilling.
University is a waste of time.	University has many benefits and experiences. Even completing short courses or studying part-time can lead to amazing opportunities and offers.
You need to be smart or rich to go to university.	University is for everyone! Government support (like extra funding for regional students) are in place to help make university accessible to everybody, no matter their background. If you have the motivation, you can go to university.
I can only get into a university course if I finish Year 11 and 12.	There are many different pathways into university. Getting into university is definitely easier after finishing secondary school but there are other options to cover all kinds of circumstances.
I have to make sure I finish my degree within the time frame, or I can't graduate.	You can choose your study load. You can adjust whether you study full-time or part-time which means it takes longer to complete a degree.

Activity: **Debunking the Negative Myths**

University is hard and boring; all you do is study	University is fun and exciting. Yes, there is study but if you are doing a course in something you enjoy, this shouldn't be a chore. Classes also include practical-based and provide hands-on learning.
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University is a waste of time	University has many benefits and experiences. Even completing short courses or studying part time can lead to amazing opportunities and offers.
You need to be smart or rich to go to university	University is for everyone! Government supports (like extra funding for regional students) are in place to help make university accessible to everybody, no matter what their background is. If have the motivation, you can go to university.
I can only get into a university course if I finish Year 11 and 12	There are many different pathways into university. Getting into university is definitely easier after finishing secondary school but there are other options to cover all kinds of circumstances.
I have to make sure I finish my degree within the time frame, or I can't graduate	You can choose your study load. You can adjust whether you study full time or part time and spread a degree out further.

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