

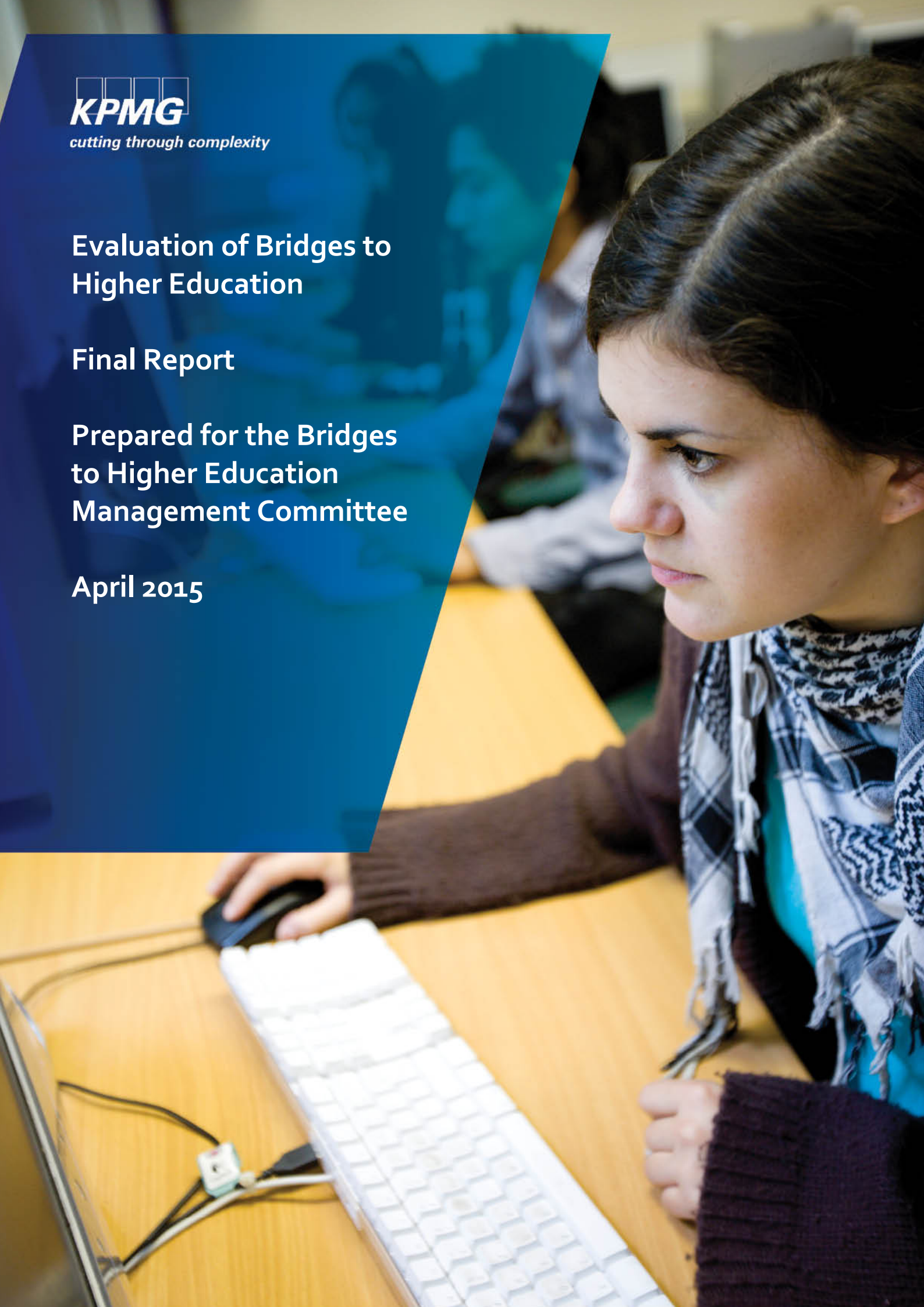


# Evaluation of Bridges to Higher Education

## Final Report

Prepared for the Bridges  
to Higher Education  
Management Committee

April 2015



## **Disclaimer**

### **Inherent Limitations**

This report has been prepared as outlined in the Scope Section. The services provided in connection with this engagement comprise an advisory engagement which is not subject to Australian Auditing Standards or Australian Standards on Review or Assurance Engagements, and consequently no opinions or conclusions intended to convey assurance have been expressed.

The findings in this report are based on limited quantitative analysis and a qualitative study. The reported results reflect a perception of the Bridges to Higher Education initiative, but only to the extent of the sample surveyed, being a representative sample of stakeholders involved with the Bridges to Higher Education initiative. The sample was approved by the University of Western Sydney, and the Partners Advisory Group representing the Bridges to Higher Education Management Committee. Any projection to the wider stakeholders is subject to the level of bias in the method of sample selection.

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KPMG have indicated within this report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within the report.

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The findings in this report have been formed on the above basis.

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## Acronyms and abbreviations

ACU	Australian Catholic University
AFL	Australian Football League
ATAR	Australian Tertiary Admission Rank
AVID	Advancement via Individual Determination
Bridges	Bridges to Higher Education
CALD	Culturally and Linguistically Diverse
CLO	Community Liaison Officer
COAG	Council of Australian Governments
DEC	Department of Education and Communities (NSW)
FEIT	Faculty of Engineering and Information Technology
GWS	Greater Western Sydney
HEPPP	Higher Education Participation and Partnerships Program
HSC	Higher School Certificate
LEAP	Learning Education Aspiration Participation
LGA	Local Government Authority
MQ	Macquarie University
MULTILIT	Making up for lost time in literacy
NISEP	National Indigenous Science Education Program
OECD	Organisation for Economic Cooperation and Development
OT	Occupational therapy
PAG	Partners Advisory Group
SES	Socio-economic Status
STEM	Science, Technology, Engineering and Mathematics
TAFE	Technical and Further Education (college of)
TVS	Television Sydney
SWIEIT	The Sydney Women in Engineering and Information Technology Speakers' Program
UAC	University Admissions Centre
UNSW	The University of New South Wales
UTS	University of Technology, Sydney
UWS	University of Western Sydney
VET	Vocational education and training

## Glossary of key terms

Term	Definition
Academic self-concept	Academic self-concept refers to the students' beliefs about their academic skills and aptitude.
Best practice	Interventions that consistently show better results in terms of contributing to the desired outcomes.
Collaboration	Collaboration involves related sectors, programs and/or funded organisations adjusting their working relationships, service planning and development to improve linkages amongst interventions, address gaps in the service continuum, and address duplication in services and effort.
Community influencer	Community influencers include Aboriginal and Torres Strait Islander Elders, Cultural Liaison Officers, members of community, religious or sporting organisations, non-government organisation representatives, individuals considered experts in their fields, career advisers and other influential/credible community members.
Contacts	A 'contact' is a single interaction with a single student, teacher or parent, i.e. a student attending three mentoring sessions should be counted as three separate contacts; a parent attending two forums should be counted as two parent contacts; a teacher participating in four teacher professional development sessions should be counted as four teacher contacts. Where 'contacts' are unable to be quantified, the number of participants should be used as a proxy and a comment made to this effect.
Fine motor skills	Fine motor skills are achieved when children learn to use their smaller muscles, such as muscles in the hands, fingers, and wrists. Children use their fine motor skills in tasks such as writing, turning pages, eating, cutting with scissors, and using computer keyboards.
Higher Education	In Australia, higher education is the sector that offers post-school education usually, but not exclusively, at the level of a bachelor degree or higher level qualification.
Paid helper or volunteer helper	Paid helpers are provided with a small financial contribution for their assistance. This includes university students acting as tutors who are paid for this work. Volunteer helpers are not paid for the assistance they provide.
Participant	Participants are defined as the number of students, parents, teachers, volunteers or community influencers who directly engaged in a Bridges project. It does not include 'indirect participation', e.g. where teachers engaged in professional development sessions, their students do not count as participants.
Partnership	A partnership is defined as a joint working arrangement where the partners: are independent bodies; agree to cooperate to achieve common goals; have joint responsibility for resources and funding; have



Term	Definition
	a specific focus of activity set out in strategic plans; are affiliated with the partnership; plan and implement a jointly agreed plan with joint resources; and share relevant information.
Widening participation	Increasing the ratio of participation of certain identifiable societal groups who are considered to be under-represented in higher education. "Under-representation" is typically taken to mean that the percentage of participants in higher education from that societal group is less than the average rate of participation of the entire population.

## Executive Summary

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### Context and background

Despite an overall expansion of the Australian higher education sector during the last decade, and greater access to further education, students from low socio-economic backgrounds continue to be under-represented in Australian tertiary institutions.

In 2008, both the Bradley Review<sup>1</sup> and the Participation and Equity Review<sup>2</sup> made a series of recommendations to address the barriers to higher education faced by students from low socio-economic backgrounds. In response to the Bradley Review, in 2009 the Australian Government set a number of concrete objectives for higher education, including: increasing the number of individuals aged 25–34 who have a university qualification to 40 per cent by 2025; and improving the participation of students from low socio-economic backgrounds in higher education to 20 per cent of all undergraduate students by 2020.

Bridges to Higher Education (Bridges) is a \$21.2 million program to support these objectives, as part of the Higher Education Participation and Partnerships Program (HEPPP). Bridges is a partnership of five universities: Australian Catholic University, the University of Sydney, the University of Western Sydney, Macquarie University and the University of Technology, Sydney. This partnership was formed in recognition that individual universities working alone cannot provide the breadth and depth of programs that collaboration can bring.

Bridges encompasses 96 projects that are collectively designed to engage with students, teachers, parents and communities in order to influence knowledge and awareness of higher education, enhance educational attainment and achievement, and build educational aspirations among students from low socio-economic backgrounds.

Projects and their underlying activities can be categorised in terms of the following broad types: on-campus activities; parent engagement activities; university outreach into schools; partnerships with schools, TAFE institutes, community organisations and relevant others to strengthen school and community capacity; teacher professional development; curriculum enrichment; tutoring and mentoring; and summer camps (or study skills courses).

### The Evaluation of Bridges

In January 2013, the Bridges Management Committee engaged KPMG to conduct a two-year evaluation of Bridges. This Final Report is the third of three reports. It summarises findings covering the period 1 January 2012 to 31 December 2014, provides an analysis of work to date, including a full cost-benefit analysis of the Bridges initiative, and offers opportunities to further improve Bridges in light of the findings.

The emphasis is on assessing the progress of Bridges in achieving its four objectives: improving students' academic preparedness and outcomes; increasing students' awareness, confidence and

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<sup>1</sup> Department of Education, Employment and Workplace Relations 2008, *Review of Australian Higher Education. Final Report*, Canberra.

<sup>2</sup> Centre for the Study of Higher Education 2008, *Participation and Equity Review: A review of the participation in higher education of people from low socio-economic backgrounds and Aboriginal and Torres Strait Islander people*, prepared for Universities Australia by the University of Melbourne, Melbourne. Viewed 14 October 2013, <<http://www.Universitiesaustralia.edu.au/resources/271/290>>

motivation toward higher education; building school and community capacity; and increasing capacity to access higher education.

## Methodology

The primary purpose of the evaluation is to measure how well Bridges is contributing to its intended objectives. A mixed methods design has been applied for the collection of data and information in order to maximise the understanding and learnings from the evaluation process. These methods comprise both qualitative and quantitative approaches in order to address the requirement for formative and summative evaluation, as well as the diversity of questions that the evaluation is required to answer.

The evaluation has applied a multi-level approach to the analysis of information to reflect the complexity of Bridges and its implementation. These levels include individual project level; cluster and/or project objective level; and whole of initiative level information.

The evaluation gathered information from a broad range of sources, which included: reports (including both qualitative and quantitative information) from the participating universities; school visits, key informant interviews and focus groups (i.e. Bridges Management Committee Staff, College of Technical and Further Education (TAFE) staff and participating schools); analysis of secondary data sources (i.e. University Admissions Centre (UAC)); and financial information provided by the participating universities to inform an economic analysis. Analyses of both participation and performance indicator data were undertaken for the period 1 January 2012 to 31 December 2014. The analyses were descriptive and statistical in nature, which enabled the estimation of overall effectiveness of Bridges projects across the entire stakeholder population.<sup>3</sup>

## Key evaluation findings

The following sections set out the emerging evaluation findings.

### Projects implemented under Bridges

Overcoming the myriad of barriers that students from low socio-economic backgrounds face in order to participate in higher education requires a multi-faceted approach that engages not only students, but also schools and school communities, teachers, parents, paid helpers and unpaid helpers (e.g., mentors or event organisers), as well as community influencers (e.g., Aboriginal and Torres Strait Islander Elders, experts in particular fields of interest). Over the course of the evaluation, Bridges has implemented a range of strategies to engage their target groups. Innovative program design, often with input from key stakeholders, ensured that projects successfully engaged with students and their families. Some projects drew on established brands to lend credibility to

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<sup>3</sup> Results for Bridges projects (reporting against each indicator) were combined to generate estimates of overall performance by indicator.

This involved estimating the total number of participants with a positive result for a given indicator (by project). To achieve this, the positive response rate among surveyed participants was multiplied by the total number of participants, for the project.

The totals for each relevant project were then added to estimate the total number of participants with a positive result for that indicator, across all projects.

For each of these overall estimates, the 95 per cent confidence interval (95 per cent upper and lower bound) was calculated. This interval provides a range within which the actual number or percentage being estimated is likely to lie. Wider confidence intervals suggest a greater degree of uncertainty in the overall estimate, usually attributable to the small sample sizes surveyed.

their Bridges activities, while others ran events such as community days and promotional activities to raise awareness of higher education offerings and opportunities. Other common approaches included working with teachers to build capacity, engaging directly with the media, and developing resources tailored for Aboriginal and Torres Strait Islander students or for culturally and linguistically diverse communities.

### The Bridges reach

Over the three year period to December 2014, Bridges has substantially grown the number of schools, students, teachers, and parents engaged. This reflects the increasing partnership momentum over time, Bridges increasing profile and credibility in schools and communities, better targeting of resources and the roll-out of new projects over time.

- Bridges has extended their reach into schools. A total of 314 schools participated in Bridges projects in 2014, twice the participating number in 2012 (n=157).
- Teacher participation in Bridges has increased significantly over the evaluation timeframe. Bridges projects engaged a total of 3,186 teachers in 2014, an increase of 151 per cent over 2012 (n=1,268)<sup>4</sup>.
- Parent participation has also continued to increase over the evaluation period. While Bridges projects directly engaged 1,409 parents in 2012, by 2014 this had grown to a total of 9,185 parents.
- Bridges has continued to increase student engagement over the evaluation period, with more than three times as many students participating in Bridges projects in 2014, as compared to 2012. Bridges directly engaged over 73,000 students in 2014; this compared to an initial 23,261 students in 2012.

*Table 1: Number of participants and contacts by category, 1 January 2012 to 31 December 2014*

Category	Number reached 2012	Number reached 2013	Number reached 2014
<b>Participation</b>			
Schools <sup>5</sup>	157	269	314
Teachers	1,268	2,719	3,186
Parents	1,409	6,337	9,185
Students	23,261	62,225	73,118
Paid helper	-	550	810
Volunteer helpers	988	1,055	1,375
Community influencers	245	518	611
<b>Contacts</b>			
Teacher contacts	1,268	7,327	7,049
Parent contacts	1,409	10,846	15,917
Student contacts	30,807	112,760	155,413

Source: Data provided to KPMG by Bridges

<sup>4</sup> Note that according to census data, there are 64,000 school teachers in Greater Sydney, and around 31,000 in inner West and Greater Western Sydney.

<sup>5</sup> 'Schools' refers to those 100 per cent funded by Bridges.

## **Impact of Bridges with respect to its objectives**

Analysis of data collected by Bridges projects and qualitative feedback from focus groups with students, teachers and parents suggests that **Bridges is clearly contributing to its objectives and promoting outcomes for students, parents and teachers alike.**

### **Academic preparedness and outcomes**

Bridges is supporting **improved academic preparedness and outcomes**. Students self-reported better study skills (an estimated 91 per cent; n=9,457) and felt better prepared for university (an estimated 92 per cent; n= 6,154) as an outcome of their participation in Bridges. Teacher feedback supported these findings, with teachers noting an improvement in students' academic performance relative to that prior to Bridges (an estimated 99 per cent of students improved based on teacher assessment; n = 3,530). Parents also benefited, suggesting they had better capacity to support their child with their higher educational goals (an estimated 94 per cent of parents surveyed provided this feedback; n=1,434).

### **Awareness, confidence and motivation**

Students and parents are **more aware of university, and students' self-confidence and motivation to attend university has improved** post-participation in Bridges. In particular, students had greater awareness of what university offers (an estimated 90 per cent of students; n=24,392) and of their potential career paths (an estimated 89 per cent of students; n= 35,852). Similarly, Bridges is contributing to parents' awareness of university and is altering their attitudes and preconceived ideas: an estimated 79 per cent of parents indicated that they knew more about their child's university options (n=1,755), and an estimated 90 per cent had better understanding of the benefits associated with higher education (n=1,987) after being involved with Bridges.

Participation in Bridges programs is also raising students' aspirations toward further study, and inspiring thoughts of university. This was reflected in student feedback with the majority of students surveyed (69 per cent of students; n = 34,880) self-reporting greater motivation to continue to year 12 and to continue on to university (73 per cent of those surveyed; n = 8,617).

### **School and community capacity**

**School and community capacity has improved.** Bridges professional development activities have built teachers' skills and enhanced their classroom practice. After participating in Bridges professional development and learning activities, an estimated 1,445 teachers (97 per cent of participants in relevant projects) reported that Bridges had helped them to expand their teaching practices; 1,435 teachers (95 per cent of participants in relevant projects) could better apply their learning to their teaching practices; and an estimated 1,275 teachers (98 per cent of participants in relevant projects) had improved knowledge in their discipline of focus.

As a result, 89 per cent of teacher participants (estimated at n=1,436) were better able to engage their students in learning and 92 per cent (an estimated n=805) were better able to motivate their students.

### **Access to higher education**

**Bridges has influenced capacity to access higher education.** Participation in Bridges is assisting students move through TAFE to enter university. The number of credit transfers and articulation arrangements between TAFE and universities has increased to 186 in 2014, from nil in 2012.

Awareness of alternative pathways to higher education is also increasing, with an estimated 87 per cent of participants in alternative pathways projects (n=29,987) noting this improvement.

### *Aboriginal and Torres Strait Islander populations*

#### **Benefits are also accruing to Aboriginal and Torres Strait Islander students and communities.**

An estimated 88 per cent of Aboriginal and Torres Strait Islander students surveyed (n = 1,280) had a greater awareness of what university offers, with an estimated 82 per cent (n=582) indicating that they were more aware of potential career paths. Parents of Aboriginal and Torres Strait Islander students also had better knowledge of the benefits associated with higher education and options available for their child (an estimated 96 per cent; n = 242) post Bridges.

Bridges projects are supporting Aboriginal and Torres Strait Islander students' motivation towards school and higher education through tailored, activities that enhance students' engagement and ambition. Greater motivation to complete year 12 was reported by an estimated 88 per cent (n = 9,818) of students, and an estimated 98 per cent (n=238) of teachers had higher ambitions for their Aboriginal and Torres Strait Islander students post Bridges.

### *Benefits are being achieved through partnership*

The core partnership between the five Bridges universities has only strengthened over time. By July 2013, all partners had signed up to a shared vision of widening participation, effectively aligning their strategic interests to achieve this intent. There were clear and established governance structures, through the Management Committee, Partners Advisory Group (PAG) and Project Groups.

The PAG in particular brought together the collective resources and experience of a wide range of stakeholders – from school principals, to the Department of Education and Communities (DEC), and not for profits – supporting a broader focus on how Bridges can achieve further equity and inclusion for all young people, particularly those who are under-represented in higher education, to drive enhanced social and economic outcomes for the future.

The strength of the current arrangements is reflected in the Project Leads and Management Committee responses to the VicHealth Partnership Analysis<sup>6</sup> tool, which is commonly used to assess, monitor and maximise the ongoing effectiveness of partnerships established by organisations. Bridges achieved an aggregate score of 138 which denotes that the partnership is based on genuine collaboration.

*The benefits to the universities themselves are apparent.*

Bridges strong credibility and increased capacity to address under-representation among low socio-economic status students was directly noted. This reflects that the partnership is seen to be operating in the interests of under-represented students and communities; rather than marketing entry into a particular university, the partnership is promoting a 'shared message' about the value of higher education overall.

As a result, Bridges had stronger capacity to engage other partners in the widening participation effort. A significant example is the collaboration with UAC (through the Web Project), which enabled the development of the 'Make Your Mark' website<sup>7</sup>, providing clear, accessible and comprehensive knowledge and information tailored for communities under-represented in higher

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<sup>6</sup> VicHealth 2011, *The partnerships analysis tool*, Victorian Health Promotion Foundation, Melbourne

<sup>7</sup> See [www.makeyourmark.edu.au](http://www.makeyourmark.edu.au)



education and information for the key influencers of prospective students (e.g. parents, school staff, employers). In so doing, the website also aims to build the aspirations of low socio-economic communities.

Bridges has also created a strong brand, with which university partners, community agencies and schools are proud to be associated. This brand – which reflects a commitment by the five participating universities to work together to do the best job and to make a difference – creates the capacity to engage widely and achieve buy-in from schools. It also adds value to each of the participating universities' reputations as advocates for social justice and equity of opportunity.

Bridges has clearly broken down barriers between institutions and enhanced the capacity for shared effort. This is most apparent in terms of the impact of the central and collaborative projects. For example:

- the *Parents and Rural and Remote Projects* both act in an influencer or advisory capacity, offering knowledge, guidance and support to university and other central and collaborative projects.
- *Bridges Connect* has enhanced the efforts of all universities to widen participation through utilising various classroom technologies to build capacity, broaden aspiration and provide academic enrichment to target schools in communities under-represented in higher education.
- The *Schools Engagement Project Group (SEPG)* enabled delivery of widening participation messages in a dynamic, engaging and interactive format that would not have been possible of one university working alone.

Communities of practice have enhanced the capacity to share lessons and experiences between universities and problem solve collectively.

Finally, partnership adds weight to the widening participation agenda; in an environment of fiscal constraint and competing priorities, the importance of reaching under-represented communities can be lost. Bridges offers strength in numbers; effectively a coalition of senior cross-university widening participation practitioners to champion the cause.

*Schools also noted the benefits of Bridges, relative to the previous siloed approach.*

The extent of resourcing for the collaboration has allowed for scale, depth and reach, far greater than universities would have been able to achieve individually. Bridges covered a wide geographic area, range of year levels and target groups and activities. Reach has also been enhanced through the development of shared resources, with the SEPG matrix identified as a key contributor.

The five universities have also been able to better coordinate their engagement with schools and students. This was thought to have allowed for greater choice, diversity and a stronger ownership of the projects operating within their school.

Shared resources and corporate knowledge also provide an enhanced capacity for students and schools to access a range of complementary strategies that reinforce messages about the value of higher education, support academic achievement, and continue to motivate students towards higher education.

Other benefits include the use of more consistent messaging: all universities are talking the same language in terms of the value of higher education.

## University applications and entry

NSW UAC data<sup>8</sup> was analysed to identify whether there was any Bridges impact on the rate at which Year 12 students were accepted into university.

A key finding was that both Bridges and non-Bridges schools experienced growth in the proportion of university applicants receiving an offer, between the pre Bridges period (2008-2011) and the post Bridges period (2012-2013).

However, the increase for Bridges schools was markedly higher than for non-Bridges schools. For Bridges schools, that proportion increased on average by 5.37 per cent of students and by 3.15 per cent for non-Bridges schools. While testing showed this difference was not statistically significant, the analyses suggest that Bridges has supported a higher offer rate among its participating schools (compared to non-Bridges schools).

Focusing on the results for schools in low socio-economic areas alone, identifies a clear Bridges effect. In this case, there was a statistically significant difference between Bridges and non-Bridges schools. That is, the average increase in rates of Bridges applicants receiving an offer was significantly higher than that of non-Bridges schools. The size of the difference (5.13 per cent) is substantial and supports the conclusion of a Bridges specific effect among schools in low socio-economic areas for this indicator.

## Economic benefit

A cost benefit analysis was undertaken to compare the value of the additional investment made in Bridges with the outcomes derived from the program. This analysis found that an approximate net monetary benefit of \$30 million was realised from the implementation of Bridges, which reflects monetised benefits in the order of \$46 million from an additional investment of around \$16 million. This equates to a return of \$2.80 for each additional dollar invested in the program. Importantly, these benefits increase substantially where the analysis focuses on schools within low socio-economic areas alone: a return of at least \$6.00 is realised for each additional dollar invested in schools within low socio-economic areas.

These results reflect observed improvements in the rate of higher education offers made to attendees at NSW schools where Bridges projects are delivered (compared to other NSW schools). Specifically, analysis of UAC data identified a 2.22 per cent increase in the proportion of applicants receiving an offer, which (adjusting for acceptance and attrition) corresponds to an additional 562 higher education completions over the evaluation period. This effect is more pronounced for schools within low socio-economic areas, with an improvement of 5.13 per cent identified for these schools.

Published research attributes substantial economic benefits to higher education qualifications. Adapting figures drawn from OECD analysis and a combination of other credible sources, the economic benefit of obtaining a higher education qualification was estimated to be approximately \$80,000-\$83,000 (2014 dollars) per person. This figure reflects the additional costs incurred in the short term (i.e. course costs, foregone income) and longer-term benefits generated for the individual and Government (increased income, taxation revenue). Importantly, the outcome of the quantitative cost benefit analysis understates the true impact of Bridges. It does not reflect the

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<sup>8</sup> UAC data analysed were for students of NSW schools.

impact on higher education participation for younger cohorts impacted by Bridges, as this effect was not yet able to be observed in UAC data.

### **Common features of successful Bridges projects**

Analysis of participant reflections and qualitative feedback highlights a range of factors that have influenced the success of Bridges projects:

- Support for parents, noting that requirements vary dependent on student year level and parental characteristics.
- Executive Support from schools themselves, with principals and teachers often demonstrating high levels of commitment to the widening participation agenda.
- An approach that aligns with students' age and stage of development.
- Clearly defined project objectives and objectives that align to that of Bridges.
- Continuity of effort, complementarity of initiatives and intensity of support over a several year timeframe.
- A tailored approach, recognising the unique needs of students, schools and different communities.
- Building positive and supportive school cultures, that challenge existing norms, build a culture of aspiration and success, and support staff morale and enthusiasm in spite of challenge.
- Strategies that build students' confidence, aspiration and sense of achievement; making students feel like they belong at university.
- A focus on support at transition points.

### **Challenges and barriers**

Continued barriers to projects achieving the Bridges intent include:

- Varied level of tailoring to school interests and school cohort. This may compromise both relevance and engagement levels.
- The extent to which schools are targeting students already likely to attend university, rather than those on the cusp or entire year levels. In addition to being inequitable, such targeting fails to recognise that all students have potential. Bridges may equally encourage students to remain at school, or pursue a TAFE Pathway; alternatively through encouragement, support and a culture of high expectations, students' untapped potential (and capability to progress to university) may emerge.
- Focus groups with teachers suggests that school capacity to engage parents can be challenging. Many parents were noted (by schools) to not attend parent-teacher evenings or school open nights, often had not completed school, had low literacy levels themselves, and/or were from non-English speaking backgrounds, making communication a challenge.
- There is limited integration between TAFE Pathways projects and Bridges projects undertaken in schools. Schools that lacked their own explicit partnerships with TAFE institutions were less likely to be aware of TAFE pathways or be in a position to promote these to their students. This is a consideration for schools themselves.

- Schools have a key role in sustaining the Bridges impact, effectively keeping the value of higher education and students' confidence, motivation and academic capacity alive during times that Bridges is not engaged with students. Visits to schools demonstrate varied efforts in this regard: schools could be embedding Bridges messages through reflective discussions with students or providing resources (such as the UAC guide) post university visits.

### **Future directions**

Given funding for Bridges ceases at end June 2015, future directions focus on those requirements to support sustainability and to enable universities to maximise the value of any future investment.

- Future direction 1 – A more proactive focus on sustaining best practices already initiated through Bridges projects, noting the limitations of future funding.
- Future direction 2 – Sustaining the partnership between the five universities, and expanding this to other universities.
- Future direction 3 – Disseminating the benefits of the Bridges initiative, as highlighted through the evaluation, so they are widely known.
- Future direction 4 – Establishing and implementing defined criteria, so as to prioritise projects for future funding.
- Future direction 5 – Support for strategic decision-making by schools, to maximise impact. There is an opportunity to implement a consistent community development approach across all schools, engaging schools in a more strategic discussion to determine what their school, requires and what will maximise positive school culture and potential.
- Future direction 6 – Influencing the broader policy framework for youth participation and engagement. Over the last three years (and the preceding period), the five universities have gained strong insights, as to the requirements to change the life trajectories of under-represented communities. The learnings from this work could inform a clear strategy – applicable across the school, TAFE, university sector and vulnerable youth sector overall. Such a framework could be particularly important in the context of the reforms to Australia's welfare system<sup>9</sup> that focus on reducing long term welfare dependence and encourage people to work. Initiatives, such as Bridges, have a broader and tangible role to play in addressing this agenda.

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<sup>9</sup> Outlined in the 2014-15 Commonwealth Budget, the National Commission of Audit Report and A New System for Better Employment and Social Outcomes 2015 (the McClure report).

# PART I: BACKGROUND

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## **1. Introduction**

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This report is the *Final Report* of the Evaluation of Bridges to Higher Education (Bridges). KPMG completed the Preliminary Report in November 2013 and the Interim Report in June 2014.

Bridges is a three year, \$21.2 million initiative (2011-2014), funded through the Higher Education Participation and Partnerships Program (HEPPP), which was established in 2010 in response to a government commitment to increase the proportion of students from low socio-economic backgrounds participating in higher education from 15 per cent to 20 per cent by the year 2020.

The program is being delivered through a partnership of five universities: University of Western Sydney, University of Sydney, Macquarie University, Australian Catholic University, and University of Technology, Sydney.

In January 2013, the University of Western Sydney (on behalf of the Bridges to Higher Education Management Committee) engaged KPMG to conduct a two-year evaluation of Bridges. This *Final Report* is the third of three reports, which presents comprehensive findings over the evaluation timeframe.

### **1.1 The Final Report**

The purpose of the *Final Report* is to build on the findings of the Preliminary and Interim Reports to assess how well Bridges has contributed to its intended objectives: improving academic preparedness and outcomes; increasing awareness, confidence and motivation towards higher education; building school and community capacity; and increasing capacity to access higher education. The *Final Report* will also:

- highlight the good practice project characteristics, elements and interventions that contribute to Bridges achieving its objectives
- demonstrate the value derived from the Bridges initiatives
- assess the cost-benefit of Bridges
- identify future directions for universities and government in widening participation.

#### **1.1.1 Methodology**

This *Final Report* provides a critical analysis of information generated from: reports (including both qualitative and quantitative information) from the participating universities; school visits, key informant interviews and focus groups (i.e. Bridges Management Committee Staff, College of Technical and Further Education (TAFE) staff and participating schools); analysis of secondary data sources (i.e. University Admissions Centre); and financial information provided by the participating universities to inform an economic analysis.

Details of the methodology are in Section 2 to this Report, with further information included in the Evaluation Framework (Figure 1).



### 1.1.2 Report structure

This *Final Report* is structured in terms of the following sections:

*Table 2: Final Report structure*

<b>Part I: Background</b> (Chapters 1 – 3)	Provides an overview of the report's purpose, the evaluation methodology applied, the context for Bridges, and the Bridges initiative.
<b>Part II: Findings</b> (Chapters 4-11)	Addresses progress and outcomes with respect to: <ul style="list-style-type: none"> <li>• governance</li> <li>• the engagement of target groups</li> <li>• range of projects implemented</li> <li>• the outcomes achieved with respect to the Bridges objectives</li> <li>• cost-benefit analysis</li> </ul>
<b>Part III: Key lessons and next steps</b> (Chapter 13)	Summarises the evaluation findings and their implications, including the value being derived from the partnership, critical success factors associated with Bridges, ongoing challenges and next steps.
<b>Part IV: Case studies</b> (Chapters 14 and 15)	Presents a series of project outlines for central and collaborative and university led projects.
<b>Part V : Appendix Report</b>	Presents the evaluation templates, common evaluation indicators, and more detailed data at a project level.

Source: KPMG

## 2. Final Report methodology

This section provides an overview of the methodology used to evaluate Bridges.

### 2.1 Scope and purpose of the evaluation

The primary purpose of the evaluation is to measure how well Bridges is contributing to its intended objectives. These include: improving students' academic preparedness and outcomes; increasing students' awareness, confidence and motivation toward higher education; building school and community capacity; and increasing capacity to access higher education.

The following questions guided the conduct of the evaluation across five domains, as listed in Table 3 below.

*Table 3: Evaluation domains and questions*

Domain	Evaluation questions
<b>Project implementation</b>	<ol style="list-style-type: none"> <li>1. What has been implemented under Bridges? Consider the nature of projects implemented.</li> <li>2. What have been the barriers and enablers to implementation?</li> </ol>
<b>Lessons and reflection</b>	<ol style="list-style-type: none"> <li>3. What are the common features of successful Bridges projects? Why are these features important in influencing outcomes for participants, in particular students from low socio-economic backgrounds?</li> <li>4. Overall, what can be learnt from the projects? How can these learnings be applied more broadly to support under-represented students?</li> <li>5. How could Bridges be improved?</li> <li>6. Given the current funding environment, what should be the focus of sustainability?</li> </ol>
<b>Engagement of the target populations</b>	<ol style="list-style-type: none"> <li>7. How effectively has Bridges engaged its various target populations? Consider the number of students, parents, teachers and schools engaged.</li> <li>8. How are target groups best engaged to promote outcomes?</li> </ol>
<b>Benefits of participation</b>	<ol style="list-style-type: none"> <li>9. What outcomes did Bridges achieve for its participants?</li> <li>10. What is the economic benefit associated with Bridges?</li> </ol>
<b>Governance and collaboration</b>	<ol style="list-style-type: none"> <li>11. How has Bridges utilised a partnership-based approach (between university partners and other key stakeholders) to promote the success of the initiative?</li> </ol>

Source: KPMG

## 2.2 Conceptual approach

A mixed methods design has been applied for the collection of data and information in order to maximise the understanding and learnings from the evaluation process.

These methods comprise both qualitative and quantitative approaches in order to address the requirement for formative and summative evaluation, as well as the diversity of questions that the evaluation is required to answer.

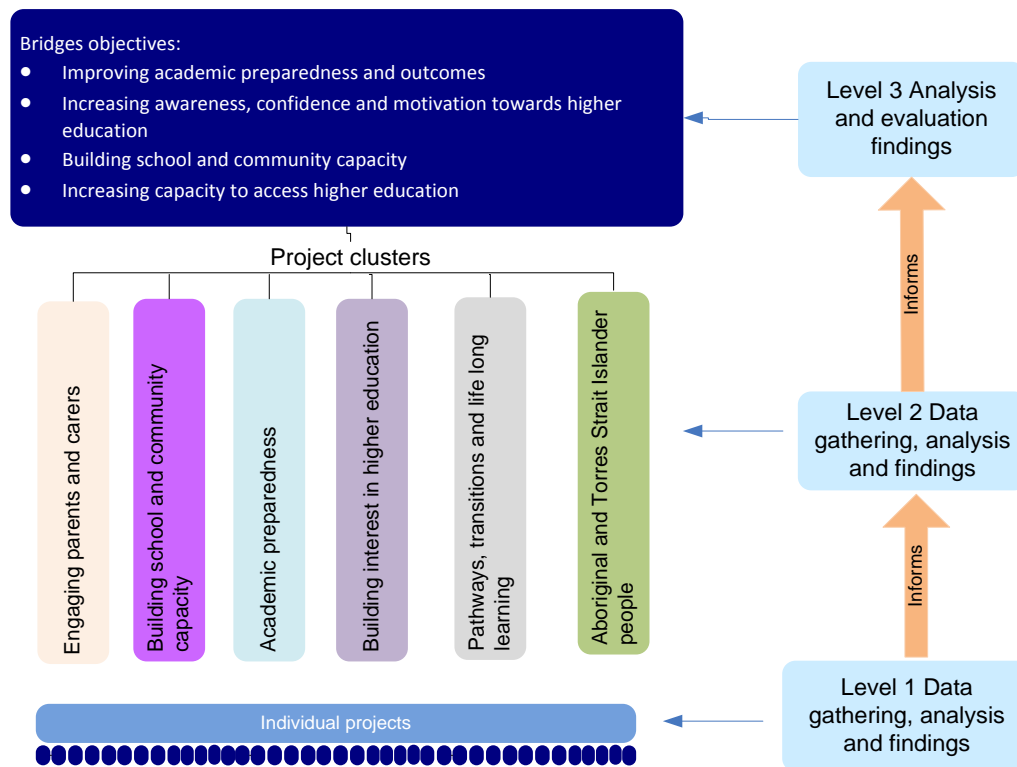
From an analytical perspective, the evaluation has applied a multi-level approach to the analysis of information to reflect the complexity of Bridges and its implementation. These levels include:

- **Level 1 - Individual project level** – in which the 'what works' evidence and outcomes for individual projects are considered.
- **Level 2 - Cluster and/or project objective level** – in which findings from projects with similar or like 'intervention approaches' or strategies are considered collectively to enable comparative analysis, identification of best practice characteristics, and assessment of the contributors to project success and outcomes. Data and information from the project level analyses have been aggregated, to enable an assessment to be made as to the individual contribution of each of them to the overall initiative objectives.
- **Level 3 - Whole of initiative level** – in which contribution to the overarching Bridges objectives is considered.

To enable this approach, a significant amount of information has been collected from a variety of stakeholders, including universities and key Bridges partners, project coordinators, teachers, students, and principals.

This is depicted in Figure 1 below.

Figure 1: Levels of analysis.



Source: KPMG

## **2.3 Methods and data sources – Final Report**

### **2.3.1 Method 1 – Evaluation reporting – qualitative and quantitative**

An Evaluation Reporting Template was developed to capture two types of information from Bridges projects:

- descriptive information about implementation and learnings<sup>10</sup>
- common quantitative measures and key data items. The evaluation has captured quantitative information at regular intervals to ensure that the impacts and outcomes of Bridges can be understood and demonstrated at the cluster, objective and whole of initiative levels. For the final report, projects were required to continue reporting against the indicators applied in 2012 and 2013.

Qualitative reporting templates and the common indicators are included in the appendices to this report.

In addition to the qualitative reporting provided by the universities, KPMG also analysed information from the concurrent evaluation of the Compass programs conducted by Erebus International.<sup>11</sup>

### **2.3.2 Method 2 - School visits**

In October 2014, the evaluation team conducted visits to five schools across Western Sydney (four secondary schools and one primary school) engaged in Bridges projects. Each school visit comprised:

- 1 x focus group with principals and teachers
- 1 x focus groups with parents
- 1 x focus groups with students.

Through this process, the evaluation reached 52 parents, 29 teachers/principals and 53 students. School visits were designed to support understanding of the experience of Bridges participation and gain ground level insights into the impacts felt from schools, educators, parents and students. Engagement with principals and teachers also explored the value of the Bridges collaboration.

Following the school visits, the evaluation team identified a gap in information with respect to schools engaged with ACU projects. The team conducted two phone based interviews with schools engaged with ACU to ensure a breadth of information was collected and ensure that each partner university was represented.

### **2.3.3 Method 3 – Key informant interviews and focus groups**

The evaluation team conducted a series of key informant interviews and focus groups with stakeholders identified by the Bridges Management Committee. Key informant interviews

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<sup>10</sup> This was only applicable for the University projects selected for more intensive exploration and the Central and Collaborative projects.

<sup>11</sup> At report writing, KPMG had access to the 2013 Erebus report. As such, evidence reflects Erebus findings to 2013 only.

included one-on-one phone based and face-to-face interviews with six members of the Bridges Management Committee; a focus group with seven Bridges Project Leads; as well as interviews with five Project Advisory Group representatives including TAFE pathways staff and a representative from the NSW Department of Education and Communities. Interviews and focus groups discussed:

- the strategic objectives of Bridges and the progress made towards its objectives
- critical indicators of success and key challenges
- how Bridges fits within the broader policy context
- future directions in the higher education landscape that may inform considerations of the ongoing viability and sustainability of Bridges.

#### **2.3.4 Method 4 – Secondary analysis of UAC data**

NSW UAC data was analysed for changes in the rates of application to university per Year 12 enrolled student and changes in rates of offers made per university application, between the pre-Bridges and post-Bridges periods. The pre-Bridges period comprised the years 2008-2011 and the post-Bridges period comprised the years 2012 and 2013. For each of these measures, the pre and post Bridges rate was calculated and the difference between the two periods identified. This was done for each school included in the UAC data.

This produced the two change measures which were each analysed using student's t-test comparisons of Bridges and non-Bridges schools. Only those schools with at least one Year 12 student enrolled in the pre-Bridges period and at least one enrolled in the post-Bridges period were included for the change in rate of university applications' measure. Likewise, only those schools with at least one university applicant in the pre Bridges period and at least one applicant in the post Bridges period were included for the change in rate of university offers' measure. The t-test result was used as a guide to determine whether a Bridges effect – specifically acting to increase the rate indicator – was present or not. Confidence intervals were constructed for the size of any such effect and they were used to guide economic modelling, including sensitivity analysis of the results.

#### **2.3.5 Method 5 – Economic Analysis**

The economic analysis was designed to assist in determining whether the investment in Bridges is justified by the short, medium and long term outcomes derived from the program. Given that the substantive monetary economic benefits would be realised over the longer-term, the economic analysis was required to construct an evidence base to demonstrate (or otherwise) the link between the achievement of short-term Bridges objectives and long term outcomes attributed to the program. The evaluation used supplementary data (i.e. UAC data) and a review of relevant literature to build the evidence base from which to undertake the economic analysis. The economic analysis preceded over the following stages:

- Establish baseline: Define the baseline scenario against which the costs and benefits were to be quantified. Bridges partners were required to agree baseline assumptions to ensure consistency.
- Cost analysis: Collection of all relevant cost information (including direct and indirect costs) over agreed timeframe. Bridges partners were required to provide cost information.



- Benefits analysis: Construct evidence base to evaluate short, medium, and long term outcomes and attribute a monetary value where possible. This included an analysis of UAC data and a review of relevant literature.
- Value for money assessment: Calculate net present value of monetised costs and benefits; and evaluate net qualitative impact.
- Sensitivity analysis: Assess level of confidence in value for money outcomes and the key sources of uncertainty.

A standard cost-benefit analysis framework was adopted to compare the present value of the investment over an agreed timeframe. In February 2015, the evaluation team ran a workshop with selected Bridges representatives to present the cost-benefit analysis framework and test key assumptions underpinning the analysis. Feedback from Bridges representatives informed development of the final cost-benefit analysis framework presented in Chapter 12 of this report.

### **2.3.6 Quantitative analysis of Bridges data**

The data and statistical analyses of Bridges projects were conducted using the information provided by each university as part of the Reporting Template developed specifically for this evaluation. The returned templates contain both participation and performance data for the full evaluation period (1 January 2012 to 31 December 2014). Information from all templates was extracted into one master document for analysis in Excel following rigorous data cleaning. All incomplete or unclear information was verified with each respective university. The analyses were both descriptive and statistical in nature, which enabled the estimation of overall effectiveness of Bridges projects across the whole stakeholder population.

A key feature of the analyses was the use of statistical estimates. Statistical estimates were produced by grouping projects that reported against a particular indicator. The collective results for that group of projects were treated as being from a stratified random sample, with stratification by project. The information on total numbers of participants for projects was used to carry out the statistical weighting of indicators before combining them and calculating confidence intervals.

Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question/indicator provides a range within which the true number or percentage is likely to fall. Wider confidence intervals suggest a greater degree of uncertainty in the relevant estimate, usually attributable to small sample sizes surveyed.

In addition, some limited exploratory analysis was undertaken. This involved exploring the potential for relationships between projects' characteristics and their reported outcomes. These analyses used the outcomes reported for selected cluster questions and explored the variability of reported positive response rates relative to certain contextual variables.

### **2.3.7 Qualitative analysis**

Thematic analysis was undertaken, with the evaluators reviewing all qualitative data to identify the common issues that recur, and establishing the main themes that summarised all the perspectives collected through focus groups and interviews. This involved reading and annotating notes, identification of themes, developing a coding schemata and systematically coding the data.

In this process, consideration was given to the 'relative weight' that each theme should be allocated, drawing on the number of focus groups/interviews in which a particular subject was raised, how many participants made mention of the subject and length of the conversation associated with the subject.

### 2.3.8 Synthesis

Synthesis of all quantitative and qualitative data was used to increase the validity of findings, with the evaluators effectively seeking substantiating evidence for emergent themes in one data source (e.g. focus groups), through comparing findings from alternate data sources (e.g. the qualitative templates or the quantitative data).

### 2.3.9 Method 6: VicHealth Partnership Tool Analysis

The Bridges Evaluation Project Group undertook an assessment of the partnership between the five universities that comprise Bridges using the survey component of the VicHealth Partnerships analysis tool (VicHealth, 2011). This survey provides feedback on the current status of a partnership in areas such as: determining the need for a partnership, making sure partnerships work, planning and implementing collaborative action, and minimising the barriers to partnerships. The survey was transcribed into Qualtrics, along with background and instructions, for distribution to participants. Aggregate scores were calculated and categorised according to the summary of partnership status listed in the table below. Partnership survey data was analysed using SPSS and NVivo.

Table 4: Categorisation of partnership status according to survey score (Source: VicHealth, 2011)

Score range	Partnership status
35-84	The whole idea of a partnership should be rigorously questioned
85-126	The partnership is moving in the right direction but it will need more attention if it is going to be really successful.
127-175	A partnership based on genuine collaboration has been established. The challenge is to maintain its impetus and build on the current success.

Source: VicHealth Partnerships Analysis Tool, 2011

The response rate for the Bridges partnership survey was 52.2 per cent, with 29 completed surveys from individuals working within the various collaborative projects and groups that make up the Bridges consortium. The final sample, including 27 surveys following removal of one partially completed survey and one outlier, was representative of the survey distribution list for gender and university. The aggregate scores for the final survey sample (n=27) ranged from 105 to 172, and the mean aggregate score was 138.3±17.6 (95 per cent; confidence interval: 131.4, 145.3).

## 2.4 Report limitations

The strength of the quantitative and qualitative data provided by universities has improved over the evaluation timeframe. As such, there are significantly fewer limitations to the *Final Report* than there were for the *Preliminary Report*.

#### **2.4.1 Limitations of the data analysis**

There is strong potential for double counting with respect to the number of students, teachers, parents, community influencers, volunteers and paid employees engaged by Bridges. Individuals may have been counted more than once in cases where they participated across multiple projects.

It is possible that contacts (i.e. student contacts, parent contacts and teacher contacts) have been under-estimated. To partially address this issue, where data on contacts was unavailable, the number of participants was used as a proxy.

### 3. Bridges to Higher Education in its context

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Despite an overall expansion of the Australian higher education sector during the last decade, and greater access to further education among some traditionally under-represented groups, students from low socio-economic backgrounds continue to be under-represented in Australian tertiary institutions.<sup>12</sup>

This is important given that participation in education and attaining qualifications is associated with higher income, shorter periods of unemployment and overall decreased likelihood of long term-disadvantage in terms of health and wellbeing over a person's life trajectory.<sup>13</sup> Education also acts as a mechanism for addressing risk-factors for marginalisation providing the basis for young people to develop skills and knowledge, improve their personal living standards<sup>14</sup> and a way to break cycles of entrenched disadvantage.<sup>15</sup>

The Organisation for Economic Cooperation and Development (OECD) has suggested that increasing participation in education amongst those who are traditionally under-represented will boost economic productivity<sup>16</sup>, with the Australian Government indicating that an additional year of education may raise productivity by between three and six per cent.<sup>17</sup>

#### 3.1 Equity issues in Australia's higher education system

Aboriginal and Torres Strait Islander students and students from low socio-economic areas continue to be substantially under-represented in terms of commencements and completions. A 2008 study found that people from low socio-economic backgrounds were about one-third as likely to participate in higher education as people from high socio-economic backgrounds.<sup>18</sup> People from low socio-economic backgrounds make up 25 per cent of the broader population, but their representation in higher education prior to HEPPP funding remained at around 15 per cent for more than 15 years.<sup>19</sup> Aboriginal and Torres Strait Islander students comprised 1 per cent of all student enrolments and 1.1 per cent of all commencements in higher education, compared to 2.5 per cent of the broader Australian population identifying as Indigenous.

A 2014 study also found that socio-economic background remains a major influence on school performance, and in terms of relative outcomes, there is little evidence of an increase in

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<sup>12</sup> Foundation for Young Australians 2012, *How Young People are Faring*, Melbourne.

<sup>13</sup> Rumberger, R. & Lamb, S. 2004, 'The early employment and further education experiences of high school dropouts: A comparative study of the United States and Australia', *Economics of Education Review*, vol. 22, no. 4, pp. 553-566.

<sup>14</sup> *ibid.*

<sup>15</sup> *ibid.*

<sup>16</sup> Organisation for Economic Cooperation and Development (OECD) 2006, *Economic Survey of Australia 2006: Improving incentives to work*, Paris; Organisation for Economic Cooperation and Development (OECD) 2007, 'Sickness, Disability and Work: Breaking the Barriers (Vol. 2): Australia, Luxembourg, Spain and the United Kingdom' *OECD Social Issues/Migration/Health*, vol. 2007, no. 25. Paris.

<sup>17</sup> Department of Finance 2009, Budget 2009-10. Ministerial Statement on Education, Employment and Workplace Relations. Jobs, Productivity and Fairness – A Foundation for Recovery. Statement by The Hon. Julia Gillard MP, Canberra. Viewed on 14 October 2013 < [http://www.budget.gov.au/2009-10/content/ministerial\\_statements/deewr/download/ms\\_deewr.pdf](http://www.budget.gov.au/2009-10/content/ministerial_statements/deewr/download/ms_deewr.pdf)>.

<sup>18</sup> Centre for the Study of Higher Education, *op.cit.*

<sup>19</sup> *ibid.*

intergenerational mobility since the 1970s.<sup>20</sup> Further, there is research to suggest that socio-economic background and educational disadvantage impact on access to higher education well before the point that university application decisions are being made.<sup>21</sup> In recognition of this, initiatives at a state and federal level to address inequitable access to higher education and poor educational outcomes have covered both the school and university sectors.

### 3.1.1 Federal initiatives

In 2008, the former Australian Government commissioned a review into higher education in Australia, the Bradley Review, chaired by Professor Denise Bradley.<sup>22</sup> Widening participation, or increasing the participation of students from low socio-economic backgrounds and rural and regional areas in higher education was a key recommendation of the review.

In response to the Bradley Review, the former Australian Government released the report *Transforming Australia's Higher Education System* in 2009. Funding of \$5.4 billion (over four years) was committed to support the expansion of the higher education sector and address structural deficiencies in the Australian system.

The *Transforming Australia's Higher Education System* report set targets of 40 per cent of 25-34 year olds to have attained a bachelor degree or above by 2025; and 20 per cent of undergraduate enrolments will be from low socio-economic backgrounds by 2020.<sup>23</sup>

The *Higher Education Support Act (2003)* establishes the expectations of a quality higher education system that allows for diversity and equity of access. There are three initiatives under this to encourage greater participation of equity groups in higher education:

- Higher Education Disability Support Program
- National Equity in Higher Education Forum 2013
- Higher Education Participation and Partnerships Program (HEPPP). The Partnerships component (funded until 30 June 2015) includes funding to universities to develop activities in partnership with primary and secondary schools, VET providers, other universities, State and Territory governments, community groups and other stakeholders.

The target cohort is prospective students from low socio-economic backgrounds, rural and regional areas, and Aboriginal and Torres Strait Islander origin, with the aims of improving both access to undergraduate courses and the retention and completion rates of students from low socio-economic backgrounds. Bridges is funded under this banner.

### 3.1.2 NSW initiatives

The NSW 10 year state plan *NSW 2021: A Plan to Make NSW Number One*, was released in September 2011, including a commitment to seeing 40 per cent of 25-34 year olds holding a

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<sup>20</sup> Redmond, G, Wong, M, Bradbury, B & Katz, I 2014, Intergenerational mobility: new evidence from the Longitudinal Surveys of Australian Youth, NCVER, Adelaide.

<sup>21</sup> Department of Education, Employment and Workplace Relations 2008, *Review of Australian Higher Education. Discussion Paper*, Canberra. See also Berger J & Motte A 2007, *Mind the Access Gap: Breaking Down Barriers to Post-Secondary Education*, Policy Options, Canada Millennium Scholarship Foundation, Canada.

<sup>22</sup> Department of Education, Employment and Workplace Relations, 2008b, *op.cit.*

<sup>23</sup> Australian Government 2009, *Transforming Australia's Higher Education System*, Canberra.

Bachelor level qualification or above by 2025 and that 20 per cent of undergraduate enrolments are students from low socio-economic backgrounds by 2020.

To support the implementation of *NSW 2021*, the NSW Government undertook a review of tertiary pathways (The Review) in 2012.<sup>24</sup> The Review considered the key pathways to vocational educational training and higher education by all students, particularly those from low socio-economic backgrounds, rural and regional areas and Aboriginal and Torres Strait Islander origin.

Other initiatives, such as *So who goes to university? A Package for Schools* are supporting NSW progress towards the national targets.<sup>25</sup> These initiatives provide information and resources for educators about effective strategies and approaches to improve students' opportunities to access higher education.

The NSW Department of Education and Communities has also been implementing *Local Schools, Local Decisions* which paves the way for public schools to have a greater say in the day to day management of their schools to better reflect the needs of their school community. Under this reform, principals and teachers have greater autonomy to manage their internal budget, which means that they now have flexibility to allocate resources to the points of need within their school environment. Previously, schools had responsibility for 10 per cent of their budget; they will now have control of 70 per cent.

*Local Schools, Local Decisions* also involves a new funding model, which will see a redistribution of education funds based on student needs.

Most recently, the NSW Government has begun to implement reforms to the Vocational Education and Training System, known as *Smart and Skilled*. Introduced on 1 January 2015, these reforms will support eligible students with entitlements to government subsidised training.

## 3.2 Broader higher education policy debates

Over the past few years, a number of policy debates have emerged that are directly relevant to pathways into higher education. The debates are primarily focused on the review of the demand driven funding system and the reliance on Australian Tertiary Admission Rank (ATAR) scores as an entry mechanism into further study; in particular setting minimum ATAR scores for entry and the role of VET in delivering higher education courses. Each of these issues are explored in further detail below

### 3.2.1 Review of the demand driven funding system

In November 2013, the Federal Minister for Education announced a review of the demand driven funding system for higher education. Under the demand driven system introduced in 2012, the Government funds Commonwealth Supported Places (CSP) for all domestic undergraduate students accepted into a bachelor degree (except medicine) at a public university. As a result, the number of CSPs increased from 469,000 in 2009 to an estimated 577,000 in 2013.<sup>26</sup> This means that, for the evaluation, any increase in the number of students attending university may be a result of both the uncapping of student places and the Bridges projects.

<sup>24</sup> Department of Education and Training 2012, *NSW Government Review of Tertiary Pathways*. Sydney, NSW.

<sup>25</sup> Department of Education and Training 2010, *So who goes to University? A Package for Schools*, Sydney.

<sup>26</sup> Australian Government, *Review of the Demand Driven Funding System*, viewed on 11 April 2014 at <<http://education.gov.au/review-demand-driven-funding-system#background1>>.



The Review (released on 13 April 2014) considered the impacts of the demand driven system on increasing participation in higher education, improving access to higher education for low socio-economic students, and meeting the skills needs of the economy. Overall, the Review found that the demand driven system has allowed universities to be more responsive to student needs, has driven innovation and has supported quality.

One of its key findings is that there has been an increase in enrolments in higher education by students from low socio-economic backgrounds<sup>27</sup>. Another key finding of the Review is that sub-bachelor programs would benefit from moving to a demand driven system. This would particularly assist low socio-economic background and low ATAR school leavers, due to their over-representation in sub-bachelor qualification programs.

The Review also found that the demand driven system and associated reforms have increased higher education opportunities for people from regional and remote areas and Indigenous Australians.

One of the recommendations stemming from the findings is that the government should not set enrolment share targets for students from low socio-economic backgrounds. It cited concerns that universities may recruit students to meet targets rather than because the admission served the long-term interests of the applicant.

In late 2014, the *Higher Education and Research Reform Amendment Bill 2014* was introduced to Parliament. Key reforms in the bill included:

- Expanding the scope of the demand driven funding system to higher education qualifications below the level of bachelor degree, and also to private universities and non-university higher education providers
- Deregulating fees to facilitate the development of price competition
- Restructuring Commonwealth subsidies for CSPs with the aim of improving the sustainability of the Higher Education Loan Programme (HELP) scheme.<sup>28</sup>

A range of stakeholders cited concerns with the provisions included in the Bill, including the National Union of Students, who claimed that the Bill would increase fees and the interest charged on student debt therefore deterring students from low socio-economic, mature age and rural backgrounds from participating in higher education and missing out on opportunities for higher life-time earnings.<sup>29</sup>

The Senate did not pass the Bill, and debate over the reforms identified above has continued through early 2015.

### 3.2.2 Reliance on ATAR as an entrance mechanism

Currently, there is debate around whether ATAR is an appropriate indicator of success at university and contention as to the extent that the ATAR should be relied upon as an entry mechanism to higher education for students who have completed high school. In particular, The University of New South Wales (UNSW) has introduced a new entry standard for undergraduate degrees (other than those requiring entry through a portfolio) in 2014, becoming the first

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<sup>27</sup> Ibid.

<sup>28</sup> Explanatory Memorandum, Higher Education and Research Reform Amendment Bill 2014.

<sup>29</sup> Senate Community Affairs References Committee, *Bridging our growing divide: inequality in Australia*, 2014, p. 171.

Australian University to apply a minimum ATAR rank of 80.<sup>30</sup> UNSW has also made arrangements to account for underrepresentation through the allocation of bonus points (which will be capped at 10). More broadly, the NSW Government will become the first state in Australia to introduce a benchmark ATAR for initial teacher's education courses in 2015.<sup>31</sup>

If a minimum ATAR score is introduced more broadly for Commonwealth supported places, it is likely that students from low socio-economic backgrounds will be greatly affected. Selection mechanisms based predominantly on ATAR will not promote diversity of participation in higher education and additional measures, or interventions will be required. This provides greater support for the value of Bridges projects, such as E12 and Australian Catholic University's (ACU's) *Principal Recommendations Program*, which use other criteria in determining likely success at university to accept students into their degree programs.

Additionally, studies have shown that students from both low and high socio-economic backgrounds who achieve ATAR scores in the same band are equally likely to attend university and in broad terms are equally as likely to perform well.<sup>32</sup>

### 3.3 Role of VET in delivering higher education courses

The Vocational Education and Training (VET) sector has begun to play a larger role in the provision of higher education qualifications that have traditionally been delivered by universities. While the number of course offerings and student numbers in higher education are smaller in TAFEs than other higher education providers, it is regarded that dual sector TAFE institutes can assist students to negotiate transitions through VET and higher education which will enable them to adapt to learning in university, including through the provision of learning support.<sup>33</sup>

Although ATAR scores have been a focus for determining student selection for university, prior academic achievement can also be demonstrated through commencing and/or completing VET qualifications. While the proportion of students nationally using alternative pathways is now around 10 per cent, there is significant variation in terms of the rates of admissions between institutions.<sup>34</sup> A study by Watson et al (2013) found that variations in admission rates reflect the different policies and practices of universities, rather than any specific characteristics specific to the field of education. Early research suggests that TAFE is an effective pathway into higher education, with those admitted through this pathway performing academically on par with their peers, particularly where support is provided to assist with the transition to university study in the first year.<sup>35</sup>

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<sup>30</sup> UNSW, *UNSW applies minimum cut-off*, viewed on 11 April at <<https://newsroom.unsw.edu.au/news/general/unsw-applies-minimum-cut>>.

<sup>31</sup> The Australian, *ATAR move a 'cheap shot'*, 23 January 2014.

<sup>32</sup> *ibid*, p. 14.

<sup>33</sup> Wheelan, L, Moodie, G, Billett, S and Kelly, A 2010, *Higher education in TAFE*, NCVER, Adelaide, 36.

<sup>34</sup> Watson, L, Hagel, P and Chesters, J 2013 A half-open door: pathways for VET award holders into Australian universities, NCVER, Adelaide.

<sup>35</sup> *ibid*.

### 3.3.1 Barriers to higher education participation for students from low socio-economic backgrounds

Critical barriers to higher education participation among low socio-economic background communities include: lower year 12 completion rates; lower academic achievement; lower awareness of the long term benefits of higher education; and alternative aspirations.<sup>36</sup>

Available evidence suggests individuals from low socio-economic backgrounds are less likely to complete school and, thus also less likely to progress to higher education.<sup>37</sup> A key contributing factor is the quality of schools. Those schools considered to be of lower quality identify as more likely to experience resourcing problems, and may have fewer teachers and less access to high quality teaching resources.<sup>38</sup> Students from low socio-economic backgrounds that attend schools of this nature have less than a 40 per cent likelihood of completing year 12; if these students attended a high quality school their chance of completing Year 12 would be in excess of 80 per cent. Accordingly, increasing the quality of schools is expected to have a substantial impact on school completion rates for students from low socio-economic backgrounds.<sup>39</sup>

More broadly, in families and communities where higher education is not valued or well understood, the chance of participating in higher education is lessened.<sup>40</sup> Unless students are informed of the positive difference that higher education can make to their lives – even where all other barriers to further study have been addressed – they will continue to choose alternative paths.<sup>41</sup>

Students are also influenced in their job aspirations by their parents, siblings and peers, and tend to choose similar pathways. For students from generally low socio-economic areas, this may involve VET or direct employment rather than university.

Many students from low socio-economic backgrounds cite perceived financial hardship as a barrier to accessing higher education. If the potential benefits are not well understood and if the potential sources of financial assistance are not well known, then students may not be making fully informed decisions. Evidence suggests that the perceived financial constraints to higher education access are more pronounced for students from rural and regional areas or students of Aboriginal and Torres Strait Islander origin, who are often required to move away from home to attend university.<sup>42</sup>

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<sup>36</sup> Department of Education and Training, 2012, *NSW Government Review of Tertiary Pathways*, NSW Government, Sydney.

<sup>37</sup> Gale T, Tranter D, Bills D, Hattam R & Comber B, 2008, *Interventions early in school as a means to improve higher education outcomes for disadvantaged (particularly low socio-economic status) students*. Component A: A review of the Australian and international literature. Published by the Department of Education, Employment and Workplace Relations, Canberra.

<sup>38</sup> DEEWR 2010, Welch *et al* 2007, Creswell and Underwood 2004, Lamb *et al* 2004, cited in Naylor R, Baik C & James R 2013, *Developing a Critical Interventions Framework for advancing equity in Australian higher education*, Discussion paper prepared for the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education, Canberra.

<sup>39</sup> Lim, P, Gemici, S & Karmel, T 2013, The impact of school academic quality on low socioeconomic status students, NCVER, Adelaide, p16.

<sup>40</sup> Centre for the Study of Higher Education, *op. cit.*

<sup>41</sup> *Ibid.*

<sup>42</sup> Australian Council for Educational Research 2002, *Rural and urban dimensions in Australian education*. LSAY Briefing, 5. Viewed 14 October 2013 <[http://research.acer.edu.au/lsay\\_briefs/4](http://research.acer.edu.au/lsay_briefs/4)>

## 3.4 Characteristics of successful programs to widen participation

### 3.4.1 Early and sustained interventions

Research by Deakin University suggests that there is a need to consider greater targeting of students in the early childhood and primary years in widening participation strategies.<sup>43</sup> These findings are supported by research demonstrating that the impact of socio-economic background on university attendance and attainment occurs well before university entry, and therefore greater impact can be achieved with interventions directed at students in earlier years of schooling.<sup>44</sup> Effective approaches work with students in earlier phases of schooling, ideally the primary years, and continue as they make the transition through the middle years into senior secondary schooling.

Students from low socio-economic and rural backgrounds who do make it to university report feeling less prepared for tertiary-level studies by their schooling.<sup>45</sup> Access to an enhanced academic curriculum, through enrolment in advanced classes or student tutoring, can have a significant impact on student educational outcomes at school, and can also raise educational aspiration and increase university readiness.<sup>46</sup> An enhanced curriculum can also have a flow-on impact to school culture through student sharing of academic skills and strategies with peers.<sup>47</sup>

### 3.4.2 Cohort-based programs

Research suggests interventions that engage with whole classes or cohorts of young people in a school or region to change school and peer culture are more effective (as well as more equitable) than interventions that simply target high-performing students from low socio-economic backgrounds.<sup>48</sup> Further, peer groups have been found to have a significant influence over educational aspiration and decisions relating to education. Best practice strategies used a whole of class or whole of school approach to challenge cultural barriers to educational aspiration and engagement. Evidence suggests that whole of school strategies are effective in improving learning outcomes for Aboriginal and Torres Strait Islander students.<sup>49</sup>

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<sup>43</sup> Phillips, S 2012, *Widening Participation in Higher Education for People from Low SES Backgrounds: A Case Study of Deakin University's Existing Community Partnerships and Collaborations*. Working Papers Series Two. Alfred Deakin Research Institute, Deakin University.

<sup>44</sup> Sutton Trust 2008b, *Productive Partnerships? An Examination of Schools' Links with Higher Education*: Institute of Education, University of London. See also Department of Education, Employment and Workplace Relations 2008a, *op cit*.

<sup>45</sup> Naylor *et al*, *op cit*.

<sup>46</sup> See e.g., Advancement Via Individual Determination (AVID) and Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP).

<sup>47</sup> See, e.g., Watt K 2003, 'Avid: A Comprehensive School Reform Model for Texas', *National Forum of Educational Administration and Supervision Journal 2002-2003*, vol. 19 no. p.43.

<sup>48</sup> National Centre for Student Equity in Higher Education 2010, *Interventions Early in School for Disadvantaged Students – Synopsis*, University of South Australia, Adelaide.

<sup>49</sup> Helme S & Lamb S 2011, *Closing the school completion gap for Aboriginal and Torres Strait Islander students*. Resource sheet no. 6 for the Closing the Gap Clearinghouse, Australian Institute of Health and Welfare, Canberra.

### 3.4.3 Raising aspiration

Educational aspirations have been found to have a substantial influence on educational outcomes.<sup>50</sup> A recent study has found that individuals (in grades eight through twelve)<sup>51</sup> who aspire to attend university are 15-20 per cent more likely to do so compared with those who do not.<sup>52</sup> Cultural and community factors have historically meant that students from under-represented backgrounds tended to aspire to low skilled occupations and set their educational aspirations accordingly.<sup>53</sup> A strong contributor to these alternative aspirations relates to the perceived financial cost of higher education, including fees and the costs associated with relocation and travel<sup>54</sup>.

Other recent research suggests that educational aspirations have a similar impact on educational outcomes regardless of student background characteristics, and that academic self-concept and performance has significant interactions with aspirations.<sup>55</sup> School students who consider their academic performance to be average or below average, relative to their peers, were less likely to achieve their aspirations compared with those who consider their performance to be above average.<sup>56</sup> This suggests that interventions to raise the aspirations of young people, and particularly those related to academic preparedness and performance, should have a similar impact for all young people, including those from under-represented backgrounds.

Educational outcomes may be influenced by improving aspirations to higher education, as well as by removing the barriers that prevent aspirations being realised.<sup>57</sup> Key barriers in this regard include: retention and completion of secondary education; awareness and exposure to role models; information and experience; personal characteristics and motivations; and a lack of transition support and access.<sup>58</sup> As such, initiatives that improve students' engagement in school, broaden their understanding of potential career options open to them and increase their expectations of the goals they can achieve for themselves will encourage students to stay in school – not as an end in itself, but rather as a pathway to achieve their ongoing educational goals.

### 3.4.4 Familiarisation experiences

Activities such as residential schools, campus visits and open days, and subject-related taster events were viewed as highly effective, as they allow young people to experience the university environment and provide an opportunity to address student misconceptions about higher education. Research in the United Kingdom concluded that 17-18 year olds who spoke to university staff were three times more likely to aspire to university and 16-17 year olds who went

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<sup>50</sup> Homel, J & Ryan, C 2014, Educational outcomes: the impact of aspirations and the role of student background characteristics, NCVER, Adelaide.

<sup>51</sup> The study notes that the bulk of students were in grade 10 (70 per cent) at the point plans were assessed.

<sup>52</sup> *ibid.*

<sup>53</sup> Purdie *et al*, *op.cit.*

<sup>54</sup> James, R. 2002. Socioeconomic background and higher education participation: An analysis of school students' aspirations and expectations: Department of Education, Science and Training Canberra.

<sup>55</sup> Homel, J & Ryan, C 2014, Educational outcomes: the impact of aspirations and the role of student background characteristics, NCVER, Adelaide.

<sup>56</sup> *Ibid.*

<sup>57</sup> Homel, J & Ryan, C 2014, *Educational outcomes: the impact of aspirations and the role of student background characteristics*, NCVER, Adelaide, 27.

<sup>58</sup> Education and Training Committee, Parliament of Victoria, *Inquiry into Geographical Differences in the Rate in which Victorian Students Participate in Higher Education*.

on residential visits were twice as likely to have such aspirations.<sup>59</sup> Further, a recent survey study that looked at the effectiveness of the *UC 4 Yourself experience day* (an outreach program run by the University of Canberra that targets schools with substantial proportion of students from financially disadvantaged backgrounds and provides a full day of campus based information sessions and activities) found that students who participated in the program were more likely to plan to attend university and were better able to imagine themselves as university students after the campus visit. Researchers suggest that the campus visit provides students with both the knowledge and experience to imagine a new future for themselves.<sup>60</sup>

### 3.4.5 Relationship-based approaches (including mentoring)

Interventions that allow for the development of on-going relationships between young people and those offering guidance regarding higher education have been shown to be more effective in encouraging higher education participation than one-off events (such as road shows). These activities were perceived as helpful because they offered on-going support and advice (including financial advice) and subject guidance to young people, including an opportunity for personal contact with staff and students at universities. Students' access to role models, from backgrounds similar to their own, can start students thinking of university as something to which they can aspire. Analysis of the impact of mentoring on educational aspirations of participants in the *Longitudinal Study of Australian Youth* found that on-going peer mentoring significantly impacted upon student intentions to enrol in a university course.<sup>61</sup> Students of low socio-economic backgrounds themselves identify the approachability of teaching staff as the most influential factor in successful completion of the first year of study.<sup>62</sup>

### 3.4.6 The parental influence

The role of parents in influencing the educational aspirations of their children is highly significant. A 2014 Australian study has found that students whose parents expected them to attend university are four times more likely to complete year 12 and are eleven times more likely to plan to attend university, compared with those whose parents anticipating them to choose a non-university pathway.<sup>63</sup>

Parental engagement also has a positive impact on student achievement, including their grades, enrolment in advanced classes, school completion and the likelihood of progressing to higher education. Strong and consistent parental support can contribute towards a student's motivation for academic achievement and learning.<sup>64</sup>

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<sup>59</sup> The Sutton Trust 2008a, *op cit*.

<sup>60</sup> Fleming, M., & Grace, DM., 2015, Eyes on the future: the impact of a university campus experience day on students from financially disadvantaged background, *Australian Journal of Education*.

<sup>61</sup> Curtis D, Drummond A, Halsey J & Lawson M 2012, Peer-mentoring of students in rural and low socio-economic status schools: increasing aspirations for higher education, National Centre for Vocational Education Research, Adelaide.

<sup>62</sup> Devlin M & O'Shea H, 2011, 'Directions for Australian higher education institutional policy and practice in supporting students from low socio-economic backgrounds', *Journal of Higher Education Policy and Management* no. 33.

<sup>63</sup> Gemici, S, Bednarz, A, Karmel, T & Lim, P 2014, *The factors affecting the educational and occupational aspirations of young Australians*, NCVER, Adelaide, 13, 17.

<sup>64</sup> Mansour M & Martin A.J. 2006, 'Home, Parents, and Achievement Motivation: A Study of Home and Parental Factors that Predict Student Motivation and Engagement.' *The Australian Educational and Developmental Psychologist*, Vol, 26, no. 2, pp.111-126.



A number of strategies that focus on changing culture and improving parental capacity have been found to enhance parental engagement. These strategies include:

- developing a school culture that welcomes parents and values parental engagement
- sharing high expectations about learning outcomes for all students
- building the capacity of parents to support their children's learning
- offering opportunities for parents to further their own learning and development, and general reinforcement of parents' sense of self-efficacy
- connecting with parents in the early years
- providing personalised information on key steps in the pathway to university
- networking and building familiarity with educators, alumni and other families who have the capacity to relate to parent's circumstances/background; and enlisting the support of community leaders and members and community.<sup>65</sup>

### 3.5 Building school and community capacity

Direct work to strengthen teacher capacity and the tailoring of interventions to school and community needs, are also important.

#### 3.5.1 Engaging teachers in professional learning and development activities

Universities can play an important role in assisting teachers to address some of the challenges to educational achievement for students from low socio-economic backgrounds.<sup>66</sup> Recent research outlines a number of important considerations for teachers of low socio-economic students. These include: offering students flexibility, variety and choice in teaching and learning strategies; being clear about expectations and using accessible language; and 'scaffolding' the learning of students by using a step-by-step approach to teaching.<sup>67</sup> Teachers also have a critical role in building student educational aspirations by providing information and guidance about universities and by challenging misconceptions that students may hold about university life. Targeting teachers so to enhance their capacity to provide students with information and advice on university courses and career pathways, is a significant opportunity for widening participation initiatives.<sup>68</sup>

#### 3.5.2 Tailored to local communities and their needs

Interventions that were developed and delivered locally, taking into account local issues and specific community needs, and in partnership with universities, schools and parents, were more

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<sup>65</sup> Kiyama, Judy M, Family Lessons and Funds of Knowledge: College-Going Paths in Mexican American Families. *Journal of Latinos and Education* 10(1): 23-42, 2010, 24. and Department of Education, Employment and Workplace Relations (DEEWR), 'Telling their stories': School Case Studies in Parental Engagement, 2011, 4.

<sup>66</sup> Stewart A 2010, Widening Participation? Yes we can! Insights from policy and leading practice in three countries; England Ireland and USA, The University of Queensland, Brisbane.

<sup>67</sup> Devlin M, Kift S, Nelson K, Smith L, McKay J, 2012, Effective teaching and support of students from low socio-economic status backgrounds: Resources for Australian higher education. Final Report. Australian Government Office for Learning and Teaching Canberra.

<sup>68</sup> The Sutton Trust 2008a, *op cit*.

successful in engaging students as they are key sources of advice and information about higher education for young people from low socio-economic areas. Avoiding a 'one size fits all' approach is particularly important for supporting Aboriginal and Torres Strait Islander students and communities.<sup>69</sup>

### 3.5.3 Targeting

The effective targeting and engagement of students most in need of support is critical to the success of widening participation initiatives. Historically, widening participation programs both within Australia and internationally have targeted students based on geography (i.e. focusing on low socio-economic status communities). This assumes that location is the best predictor of disadvantage. However, recent evidence suggests that widening participation interventions should be considered more holistically and should aim to engage students through multiple touch points (including parents, peers and teachers).

A 2008 study from the University of Melbourne analysed the effectiveness of targeting programs based on the Socio-Economic Indexes for Areas (SEIFA), which is linked to the student postcodes.<sup>70</sup> The study found that this approach was limited given the social heterogeneity of areas. The use of the SEIFA as the sole measure of underrepresentation was shown to have missed students of low socio-economic status who resided in areas of wider affluence, or conversely provided resources to students who do not need them.<sup>71</sup> A separate study by Lim and Gemici found that nearly 40 per cent of individuals were wrongly classified using the SEIFA tool. The study concluded that given the critical importance of targeting the 'right' students to enhance equity, the lack of accuracy in these common measures of socio-economic status mean that they are not appropriate tools for programs focused on improving participation in higher education.<sup>72</sup>

Recent evidence suggests that engaging student's key influencers - their parents, teachers and peers - can play a strong role in supporting students' aspirations towards higher education. Therefore, it is important to target programs and initiatives beyond the student; and ensure that parents and teachers are engaged as to the benefits of, and pathways into, higher education.

A study by Gale et al found that students are up to four times more likely to complete secondary school if their parents wanted them to attend university, and up to eleven times more likely to aspire to university if they had supportive parents.<sup>73</sup> The study also concluded that students' relationships with their teachers, as well as relationships with their peers, played a significant role on their aspiration and planning to complete Year 12. Interestingly, the study also found, through a path analysis, that parental and peer influences "*almost entirely mediate the effects of gender, Indigenous status, socioeconomic status, location, family structure and immigration status.*"<sup>74</sup> These

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<sup>69</sup> Helme & Lamb, *op cit*.

<sup>70</sup> The University of Melbourne, 2008, Participation and Equity: A review of the participation in higher education of people from low socioeconomic backgrounds and Indigenous people, Centre for the Study of Higher Education.

<sup>71</sup> Harrison, N., & Hatt, S., 2009, 'Disadvantaged learners: Who are we targeting? Understanding the targeting of widening participation Activity in the United Kingdom using Geo-Demographic Data from Southwest England, Higher Education Quarterly, Vol. 64, No.1, pp 65-88.

<sup>72</sup> Lim, P & Gemici, S 2011, *Measuring the socioeconomic status of Australian youth*, The National Centre for Vocational Education Research (NCVER).

<sup>73</sup> Gale et. al., Interventions early in school as a means to improve higher education outcomes for disadvantaged (particularly low SES) students – Component A: A review of the Australian and international literature (Australian Government, 2010).

<sup>74</sup> Ibid., p.10.



findings highlight the need for a review of the targeting mechanisms of widening participation programs to ensure that initiatives are not only reaching students most in need, but also reaching the key influencers in their lives, to foster conversations around, and motivations towards, higher education.

#### **3.5.4 Creating positive school cultures**

School attributes are responsible for almost 20 per cent of variations in students' ATAR.<sup>75</sup> Of this 20 per cent variation, 13 per cent of the difference reflects features that are particular to certain schools, with such idiosyncratic (or school 'ethos') factors producing significant differences between schools that can be measured statistically.

University outreach interventions that build capacity in schools, communities and universities can contribute to improved outcomes for underrepresented students.<sup>76</sup> These types of capacity building programs aim to familiarise students, schools and parents with university, and seek to foster cultures of possibility. Research indicates that these programs should begin early in a students' schooling, particularly for primary schools in areas of high underrepresentation, in order to generate cultural and dispositional shifts in students, families and teachers in relation to achievement and aspiration.<sup>77</sup> Approaches that take a whole of school approach to engagement are considered to be more effective and inclusive than individual classroom projects, and serve to change peer cultures as well as supporting individuals within a school. This approach may be further strengthened by universities working with the school leadership to develop school-community partnerships and enhance the professional development of university staff and teachers.

### **3.6 Importance of transition support**

The transition from school to further education can be difficult, regardless of a students' geographic location, socio-economic background or other factors. However, in the case of students from low socio-economic backgrounds, this transition period can be particularly challenging.<sup>78</sup>

While other interventions discussed above focus on increasing students' access to higher education opportunities, the provision of transition support seeks to retain students in the higher education environment. A lack of support during this transition process can create significant difficulties for students who have managed to overcome personal and practical barriers to access post-school education, but then face further difficulties which may inhibit academic success and the development of new social networks.

Gale et al. (2010) propose that effective transition support requires collaboration across schools, tertiary institutions, non-government organisations, families and communities. The involvement of all stakeholder groups in designing and delivering interventions ensures that programs are built

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<sup>75</sup> Gemici, S, Lim, P & Karmel, T 2013, The impact of schools on young people's transition to university, NCVER, Adelaide.

<sup>76</sup> Gale et. al., Interventions early in school as a means to improve higher education outcomes for disadvantaged (particularly low SES) students – A design and evaluation matrix for university outreach in schools (Australian Government, 2010).

<sup>77</sup> Ibid.

<sup>78</sup> Gale et. al., Interventions early in school as a means to improve higher education outcomes for disadvantaged (particularly low SES) students – Component A: A review of the Australian and international literature (Australian Government, 2010).

on a tailored and detailed understanding about what assists students to aspire to higher education and how they can be supported to make successful transitions and achieve a sustained level of high performance. Processes that incorporate reciprocal feedback through all stages of program development and implementation are more likely to improve the quality of the intervention and its outcomes.<sup>79</sup>

### 3.7 Bridges to Higher Education

Bridges was designed to respond to the emerging policy context and knowledge about what works in improving participation in higher education among people currently under-represented in higher education. The program is funded under the terms of the *Higher Education Support Act (2003)* through a Grants Agreement with the (then) Australian Government Department of Education, Employment and Workplace Relations. The program objective is to improve the higher education participation rates of students from low socio-economic backgrounds.

In 2011, the program was awarded HEPPP funding of \$21.2 million, specifically to support the achievement of the Australian Government target to increase the proportion of students from low socio-economic backgrounds participating in higher education from 15 per cent to 20 per cent by 2020. The funding awarded to Bridges is the highest amount allocated under HEPPP, and reflects the growing population and areas of significant underrepresentation within the Sydney Basin (in particular Greater Western Sydney).

The overarching objectives for Bridges are as follows:

- Improving students' academic preparedness and outcomes
- Increasing students' awareness, confidence and motivation toward higher education
- Building school and community capacity
- Increasing capacity to access higher education.

The current funding for Bridges projects ceases on 30 June 2015.

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<sup>79</sup> Ibid.

## PART II: FINDINGS

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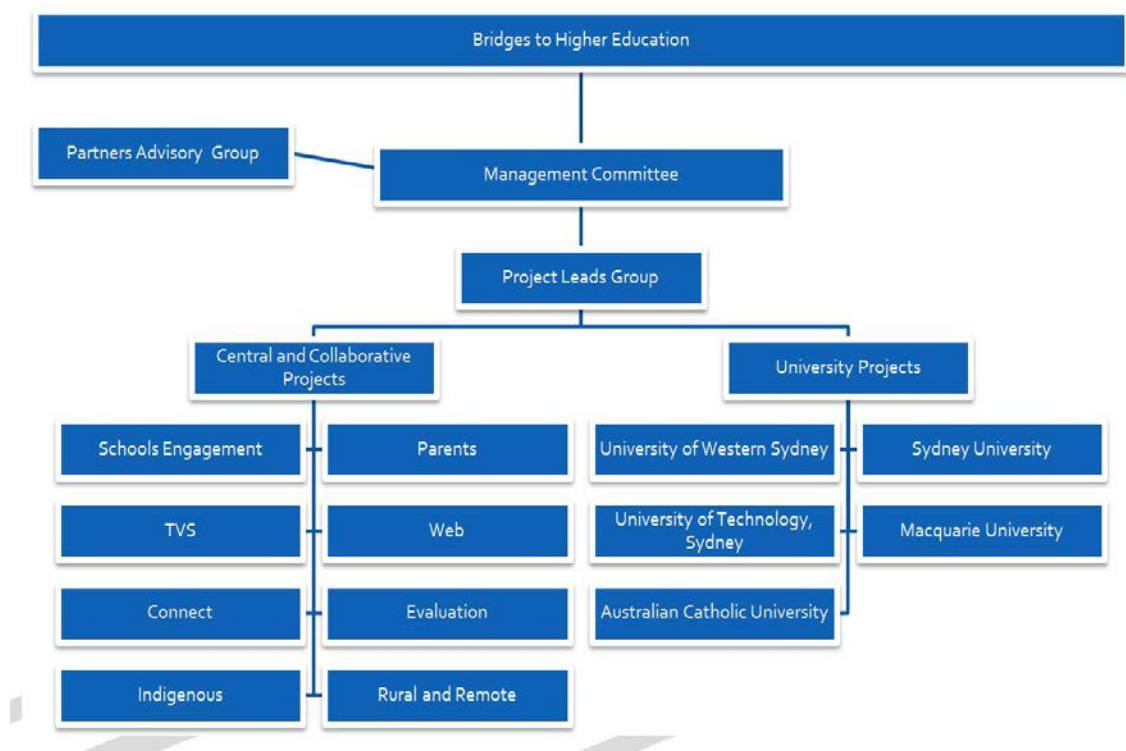
## 4. Governance and collaboration

A critical feature of Bridges is the use of partnerships at multiple levels to deliver the objectives of the HEPPP Program. It brings together the resources and significant experience of the five partner universities, with TAFE institutes, local government organisations, education associations and regional offices, Aboriginal and Torres Strait Islander organisations, other community, philanthropic and social enterprise organisations, as well as primary and secondary schools.<sup>80</sup> The use of a partnership-based approach in the design and delivery of Bridges recognises the value of collaboration in improving outcomes for schools, students and communities alike.<sup>81 82</sup>

### 4.1.1 Collaboration and governance structures

As outlined in the *Interim Report*, representatives from the five participating universities form the Bridges Management Committee, which has oversight and responsibility for Bridges implementation, and manages the overall program including the strategic plan, budget, project groups and evaluation and reporting.

Figure 2: Bridges Governance Structure, 2013



Source: KPMG

<sup>80</sup> Sourced from various governance documents provided by Bridges.

<sup>81</sup> McQuaid, R 2010, 'Theory of organizational partnerships: partnership advantages, disadvantages and success factors' in S. Osborne, *The new public governance? Emerging perspectives on the theory and practice of public governance*, p. 127-148. London: Routledge

<sup>82</sup> Department of Education and Early Childhood Development, *Evidence of the need for education partnerships*, Melbourne. Viewed 15 August 2013 <<http://www.education.vic.gov.au/Documents/school/principals/community/evidenceandbenefits.pdf>>

The Partners Advisory Group (PAG) is a wider group that provides strategic advice to the Bridges Management Committee, and comprises members from a wider group including the five participating universities, NSW DEC, TAFE, local government organisations and Indigenous organisations.

The Project Leads Group, consists of the chairs of the central and collaborative projects who report directly to the Management Committee, with meetings held monthly. The Project Leads Group collaborates to share good practice and identify potential synergies between projects and activities.

Underpinning these arrangements are a number of subsidiary structures:

- Central and collaborative projects work as cross-cutting projects or themes and are driven forward by the central Bridges staff to ensure that synergies and opportunities for further collaboration are maximised. These are: School Engagement, Schools Engagement: Theatre in Schools, Parents, TVS, Web, Bridges Connect, Rural and Remote, and Indigenous. Each central and collaborative project has established a project group that undertakes much of the identification of opportunities for greater coordination and collaboration, and the development and implementation of these opportunities. Project groups are viewed as critical to Bridges achieving its objectives.
- Communities of Practice involve staff engaged in common projects across universities; regular meetings increase communication across similar projects, sharing and disseminating the 'what works' evidence base.
- Collaborative workshops provide an opportunity for Bridges project staff to meet for a full day. Collaborative workshops often have a focus or theme that guides the discussion, for example, looking over the previous year and plotting activities and gaps that need to be filled. Depending on the agenda, a variety of different guests and project officers / coordinators are invited.

## 4.2 Status of the partnership

Overall, the core partnership between the five Bridges universities has evolved over time. An initial investment of time and effort was required to build trusted relationships, reflecting that universities are in many ways competitors and the Bridges requirements reflected a new way of working. By July 2013, a tangible shift in the relationship was noted. All partners had signed up to a **shared vision** of widening participation, effectively aligning their strategic interests to achieve this intent. As one key informant noted:

*"You simply can't under-estimate how ground-breaking it is for universities to collaborate. They (universities) are clearly competitors in every other way – in terms of students, research and funding....I have seen that shift over time" (Key informant).*

There were **clear and established governance structures**, through the Management Committee, PAG and Project Groups. These are creating the basis for shared leadership for Bridges and shared decision-making.

The **PAG is effective drawing upon the knowledge, skills and influence of a wide range of stakeholders**. Engagement of organisations such as the Foundation for Young Australians, offers a broader youth focus and social change perspective; while inclusion of school principals and DEC provides an important feasibility check, as to the appropriate fit of projects for a school context.

There is appropriate **seniority of representation** and a capacity to use this seniority to support engagement. Reference was made to:

- The value of having a pro-Vice Chancellor as the initial Chair of the Management Committee. This was noted as a critical enabler of the Partnership, with the capacity draw on the power of this position to raise the credibility, profile and commitment to Bridges.
- The importance of having an appropriately senior Management Committee. In most cases members were empowered to make decisions on forward priorities and funding, and had appropriate levels of seniority within their organisations to ensure continued support for Bridges.

**Project management support** is evident in the creation of a dedicated project position to oversee Bridges. This individual has a core role in coordinating the governance and evaluation activities on behalf of the five universities. In many ways, this enables each university to focus on the core Bridges implementation role, i.e. delivering on its funded projects.

#### 4.2.1 VicHealth Partnership tool assessment

**The strength of the current arrangements is reflected in responses to the VicHealth Partnership Analysis<sup>83</sup> tool.**

The VicHealth Partnerships Analysis Tool is designed to assess, monitor and maximise the ongoing effectiveness of partnerships established by organisations. Partnership is assessed against seven domains considered key to success: determining the need for the partnership; choosing partners; making sure partnerships work; planning collaborative action; implementing collaborative action; minimising the barriers to partnerships; and reflecting on and continuing the partnership.

In this case, Bridges<sup>84</sup> distributed the survey to 46 members of Bridges Projects or Groups. A response rate of 52 per cent was achieved<sup>85</sup>.

The Partnership Analysis Tool enables an aggregate score to be created, to assess the overall strength of the arrangements. The tool sets out three categories, i.e.:

- Category 1: a score between 35 and 84 denotes that the whole idea of a partnership should be rigorously questioned.
- Category 2: a score of 85 between 126 denotes that the partnership is moving in the right direction but it will need more attention if it is going to be really successful.
- Category 3: a score between 127 and 175 denotes that a partnership is based on genuine collaboration has been established. The challenge is to maintain its impetus and build on the current success.

Drawing on the average across all surveys, Bridges achieved an aggregate score of **138** suggesting that the partnership is **based on genuine collaboration**. Sample scores ranged from **105 to 172**, with no significant differences in aggregate survey scores by gender, university, role or group.

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<sup>83</sup> VicHealth 2011, *The partnerships analysis tool*, Victorian Health Promotion Foundation, Melbourne

<sup>84</sup> The Bridges to Higher Education Evaluation Project Group administered the survey and analysed the responses.

<sup>85</sup> Twenty-four individuals completing 29 surveys. One partially completed survey and one outlier, were excluded from the analysis leaving a sample of 27 surveys. The final sample was representative in terms of university and gender of respondents.

## 4.3 Benefits of collaboration

A wide range of benefits are emerging through the partnership, for universities and schools alike – including increasing the profile of the universities and their credibility, stronger capacity to engage partner organisations, better coordination of work with schools and better school-university relationships, and greater choice of university led programs.

### 4.3.1 Value for universities

**Bridges lends the universities a strong credibility.** This reflects that the partnership is operating in the interests of under-represented students and communities; rather than marketing entry into a particular university, the partnership is promoting a shared message about the value of higher education overall. As one key informant noted:

*"Schools and school executives can see the real benefit of what we were doing; that it was for participants rather than for a self-motivated marketing exercise."* (Key informant)

As a result Bridges **had stronger capacity to engage other partners in the widening participation effort.** A significant example is the collaboration with UAC (through the *Web Project*), which enabled the development of the 'Make Your Mark' website, providing:

- clear, accessible and comprehensive information and knowledge
- information tailored for communities under-represented in higher education
- information for the key influencers of prospective students (e.g. parents, school staff, employers).

In so doing, the website also aims to build the aspirations of low socio-economic status communities.

**Bridges has also created a strong brand profile,** with which university partners, community agencies and schools are proud to be associated. This brand – which reflects a commitment by the five universities to working together so to improve outcomes for under-represented communities – creates the capacity to engage widely, and achieve buy-in from schools. It also adds value to each of the participating universities' reputations as advocates for social justice and equity of opportunity.

**Bridges has clearly broken down barriers between institutions and enhanced the capacity for shared effort.** This is most apparent in terms of the impact of the central and collaborative projects (See Section 14 for case studies). For example:

- The *Parents* and *Rural and Remote Projects*, both act in an influencer or advisory capacity, adding value to university projects and other central and collaborative projects alike.
  - The *Parents Project* has supported the development of appropriate parent and carer information sheets for children involved in the Bridges Connect Lego Robotics program; collaborated with the Rural and Remote Project with respect to a rural and remote community forum for parents and professionals; and engaged with the SEPG about the content for the Theatre in Schools Parent Pack.
  - The *Rural and Remote Project* has encouraged representatives from across the five participating universities to ensure students and communities in rural and remote areas were considered in planning their respective activities. The project group supported *Bridges Connect* to coordinate the delivery of Robotics in Schools to rural and remote



areas, with the *SEPG* to deliver Theatre in Schools in rural and remote communities, and with the *Parents Project* to provide information for parents in rural and remote areas.

- **Bridges Connect has enhanced the efforts of all universities to widen participation through its teacher training initiatives, video conferencing series and through offering Connect Robotics in Schools.** The project utilised various classroom technologies to build capacity, broaden aspiration and provide academic enrichment to target schools in communities under-represented in higher education. Of note, the collaboration between the five universities also promoted access to wide-ranging academic speakers who presented using the Connected Classroom technology.
- **The *SEPG* enabled delivery of widening participation messages in a dynamic, engaging and interactive format that would not have been possible of one university working alone.** Designed to dispel myths about higher education, and to encourage and motivate early high school students to think about their future choices, the *Onwards and Upwards* production (as part of the *Theatre in Schools Project*) was rolled out. It was only through the efforts of the *SEPG* that the production reached a wide range of schools in metropolitan and regional areas, and that actors were representative of a diverse community cohort, in particular reflecting the communities with whom schools we were engaged.
- **The *Indigenous Project* has fostered trust and collaboration between each university's Indigenous Support Centre and associated Indigenous Learning Centres.** Such collaboration provides for greater outreach and impact in the community, as the IPG members share networks, resources, ideas and best practices.

**Communities of practice have enhanced the capacity to share lessons and experiences between universities and problem solve collectively.** Universities described the benefit of being able to translate another university's program with confidence that it works, effectively shortcutting an extended process of trial and redevelopment. Further, there was an acknowledgement that the communities of practice, project leads group and PAG each enhanced Bridges' capacity to draw on wide-ranging expert practitioner advice, supporting continuous quality improvement to each university's offerings and consistent use of evidence informed practice

Sharing and understanding of good practice and what really makes a difference are seen as critical benefit. One key informant noted that:

*"for those of us working in community engagement and growing participation it gives us peers who we can discuss issues with, nobody else gets it. This isn't core business for universities and there aren't other organisations out there doing this kind of work."* (Key informant)

Finally, **partnership adds weight to the widening participation agenda;** in an environment of fiscal constraint and competing priorities, the importance of reaching under-represented communities can be lost. Bridges offers strength in numbers; effectively a coalition of senior cross-university widening participation practitioners to champion the cause.

#### 4.3.2 Value for schools

The **extent of resourcing for the collaboration has allowed for scale, depth and reach,** far greater than universities would have been able to achieve individually. The 96 Bridges projects covered a wide geographic area, range of year levels and target groups (from Aboriginal and Torres Strait Islander communities, to students from refugee backgrounds) and activities. **Reach**

**has also been enhanced through the development of shared resources.** For example, the SEPG matrix was a key contributor. This tool captures the location and intensity of projects being delivered by the five universities across DEC regions and indicates where collaborative projects are operating. The Matrix also supports understanding of which school communities are over or under-served with Bridges projects, enabling better use of Bridges resources. This has allowed universities to expand into new or relatively less serviced schools or look at engaging primary schools.

The five Bridges universities have also been able to **better coordinate their engagement with schools** and students. Rather than several universities offering to hold the same type of event, schools observed a more coordinated approach; this was thought to have allowed for greater choice, diversity and a stronger ownership of the projects operating within their school. Schools also cited better access to complementary activities, for example projects that would meet the needs of year levels not already engaged in Bridges, or to embed the learnings from a one-off activity (such as university campus visit).

Other benefits include the use of more **consistent messaging**: all universities are talking the same language in terms of 'why higher education should be valued', 'encouraging students to think about their futures' and 'where to start'.

This new capacity has seen the **evolution of the university-school relationship** from what a number of informants perceived as one-way communication to that of collaboration in the interests of meeting school needs and requirements. Schools have also benefited from a greater willingness from the partner universities to engage them in program development, as one key informant noted:

*"It is important to share power with schools, mutuality of power is important. Schools like input into program development and flexibility in program delivery. Teachers are engaged in design and reflection. We ask the schools what they need." (Key informant)*

**Schools are also drawing upon their relationships with universities to support professional development.** One High School held a staff conference at the university of Sydney; several others noted the manner in which Bridges had better tailored professional development to their school needs; a few referred to gaining access to support from academics to enhance skills in disciplines beyond the Bridges projects. This appears to be mutually beneficial with one principal noting that *"teachers are now more supportive of students' aspirations because of their own professional learning and the students' ongoing engagement with universities."*

#### 4.4 Challenges

Overall, feedback on the new governance structures and the central and collaborative projects was overwhelmingly positive, with stakeholders valuing the benefits these bring to the partnership. However, a number of key challenges were noted. Drawing upon the Characteristics of Effective Partnerships framework used in the Preliminary Report (Appendix I), feedback from stakeholders suggests that **dedicated resourcing and / or support for Bridges, and funding mechanisms that enable partnership and appropriate senior representation** remain areas for continued improvement.

Partnerships are more likely to achieve set objectives if supported by **dedicated resourcing**. However, as one university coordinator commented, *"There are significant challenges required to negotiate across five universities and resource the delivery of multiple projects."* This example was reiterated by other university coordinators, who noted that key staff were often required to work

across multiple projects and had to take on additional duties far beyond their position descriptions.

All partners were noted to have signed up to a **shared vision** of widening participation, effectively aligning their strategic interests to achieve this intent. However, at the same time each university was noted to necessarily have its own broader range of strategic priorities and directions; this inevitably influenced the extent to which particular streams of work were funded or prioritised. A further complicating factor is the degree of senior executive support for Bridges, which is seen to vary between universities.

**Funding mechanisms that enable partnership** are central to effective partnerships. This recognises the significant time investment required to make partnerships work, including participation in governance groups, communities of practice, reporting activities, information sharing and supporting the success of universities' work. All parties were clear that this time impost, while adding value to Bridges, often goes unrecognised. Further, those universities that receive proportionally less funding can be disproportionately impacted; the extent of funding provided to each university has a direct impact on capacity for participation and available time to focus on common priorities.

Effective governance also requires **sufficient seniority** to support decision-making and a strategic perspective. A common challenge was that individuals with different delegations or levels of authority were involved with Bridges core governance structures; at times this was noted to cause delays as individuals sought appropriate sign-off.

#### **4.4.1 Summary**

Strong governance mechanisms have been a critical enabler of success for Bridges to date. Cross-university support has increased the profile of the work on addressing under-representation, and has delivered the capacity, through shared efforts and resources, to support the widening participation agenda. Bridges is to be commended for its effort to sustain collaboration and place the best interests of under-represented students first in an inherently competitive environment.

## 5. Findings: Implementation of Bridges to Higher Education Projects

This section provides a descriptive overview of the nature of projects implemented under Bridges over the 1 January 2012 to 31 December 2014 period. Consideration is given to the:

- focus of Bridges projects, including alignment to the Bridges objectives
- reach of Bridges, with respect to its target groups
- types of projects that have been implemented.

### 5.1 The Bridges to Higher Education projects

Bridges encompasses approximately 96 projects designed to engage with schools, TAFEs, students, teachers, parents and communities. The majority of projects came into effect prior to 30 June 2013, with a small number implemented over the subsequent 18 months (1 July 2013 – December 2014).<sup>86</sup>

*Table 5: Number of projects by university, 1 January 2012 to 31 December 2014*

University name	Number of projects operating 1 January 2012 to 30 June 2013	New projects 1 July 2013 – 31 March 2014	New projects 1 April 2014- 31 December 2014	Total projects
Australian Catholic University	15	-	-	15
Macquarie University	6	-	-	6
The University of Sydney	31	2	1	34
University of Technology, Sydney	14	-	-	14
University of Western Sydney	12	-	7	19
Central and Collaborative projects	7	1	-	8
<b>Total</b>	<b>85<sup>87</sup></b>	<b>3</b>	<b>8</b>	<b>96</b>

*Source: KPMG analysis of data provided by Bridges*

<sup>86</sup> Over the period between 1 January 2012 and 30 June 2013, 88 projects were implemented and 96 projects were active as at 31 December 2014.

<sup>87</sup> Note some projects were counted in the previous reporting period (1 January 2012 to 30 June 2013) that had not begun. These have not been identified as new projects from 1 July 2013 – 31 March 2013.

## 5.2 Project alignment to the Bridges objectives

All projects align with one or more of the overarching objectives for Bridges. The most commonly reported project objectives were increasing students' awareness, confidence and motivation toward higher education and increasing students' academic preparedness and outcomes.

*Table 6: Number of projects by objectives, 1 January 2012 to 31 December 2014<sup>88</sup>*

Objective	Number of projects operating 1 January 2012 to 30 June 2013	New projects 1 July 2013 – 31 March 2013	New projects 1 April 2014– 31 December 2014	Total projects
Increasing students' awareness, confidence and motivation towards higher education	53	2	8	<b>63</b>
Improving academic preparedness and outcomes	44	2	3	<b>49</b>
Building school and community capacity	34	1	6	<b>41</b>
Capacity to access higher education	13	1	1	<b>15</b>

*Source: Data provided to KPMG by Bridges*

## 5.3 Project target populations

The predominant target group for Bridges projects is school students.

There were substantially more projects targeting secondary school students (between years 7 and 12) than projects targeting primary school students (between kindergarten and year 6). Projects were most likely to target students in years 9, 10 or 12. Where projects targeted primary school students, most focus was on years 4, 5 and 6.

In the nine month period to December 2014, the number of projects targeting mature aged students recorded the greatest increase in participation. This is a reflection of the growth in VET and TAFE Pathways projects.

<sup>88</sup> Note: Projects can align with multiple objectives.

*Table 7: Number of projects by year group targeted, 1 January 2012 to 31 December 2014*

Year group targeted	Number of projects operating 1 January 2012 to 30 June 2013	New projects 1 July 2013 – 31 March 2013	New projects 1 April 2014- 31 December 2014	Total projects per year group
Kindergarten	2	-	-	2
1	2	-	-	2
2	2	-	-	2
3	9	-	-	9
4	18	1	-	19
5	26	1	-	27
6	33	2	-	35
7	35	1	-	36
8	44	1	-	45
9	49	2	1	52
10	53	2	1	56
11	44	1	1	46
12	53	-	8	61
Mature age	5	-	7	12

*Source: Data provided to KPMG by Bridges*

While all Bridges projects focus on individuals from low socio-economic backgrounds, some projects have a particular focus on parents, teachers, Aboriginal and Torres Strait Islander communities, rural and remote communities, or individuals from refugee backgrounds. The degree of focus on each category of target group is set out in the table below.

*Table 8: Number of projects by target group, 1 January 2012 to 31 December 2014*

Target group	Number of projects 2012	New projects 1 July 2013 –	New projects 1 April 2014-	Total projects
Low socio-economic background groups	85	3	8	96
Parents	15	1	-	16
Teachers	34	1	2	37
Aboriginal and Torres Strait Islander students	12	1	1	14
Rural and regional students	9	1	-	10
Students from refugee backgrounds	3	1	-	4

*Source: Data provided to KPMG by Bridges*

## 5.4 Bridges participation

Over the three year period to December 2014, Bridges has substantially grown the number of students, teachers, and parents engaged. The number of Bridges participants and Bridges contacts by category is illustrated in the table below. This table does not include indirect participants or contacts.<sup>89</sup>

*Table 9: Number of participants and contacts by category, 1 January 2012 to 31 December 2014<sup>90</sup>*

Category	Number reached 2012	Number reached 2013	Number reached 2014
<b>Participation</b>			
Schools <sup>91</sup>	157	269	314
Teachers	1,268	2,719	3,186
Parents	1,409	6,337	9,185
Students	23,261	62,225	73,118
Paid helpers	-	550	810
Volunteer helpers	988	1,055	1,375
Community influencers	245	518	611
<b>Contacts</b>			
Teacher contacts	1,268	7,327	7,049
Parent contacts	1,409	10,846	15,917
Student contacts	30,807	112,760	155,413
<b>Other activities</b>			
Professional development activities	-	-	97

Source: Data provided to KPMG by Bridges

### 5.4.1 School engagement<sup>92</sup>

Bridges reach has increased substantially over the three year implementation period. Focusing on direct involvement alone, a total of 314 schools participated in Bridges projects in 2014, an

<sup>89</sup> The participation number for TVS are not included due to the indirect nature of its reach. For 2013, TVS reached 9,826 teachers, 9,956 students and 20 community influencers; in addition 10,926 teacher contacts, 60,948 student contacts were made. The 2014 TVS data was excluded from analysis due to inconsistencies in reporting.

<sup>90</sup> It was not possible to include totals (e.g. the number of students or teachers engaged over the 2012-2014 period) as some of the participants were involved often multiple years.

<sup>91</sup> 'Schools' refers to those 100 per cent funded by Bridges.

<sup>92</sup> Note the difference between 'contacts' and 'participants' is as follows: a contact is a single interaction with a single student, teacher or parent e.g., teacher participating in four teacher professional development sessions should be counted as four teacher contacts. Number of participants is the number of students, parents, teachers, volunteers or community influencers who directly engaged in a Bridges project.



increase from 147 schools in 2012. Direct school participation per project ranged from one school to 306 schools in the 2014 calendar year.<sup>93</sup>

Consistent with the previous reporting period, projects that engaged a higher number of schools tended to focus on improving students' *academic preparedness and outcomes* (refer to Appendix F for results by project).

When indirect engagement is considered, the highest school participation was recorded by *Television Sydney (TVS)* (n = 1,000, Central and Collaborative), noting this project has material accessible for all NSW-based schools, including those who are not direct participants in Bridges.

#### 5.4.2 Teacher engagement

##### Teacher participation

Teacher participation in Bridges has continued to increase. Bridges projects engaged a total of 3,186 teachers in 2014, an increase of 151 per cent over 2012 (n=1,268).<sup>94</sup> Bridges has now far surpassed its initial strategic goal of reaching 2,800 teachers over the funding period.<sup>95</sup> In 2014, direct teacher participation per university led project varied from two participants to 250 participants.

Those projects with a focus on students' academic preparedness or targeting secondary school students tended to have the highest rate of teacher participation in both years.

A total of 2,015 teachers had engagement with Bridges through participation in *TVS* in the 2014 calendar year; the significant majority of which were engaged indirectly.

##### Teacher contacts

There were 7,049 direct teacher contacts in 2014, similar to that experienced in 2013 (n=7,327). Thirty-six projects reported less teacher contacts in 2014 than in 2013 (including those projects which ceased or did not report on teacher contacts in 2014). The number of teacher contacts per project varied from six to 1392.

Consistent with trends observed across the evaluation period, teacher contacts tended to be higher where projects had a focus on students' *academic preparedness* or targeted high school students.

#### 5.4.3 Parent engagement

##### Parent participation

Parent participation has also continued to increase over the evaluation period. While Bridges projects directly engaged 1,409 parents in 2012, by 2014 this had grown to a total of 9,185 parents. While noting that the level of parental participation has improved over time, greater efforts may be warranted to ensure parents are aware of the higher education, its value and have the capacity

<sup>93</sup> It is possible for different projects to reach the same schools at the same time. As such, the sum of all schools reached (as reported independent by each project) may exceed the number of total unique schools reached by the Bridges to High Education program.

<sup>94</sup> Note that according to census data, there are 64,000 school teachers in Greater Sydney, and around 31,000 in inner West and Greater Western Sydney.

<sup>95</sup> Bridges to Higher Education 2012, *Bridges to Higher Education Strategic Plan*, Prepared by the Management Committee.

to support their child's higher education pursuit. This reflects that there were almost eight times as many students participating in Bridges projects in 2014 (n=73,118), compared to parents.

Direct parent participation in 2014 varied from nil to 2750 per project.

The highest rates of parent participation related to projects that had a focus on students' *academic preparedness and/or building awareness, confidence and motivation towards higher education*. Those projects targeting high school students also showed a higher rate of parent participation.

#### Parent contacts

A total of 15,917 indirect parent contacts were made in 2014 (an increase of 47 per cent over the 2013 calendar year). The number of direct parent contacts per project in 2014 ranged from nil to 2750.

#### 5.4.4 Student engagement

##### Student participation

More than three times as many students participated in Bridges projects in 2014, relative to 2012. Bridges directly engaged over 73,000 students in 2014; this compared to an initial 23,261 students in 2012. Over the three-year evaluation timeframe, 158,694 students participated in Bridges projects. The program has significantly exceeded their strategic target of 100,000 students within the funding period.

Student engagement per project in 2014 varied from six to 16,099.

Importantly, Bridges collaborative projects *Bridges Connect and Schools Engagement - Theatre in Schools* directly engaged a significant proportion of students, reaching 16,099 and 4,110 students respectively in 2014. In addition, TVS had indirect engagement of 2,015 students in 2014.

The highest rate of student participation related to projects that had a focus on students' *academic preparedness and/or building interest in higher education*, or those targeted at the Year 7 to 12 cohort.

### Student contacts<sup>96 97 98</sup>

Increasing levels of student engagement is also reflected in the number of additional contacts Bridges made with students in 2014, relative to previous years. There were 155,413 direct student contacts in 2014, an increase from 112,760 contacts reported in 2013 (this represents a 38 per cent growth from 2013).

The number of contacts per project in 2014 ranged from 24 to 31,075. The latter was achieved by *Bridges Connect*. A further 2,015 indirect student contacts can be attributed to TVS.

#### 5.4.5 Volunteer helpers<sup>99</sup>

Volunteer helpers were generally university students who acted in a mentoring, tutoring or ambassador role. Volunteer helpers may also be university staff and alumni.

There were 1,055 volunteer helpers directly participating in Bridges projects in 2013 and 1,375 volunteer participants in 2014 (a 30 per cent increase).

Projects focusing on students' *academic preparedness* and/or *building interest in higher education*, or targeting students in Years 9 to 12 tended to have the highest volunteer participation.

#### 5.4.6 Paid helpers

There were 550 paid employees who were involved in Bridges in 2013, increasing to 810 in 2014.

Paid helpers tended to be involved in projects which focused on building students' *academic preparedness* and/or *building interest in higher education* in 2014. Paid helpers were more likely to be involved in projects targeting older students (e.g. Years 9 and onwards).

Some programs provide payment to mentors to assist in the attraction and retention of mentors. These programs attract students with similar backgrounds, and in doing so provide income to students from low socio-economic backgrounds.

#### 5.4.7 Community influencers

Community influencers include Aboriginal and Torres Strait Islander Elders, Community Liaison Officers, members of the community, religious or sporting organisations, non-government organisation representatives, individuals considered experts in their fields, career advisers and other influential/credible community members. A total of 518 community influencers were engaged by Bridges in 2013, and 611 were engaged in 2014. The *Parents Project* (Central and Collaborative, n = 179) and Macquarie *LEAP- National Indigenous Science Education Program – NISEP* (n = 149) accounted for more than half of the total community influencers in Bridges during 2014.

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<sup>96</sup> This data is not consistent with the data provided for HEPPP reporting purposes in 2013, due to the evolving definitions of student contacts.

<sup>97</sup> UWS was unable to report on student contacts for a number of its Bridges projects. On this basis, number of students was taken as a proxy for reporting purposes.

<sup>98</sup> Some discrepancies in the reporting of student contacts were noted by Universities. For example, data from projects that used electronic systems, such as *PANGO YT*, can only provide information on the number of student interactions rather than the number of individual student contacts. Numbers reported on the website could reflect 'three separate students' or 'the same student contacting the *PANGO YT* portal several times'.

#### 5.4.8 In Professional development activities

In 2014, Bridges projects were required to report on the number of professional development activities that were held during the calendar year. A focus on professional development is in line with the evaluation findings, which have highlighted the key role that teachers play in supporting students' academic performance and aspirations. Activities that have built teachers capacity to engage with and support students also goes towards the sustainability of the Bridges initiative.

A total of 97 activities were reported by 22 programs. The majority of those programs undertook between two to eight professional development activities each. Those programs mainly focused on teachers and high school students, as well as *building school and community capacity*.

#### 5.4.9 Summary

Bridges reach grew substantially over the 2012-2014 period. Key to Bridges success is its holistic approach to engagement, with projects targeting not only students but schools and school communities, teachers, parents, volunteers (e.g. mentors or event organisers), and community influencers (e.g. Aboriginal and Torres Strait Islander Elders, experts in particular fields of interest).

Over the three-year funding period, Bridges has made strong progress against the participation targets outlined in the Bridges strategic plan, with consistent and significant growth in the numbers of students, parents and teachers participating in Bridges projects.

## 6. Improving students' academic preparedness and outcomes

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Involvement in Bridges is clearly enhancing students' academic preparedness and outcomes.

Participation in tutorial schemes, workshops, summer schools and mentoring programs is supporting academic skills. This includes both those of a technical nature, such as literacy and numeracy, and practical skills, related to time management, team work, and leadership. For many students, academic performance was also noted to be improving as a by-product.

Participation in Bridges is also promoting students' academic self-concept and a more positive attitude towards learning. These attributes will support students both in their later years of high school and contribute to their sustained engagement in higher education, which is critical given the rates of attrition amongst NSW students.<sup>100</sup>

In some instances, the presence of Bridges in schools has contributed to an achievement based culture, whereby teachers have begun to set higher expectations and standards for *all* students; in turn, students have recognised that they have a capacity to achieve, are striving to meet those expectations and are now considering higher education as a potential pathway. These benefits are accrued by students beyond those immediately involved in Bridges, with Bridges participants inspiring their peers, younger students and siblings.

Where Bridges has concurrently engaged parents, parental attitudes towards higher education are changing and their expectations of their children's achievement are being raised. This is important given the knowledge that parental attitudes affect student achievement and aspirations for higher education.

The following section sets out the strategies introduced by Bridges to improve academic preparedness and outcomes, and their impact.

### 6.1 Bridges strategies to improve academic preparedness and outcomes

Over the 2012-2014 period, forty-nine Bridges projects had an identified focus on improving students' academic preparedness and outcomes (see Appendix D for a listing). While the majority of projects (n= 36) target high school students, 13 projects have sought to engage the primary student cohort. The key strategies implemented by Bridges to improve students' academic preparedness and outcomes are summarised below.

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<sup>100</sup> The Australian Government cites the aggregate rate of attrition amongst NSW University students at 18 per cent. For information, see Department of Education and Training, Undergraduate Applications, Offers and Acceptances, 2013, at <http://www.education.gov.au/undergraduate-applications-offers-and-acceptances-publications>.

Table 10: Bridges strategies to support academic preparedness and outcomes

**Activities to build resilience, academic or study skills:** including summer schools and in-school workshops to support exam preparation, time management, independent learning, or academic skills development in areas such as English and Mathematics. These often act as an alternative to paid tutoring services that may be unaffordable to families participating in Bridges.

**Activities that draw upon technology:** Projects are maximising the potential of teleconference and collaborative presentation technologies to disseminate teaching and learning experiences over wide geographical areas. In other cases, technology and web based platforms have enhanced student engagement through hands on learning activities. Creative use of technology also supports ready access to tutoring, educational games, and tools and information.

**Tutoring and mentoring projects:** Activities vary from on-demand after-hours access to homework and assignment help from teachers, to face-to-face, individualised and intensive academic support and advice from university students of a similar background.

**Engaging parents:** Activities include formal training, information sessions and group forums. Projects provide useful resources and strategies to build parental capability to support their child's development, in terms of fine motor skills, literacy or numeracy.

Source: KPMG analysis, documents provided by Bridges

## 6.2 Outcomes achieved

Collectively, the results of the quantitative and qualitative analysis suggest that Bridges projects have impacted on academic preparedness and outcomes for the substantial majority of participating students.

Students have developed both content based and practical skills, contributing to greater engagement in learning and more positive attitudes towards study. Further, the majority of students, teachers and parents are feeling more positive about higher education options and students' capacity to pursue these options as a result of their involvement in Bridges. The evidence is further outlined below.

## 6.3 Improving academic skills and performance

**Bridges has contributed to improvements in students study skills and academic performance.**

As illustrated in Table 11 below, an estimated 9,457 students (91 per cent) self-reported better study skills and an estimated 6,154 students (92 per cent) felt better prepared for university as an outcome of their participation in Bridges. Resultant improvements in academic performance were supported by feedback from teachers: of all the students for whom teachers assessed learning progress, an estimated 37,270 students (94 per cent) showed improvement, while an

estimated 99 per cent of students (n = 3,530 students) were reported to have improved their academic performance relative to that prior to involvement in Bridges.<sup>101</sup>

*Table 11: Impact on students' academic skills and performance, 1 Jan 2012 to 31 Dec 2014<sup>102</sup>*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
<b>Preparation for university</b>						
Students self-reporting better study skills	9,457	9,256	9,657	91%	89%	92%
Students self-reporting that they are better prepared for university	6,154	6,080	6,228	92%	90%	93%
<b>Learning progress</b>						
Students for whom teachers report improved learning progress	37,270	36,879	37,660	94%	93%	95%
Students for whom teachers report improved academic performance	3,530	3,497	3,563	99%	98%	100%

Source: Bridges to Higher Education data

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

Qualitative evaluation templates and focus group findings further support these conclusions. Students, teachers and parents alike reported that participation in Bridges has better engaged students in their learning, enhanced their focus in school and strengthened their academic capacity. Teachers consistently reported that the academic skills gained through Bridges provided some of the long-term capabilities to enable independent learning in a higher education setting.<sup>103</sup> Outcomes related to supporting students' academic preparedness and performance are explored further in the University of Sydney's *Compass - Preparation for Senior Study Program* case study (see Chapter 15 for case study).

With respect to primary school students, teachers noted benefits in terms of language, literacy, interpersonal and physical skills development. Projects successfully assisted students to develop the foundational skills and capabilities that underpin sustained academic engagement and success. For example, University of Sydney's *Supporting basic skills development: (Occupational*

<sup>101</sup> The confidence intervals for these estimates were narrow, indicating high reliability for these estimates. Accordingly it can be concluded that the proportion of participating students for whom these outcomes were reported, is very high.

<sup>102</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

<sup>103</sup> Analysis of the transition to university structures to support students from low socio-economic status backgrounds is well beyond the scope of this evaluation. However, exploring the contribution of such structures to the sustainability of Bridges outcomes (or otherwise) may prove a useful exercise for the Management Committee.



Therapy)) has worked with teachers and students to identify, and support students' physical development needs (i.e. gross motor, fine motor, handwriting and visual perceptions skills.) A key success factor for this project lay in its inclusive approach, which sought to engage students, parents and teachers.

This type of earlier intervention is likely to offer longer term benefits. As highlighted by a 2013 report by the Australian Productivity Commission, return on investment in education is greatest when academic and aspirational support begins as early as possible. This is particularly evident for students from socio-economically disadvantaged backgrounds.<sup>104</sup>

The literature also notes the importance of continuing to engage students over time in order to optimise academic outcomes. Several Bridges projects have engaged with primary feeder schools to provide a continuum of consistent support to students, rather than episodic intervention. For example, The UWS *First Foot Forward* project targets feeder primary schools of current *Your Tutor (Fast Forward)* project schools.

With respect to secondary school students, programs such as *UWS Your Tutor* provide students with the skills to strengthen their academic pursuits, whilst projects that expose students to university life through hands on learning (e.g. *UTS U@Uni Summer School*) demonstrate that university is an attainable and desirable goal, thereby enhancing students' incentive to study. Bridges was also noted to have a strong practical element, contributing to year 10-12 students' content knowledge (e.g. in science or maths), problem solving abilities, presentation skills or report writing. Capacity for independent study and to set realistic study goals was also a notable benefit.

*"The maths lecturer taught us how to study and ways of working. Because maths is a weakness for me this really helped me in school" (Student: ACUgate: Year 12 English and Mathematics Workshops).*

*"Organisation and problem solving, analytical skills. They might not jump into a science degree, but its project based learning and team work. It's a good way to learn. It also gives them more life experience – makes them a bit more worldly and streetwise. They also develop time management and organisation skills" (Teacher: LEAP – Robotics).*

Teachers and students consistently noted that for many secondary students, both learning progress and marks had improved. They attributed such outcomes directly to Bridges projects:

*"A teacher stopped me in the hall to tell me how incredible the improvement in his business studies' students had been as a direct result of the UTS tutoring with [HSC Tutors]. He said that the kids have been teaching HIM things and he thinks it will improve their marks by 3 or 4 per cent across the whole subject" (Teacher: U@Uni UTS HSC Tutorial Scheme)*

*"My marks have improved dramatically. I think it's based on Your Tutor. I've always had motivation, but sometimes I don't understand. Your Tutor tutors help me by breaking things down" (Student, UWS Your Tutor (Fast Forward)).*

Importantly, Bridges was also noted to support students' understanding of 'what is required to support success in their high school classrooms and beyond'. A wide range of programs were noted to support students to embed good habits that will enable academic success both now and

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<sup>104</sup> McLachlan, R., Gilfillan, G., Gordon, J., 2013, Deep and persistent disadvantage in Australia. Canberra: Australian Government.

in a higher education setting. Ben's story (below) highlights how Bridges has improved students' academic preparedness and performance.

### **Ben's Story – How Bridges can support students' academic preparedness and performance**

Ben participated in the *University of Sydney's Compass: Preparation for Senior Study* project, where he gained useful study techniques and a fresh perspective on learning.

*"The study workshops helped us the most. We split into small groups and had one student from the university with each small group. They taught us heaps of different study techniques and ways to stay engaged in study (.e.g. techniques for exams).*

*Our mentor gave us a question and gave us three minutes to complete the question. None of us could finish it – and then she told us that is how much time we would have to complete each question in the HSC. She said, "You have to section your time, and identify the key points that you have to make". She also said other things to motivate us. She suggested putting everything that I need to study in a jar and pull a piece of paper one at a time to choose what to study. She taught us that there are different ways of studying not just reading a book."*

Source: KPMG

### **6.3.1 Participation in Bridges projects increases student academic self-concept**

Both students and teaching professionals reported that participation in Bridges has led to improvements in students' academic self-esteem and mastery.

As illustrated in Table 12 below, an estimated 87 per cent of students (n = 33,781) self-reported greater confidence in their academic abilities.<sup>105</sup> This finding is also supported by teacher feedback. Teachers self-reported improvement for an estimated 83 per cent of students (n = 8,951).<sup>106</sup>

*Table 12: Impact on students' self-esteem and self-confidence, 1 Jan 2012- 31 Dec 2014*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimate d %	Lower 95% (%)	Upper 95% (%)
<b>Self-esteem and sense of self-confidence in mastering academic tasks</b>						
Students self-reporting greater confidence in their academic abilities	33,781	33,277	34,285	87%	85%	88%
Students for whom teachers report greater confidence in academic abilities	8,951	8,069	9,834	83%	75%	91%

Source: Bridges to Higher Education data. Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.

<sup>105</sup> The confidence interval for these estimates was narrow indicating high reliability for these estimates.

<sup>106</sup> The confidence interval for this second indicator is moderate (75 per cent to 91 per cent). This suggests that the true positive rate is likely to be at least 75 per cent, supporting the conclusion of a high impact on confidence in academic abilities.

Focus groups with students supported these conclusions, with students noting that participation in Bridges had helped them build both emotional resilience and confidence in their own abilities. Students consistently gave examples of how Bridges had assisted them to overcome negative or self-defeating thoughts which may present a barrier to academic success. Bridges projects that focus on skill development have also changed students' perceptions of their abilities and raised their expectations for success. Bridges activities commonly encouraged students to step outside of their comfort zones and to direct their own learning. The following excerpt from a parents focus group highlights how Bridges has positively contributed to students' self-efficacy:

*"The (project) made him more confident about doing more things, because before (the project), he didn't think he could do well. It also changed him being awarded (for the project). He felt proud. At the beginning he was all over the place and didn't know what he wanted to do – but now he is thinking of going into construction and doing a traineeship"* (Parent – UWS Fast Forward).

Teachers noted that self-confidence was manifesting itself in Bridges participants being more willing to ask for help, answering questions with confidence in class, and believing more in their capacity to succeed.

*"It was social, we could all help each other out or we could ask the teacher. It helped me to ask for help- I used to think I should just be an individual but through this I have learnt that I don't have to do everything by myself – I can ask for help when I need."* (Student, focus groups)

### 6.3.2 Participation in Bridges improves attitudes and behaviours towards learning

Bridges projects have engendered a positive shift in students' attitudes and behaviours towards learning. Students were noted to be arriving at school on time, listening in class, completing their homework and generally taking school far more seriously. A number reported a new love of learning.

*"I've become more engaged in biology because of how the tutors approach tutoring and how they have connected with me. I've now been able to apply myself more to study. I never went through past papers in Year 11 and I didn't take Biology seriously. Now I take it more seriously; I do past papers and look over my notes more. I think my study habits and application of the subject has improved as a result of the tutoring program."* (Student, UTS U@Uni HSC Tutorial Scheme)

*"Students are responding very well to it and you're seeing such a good change in their attitude, a good change in their learning habits and their study habits as well, which in the HSC year is so crucial."* (Teacher, UTS U@Uni HSC Tutorial Scheme)

At the primary school level, UWS Books in Schools supported a culture of reading within some schools; older students were noted to be reading to those who were younger, and peers were talking about the books that they had read. As one teacher explained:

*"Many students now take reading more seriously and want to progress to the next reading level; they know how important it (reading) is."* (Teacher, focus groups)

At the secondary school level, university visits, access to tutoring schemes, mentors and homework support had a similar effect:

*"She gets up early to study before going to school since visiting the university. She and her friends heard inspirational stories that made them think they should study, so they can get in (to university)" (Parent, UTS U@Uni Summer School).*

*"I am definitely seeing changes in my students...one of my students was a problematic child, was reluctant to do work, it was like trying to drag him along everywhere. Now he is one of the first students to come to class...We had a discussion because we showed him his marks from his preliminary assignments and he was a bit upset. I asked him, "Why are you upset about it, it is a great mark?" and he said "Yeah, but if I had been working as hard in term one, it could have been an 80-something" (Teacher, University of Sydney Compass: Homework Club).*

Secondary students were also more inclined to engage in school activities, and more likely to volunteer to school leadership positions. Teachers reported that this has had a positive impact on the broader school community, as students are exposed to the experiences of their peers, and see first-hand the positive changes that have occurred as a result of their participation in Bridges.

*"There are kids that ask me if they can be School Captain in Year 9 – that would never have happened before. The child who asked me was reserved – he was asking me what he could do to get there. The reason why we had this conversation is because we were talking about the Year 11s and everything that they were doing through their projects, and how he could do things to get to that level too" (Teacher – School involved with a number of University of Sydney: Compass programs).*

Students participating in the Bridges projects were thought to be recognising the importance of high school as part of their broader education journey and to see the sense in doing well. For some this attitudinal shift was recognised as the first step: rather than leaving school in year 10, they came to realise the point of school and made a conscious decision to "stay on" and "do their best".

*"Every single moment of school, every single second of study brings me closer and closer to my dreams, I will work harder and make more sacrifices to achieve them."*  
(Student, UTS U@Uni Summer School)

### 6.3.3 Creating a culture of academic success

Bridges has contributed to whole of school cultural change. Teachers are establishing high expectations, as well as celebrating student achievement, to engender a culture of academic success.

Schools are also more commonly extending the curriculum to both engage and challenge students:

*"Through my involvement with Bridges, I found out that the top children in Year 8 at other schools were learning about homeostasis, and this made me realise the top children in our Year 8 should know about this. I was too focused on pitching the course to be appropriate to the whole grade. It helped us to insert some Stage 6 ideas into our teaching" (Teacher, the University of Sydney - Kickstart).*

To enable a school culture where it is the norm for students *to strive for success and do their best*, teachers highlighted the importance of entire year level groups accessing Bridges, rather than just the *"brightest, most dedicated students"*. Some schools targeted only those high achieving students, with access to Bridges treated as a reward for academic success. Others recognised that Bridges should target those students with the potential to achieve or just on the cusp, who will

benefit most from additional support. This inclusive approach contributed to a culture that recognised the capacity of all students to succeed.

#### 6.3.4 Contribution of parents<sup>107</sup> to academic preparedness

Bridges projects have enhanced the engagement of parents in their child's learning. Strong and sustained effort in this domain is critical given the strong evidence around parents influence on students' aspirations and outcomes.<sup>108</sup>

As illustrated in Table 13 below, an estimated 1,434 parents (94 per cent of participants in relevant projects) reported an increased capacity to support their child with their higher educational goals.<sup>109</sup> An estimated 97 per cent (196 parents) reported greater ambitions for their child.<sup>110</sup> Teachers also reported change in parental engagement, estimating that 88 per cent of parents became more involved in their child's education.<sup>111</sup>

*"Parents' engagement in Bridges programs such as Books in Schools and University visits is opening up conversations, it is changing perceptions of university and breaking down barriers." (Teacher)*

*Table 13: Impact on students' academic preparedness and outcomes. 1 Jan 2012 to 31 Dec 2014<sup>112</sup>*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
Parents and carers more involved in their child's education (as reported by teachers)	178	167	190	88%	82%	94%
Parents and carers more involved in the school (as reported by teachers)	178	167	190	88%	82%	94%
Parents and carers reporting increased capacity to support their child with higher education goals	1,434	1,397	1,470	94%	92%	96%
Parents and carers reporting an increase in ambitions for their child	196	195	198	97%	96%	98%

Source: Bridges to Higher Education data.

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and*

<sup>107</sup> The term parents refers to both parents and carers.

<sup>108</sup> Gemici S, Bednarz A, Karmel T & Lim P 2014, The factors affecting the educational and occupational aspirations of young Australians, NCVER, Adelaide.

<sup>109</sup> The narrow confidence interval for these estimates indicates that Bridges had a substantial impact in these areas.

<sup>110</sup> The narrow confidence interval for these estimates indicates that Bridges had a substantial impact in these areas.

<sup>111</sup> The confidence interval is moderate (82 per cent to 94 per cent). Nonetheless, the lower bound of 82 per cent means there was a material impact on parental involvement as measured by these two indicators.

<sup>112</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

lower bound) for each question provides a range within which the true number or percentage is likely to fall

Projects that engaged primary school students enhanced parental capacity to better support their child's literacy and numeracy skills, language development and fine motor skills; such projects are critical to ensure younger children do not fall behind their peers. For example the University of Sydney Compass: *Word Up* and *UWS Books in Schools*, were noted to offer significant value for parents from non-English speaking backgrounds. Parents themselves reported improved reading skills as a result of their involvement, and being more equipped to support their child's education.

University visits and experience days enabled parents to experience university for themselves and learn more about how they can support their children in their aspirations towards higher education. Parents engaged in focus groups, noted their impact: encouraging parents to support their children to complete high school and pursue university; providing practical advice about support requirements (e.g. creating the right atmosphere for study at home, establishing a revision timetable); and building parents' understanding of how to encourage positive study habits and an academic focus.

While Bridges projects have made significant gains in engaging parents, there remains an opportunity to better target parents that are traditionally more difficult to reach, including parents from non-English speaking backgrounds and parents with low literacy skills. It should be noted that this cannot be achieved by Bridges alone, but rather, requires a whole of school sustained commitment.

## 6.4 Summary

Bridges projects that focused on academic preparedness have contributed to students' improved learning progress, better study skills, better preparation for university and a greater sense of confidence in their academic abilities. Such outcomes are likely to contribute to and result in motivation to continue to year 12, and influence stronger ambitions towards attending university.

Key enablers of these outcomes reflect the substantial investment in tutoring and mentoring, summer schools, projects that build capacity for independent study and with respect to younger students, those that support the development of foundational skills and capacities, e.g. language, fine motor skills or visual perception.



## 7. Increasing students' awareness, confidence and motivation toward higher education

Overall, Bridges projects have increased awareness, confidence and motivation towards higher education. After participating in Bridges, students are more aware of available courses and fields of study, subject and ATAR requirements, the various pathways to university, and the benefits of obtaining higher education qualifications. Parents have a better understanding of financial support options and practical aspects such as travel; concerns regarding safety also tend to be allayed.

Confidence is also improving. Post Bridges participation, many students perceive higher education as a more attainable goal. This has positive implications for students beyond the Bridges cohort: participants often encourage and inspire their peers and students in younger year levels to consider higher education.

Greater motivation to complete year 12 and a university pathway was also noted as a positive change for students involved with Bridges. Students are more willing to study and work harder to achieve their academic potential once they are aware of the value of a higher education qualification and how their school studies relate to their future aspirations. Results also suggest students are more ambitious in terms of their future educational and career prospects.

### 7.1 Bridges strategies to improve awareness, confidence and motivation

Over the 2012-2014 period, 63 Bridges projects have an identified focus on improving awareness, confidence and motivation (see Appendix D for a listing) in students. Activities can be classified as follows:

Table 14: Bridges strategies to improve awareness, confidence and motivation

**Engaging parents:** Includes on-campus activities/education sessions for parents to demystify the university experience, forums to present information on higher education options, participation in community events to establish university presence, school meetings with parents focusing on students' study options, and education/training for teaching staff to assist in the better engagement of parents and carers.

**Access to role models and mentors:** The value of mentoring and tutoring programs with respect to awareness, confidence and motivation (as noted in the evaluation templates and teacher focus groups) relates to the indirect impact between mentor/tutor and students, which broaden student experience of post-school options.

**On-campus experiences:** This approach allows prospective students, and often their parents, a taste of what it is like to attend university. These experiences range from half-day campus tours to more intensive (week or two week long) experiences with high levels of activity and interest. Activities cater to both younger (primary school) and older (late-secondary school) students, and often involve hands-on activities (e.g. involvement in science experiments) or lectures, meeting of university staff and/or engaging with university students.



**Curriculum enrichment activities:** Curriculum enrichment activities expose students to new career pathways, such as science. Projects use approaches such as providing access to new technologies in remote areas or the use of visiting experts.

**School visits by university staff and students:** School visits typically involve university staff and sometimes former/current students travelling to schools to give students an insight into university life and encourage students to consider attending university. Some Bridges projects are using school visits to build upon and maximise outcomes from on-campus experiences or alternatively to work with groups of students to develop activities that students then deliver to their peers.

**On-line activities:** These programs seek to build student interest by delivering on-line and technology-supported career advice or career discovery tools. Flexibility in time and location provides opportunities to connect students from low socio-economic backgrounds with support that they might not otherwise be able to access through their schools or community.

**Use of other dynamic platforms:** A number of projects use alternative platforms (theatre, TV, live science labs or videoconferencing) as mediums to motivate students to the possibilities that higher education may offer.

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Source: KPMG analysis, documents provided by Bridges.

## 7.2 Outcomes achieved

Collectively, Bridges projects are contributing to a positive change in students' and parents' awareness of higher education through promoting better understanding of university offerings, the range of university options, and the benefits of university.

### 7.2.1 Evidence of contribution to awareness

Prior to Bridges some students have little awareness of the nature of university life and the different courses and activities available to them. Teachers commented that exposure is paramount to raising awareness:

*"Otherwise students' only ideas of university are from people they know, or they have to be self-motivated and seek this information themselves."*

The Bridges impact on awareness is significant: feedback from qualitative templates and focus groups with principals, teachers and parents suggests that participation in Bridges has started the conversation about higher education. This is apparent from multiple perspectives. Students are:

- talking more with their peers about their interests and are developing an awareness and understanding of the courses they might like to undertake at university
- engaging mentors, teachers and career advisors in strategic discussions about their post-school interests
- speaking openly about their desire to pursue a career in a particular field
- seeking advice with respect to entry requirements (e.g. required subjects and the ATAR).

Not only is this apparent amongst secondary school students, but at the primary school level too. Qualitative feedback suggests that the Enquiring Minds series has increased students' awareness

of higher education through connecting childhood passions with the pathways required to get there; thereby planting the seeds of higher education into via logical pathways. The articulation of these pathways, for example, *"I like animals, I want to be a vet, I need to study to become a vet"* prepares students for study beyond school and motivation to access higher education.

Further, students in years 3-6 who had participated in ACUgate: MyScience, ACUgate: Meet the Professor and Compass – Discover Uni Day and 3 phase program, are now *"talking about university"*, and reporting that it *"wasn't as scary as they thought it would be...it was actually really cool"*.

A key feature of Bridges programs that build students' awareness is the development of social capital to encourage and facilitate in-depth discussions about higher education opportunities. This is particularly important for students who may be the first in their family to consider studying at a university, and may not initially have the social supports to initiate these conversations at home or in their communities. Bridges offers extended benefits when students continue the conversation at home with families; effectively exposing parents and siblings to their newfound knowledge and enthusiasm. Nick's story (below) provides a student perspective on how participation in Bridges influenced his awareness and understanding of higher education.

#### **Nick's story: How Bridges supports students' awareness of higher education**

Nick, who participated in UWS Fast Forward (Your Tutor) recalls how participation in the project shifted his perceptions of higher education:

*"The first time I did Fast Forward it pretty much involved us students going to university to get the knowledge of what the university would look like and be like.*

*It was pretty scary at first meeting new people. They put us into room with different groups from different schools. If we hadn't met before we had to get a ball and pass it around, and the person who catches the ball says their name and passes it on. That was the first thing we did to meet people. After that activity we had different team members, and there were different group leaders. Someone from the university took us to show us different subjects. We did Science, a bit of English, a bit of Maths.*

*After I did Fast Forward it made me think to myself, "do I really want to go to university?" and the answer was yes. To get a good job I need to go to university. It was pretty good – it made me think all about university."*

Source: KPMG

As a result of their involvement in Bridges, some students' intentions are changing, with university now considered a viable option. For example one parent reflected on his daughter's participation in Macquarie LEAP- Robotics:

*"This has opened her mind to what's actually out there and broadened her perspective about what can be done. Prior to this she wasn't interested in uni. Now she wants to move into a technological field"* (Parent, Macquarie LEAP - Robotics).

This is reflected in the data which suggests that Bridges is increasing awareness of higher education options. Data analysis shows that of all the students exposed to projects with this objective, an estimated 24,392 students (90 per cent) of students surveyed reported a greater awareness of what university offers and an estimated 35,852 students (89 per cent) reported

greater awareness of potential career paths. Further, an estimated 96 per cent of students (n = 2,920 students) sought information about career options after participating in Bridges.<sup>113</sup>

*Table 15: Impact on awareness of higher education, 1 Jan 2012 to 31 Dec 2014<sup>114</sup>*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
<b>Awareness of potential career/ post-school options</b>						
Students reporting greater awareness of what university offers	24,392	24,298	24,486	90%	90%	90%
Students reporting greater awareness of potential career pathways	35,852	35,532	36,172	89%	89%	90%
Students seeking out information about possible university options	2,920	2,896	2,944	96%	96%	97%

*Source: Bridges to Higher Education data*

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

Organised campus visits to a range of universities provided the added benefit of exposing students to a broad range of universities and study options. Outcomes relating to raising awareness of higher education options and benefits are demonstrated in the ACUgate: *Meet the Professor* case study (see Chapter 15).

Similarly, Bridges is contributing to parents' awareness of university and is altering their attitudes and preconceived ideas. This is supported by data suggesting Bridges projects are having a significant impact on increasing parents' knowledge of university options (79 per cent, n=1,755), and their understanding of the benefits associated with higher education (90 per cent, n=1,987).

<sup>113</sup> As the confidence interval for these estimates is relatively narrow, the evaluation can confidently conclude that the proportion of students demonstrating greater awareness of higher education post Bridges involvement is very high.

<sup>114</sup> Multiple projects could report to one indicator – refer to Appendix D for project breakdown by indicators.

*Table 16: Impact on awareness of higher education, 1 Jan 2012 to 31 Dec 2014<sup>115, 116</sup>*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
<b>Parent and carer knowledge</b>						
Parents and carers reporting better knowledge of the higher education options available to their child	1,755	1,706	1,803	79%	77%	81%
Parents and carers reporting better knowledge of the benefits associated with higher education	1,987	1,947	2,027	90%	88%	92%

*Source: Bridges to Higher Education data*

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

Parents reflected that apart from Bridges campus visits they have limited visibility of information related to university, and have limited capacity to provide advice to their children, particularly their oldest children.

This was consistent with the views of teachers, who commented that a lot of students are the first in their family to go to university or complete HSC, so the information provided by the school is the extent of the student's exposure.

*"It's very hard when it's the first child. That's a problem. It's very different. There's information only the university can give them. Parents don't know" (Parent focus group).*

Bridges has provided parents with tailored information to address some of the perceived barriers to higher education for their children. For example, the *Rural and Remote project* identified critical concerns amongst parents from rural and remote areas with respect to accessing higher education, with 100 per cent of parent respondents citing financial and physical distance barriers. The project was then able to address these concerns specifically through information sessions for that provided information on the services and support available to students from regional and remote areas. As a result, 85 per cent of parents who provided feedback strongly agreed the session increased their awareness of the benefits of higher education, with one parent reflecting that:

*"Tonight's session has lessened my fears" (Parent, Rural and Remote project).*

Projects that have provided information to parents in an easily accessible format, for example, through the Make Your Mark website have also strengthened parents' awareness of higher education, with feedback indicating that parents had a better understanding of their child's

<sup>115</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

<sup>116</sup> Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.

further education options and felt more informed about the steps involved in applying for further education.

Bridges has also given parents the opportunity to see firsthand what university life is like. Within this context, parent visits to university campuses can act as a game changer; promoting understanding of the practical realities of their child's enrolment at university, and to envisage how their children will succeed in this environment. Common considerations for parents included awareness of financial support options (including HECS), travel options, and safety. Parents themselves report that visiting university campuses was an eye-opener, and that their interest piqued when they visited a campus as it provided an opportunity to learn more.

While parents reflected that "*university visits are a positive thing*," there was a strong call for further information about the pathway from school to university including selection of school subjects and the implications of an ATAR. Parents from non-English speaking backgrounds also commented that university terms can be complex to understand in English, with a request for materials in their language to promote better awareness and understanding.

Complementing this greater awareness of university life and pathways to university, analysis of Bridges data shows students' perception of university also improved after participating in Bridges. An estimated 8,014 students (83 per cent across all relevant projects) reported a more positive university perception, relative to their pre-Bridges experience<sup>117</sup>. This is particularly important as a positive perception of university is more likely to make higher education seem achievable and an attractive option for students.

*Table 17: Impact on perceptions of university, 1 Jan 2012 to 31 Dec 2014<sup>118</sup>*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimate d%	Lower 95% (%)	Upper 95% (%)
<b>Students self-reporting a more positive/improved perception of university</b>	8,014	7,548	8,481	83%	78%	87%

*Source: Bridges to Higher Education data*

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

### 7.2.2 Evidence of contribution to increasing confidence

Bridges is also contributing to increased student confidence towards school and higher education. Students are more likely to view university as an attainable goal; they are setting goals with respect to study and achievement of an appropriate ATAR, and are generally perceived to be less anxious about their future. As one parent explained:

<sup>117</sup> As the confidence interval for this estimate is moderately wide (78 to 87 per cent), this suggests that the true positive response rate for this indicator is at least 78 per cent. The evaluation can, therefore, conclude that there was a high impact on students' perceptions of university.

<sup>118</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

*"Before the university came here he said he didn't want to go; that he wasn't up to it. (After Bridges) he became more confident. He wanted to stay at school and wanted go to university to get a better future. It gave him a lot of courage to do the right thing. He is in year 10 now and wants to do accounting so he is at the right stage (in terms of) choosing the right subjects. As the oldest son he also wants to be the right role model for his younger brothers. He is more focused about what he wants to do and what he wants to become in the future" (Parent, school focus group).*

Further, some students who may have perceived entering the labour market from school as their only option, are now exploring university (or further study). Their expectation for their lives have changed dramatically.

Mentors were often an important element of this improved confidence. By sharing personal experiences and exploring goals and career paths, mentors provide the social capital required to engage students, improve confidence in their own abilities and inform decision-making about their future:

*"My confidence, it really improved, after my mentor talked about other people and their success stories, all their disadvantages and how they've succeeded so much. The mentor talked to us one on one, and helped us personally" (Student, LEAP - Macquarie Mentoring (Refugee Mentoring)).*

UWS's *Your Tutor (Fast Forward)* online homework assistance had similar benefits, with students reflecting that they appreciated talking to someone external (i.e. not a parent or teacher) who had an interest in their development, and enjoyed the one-on-one attention:

*"I could talk to them and not feel embarrassed, they felt like a friend, not a stranger"*

*"It was just about me and my goals, and how to achieve them." (Students, UWS, Your Tutor (Fast Forward))*

Students drew confidence from the stories shared by their mentors, particularly when they could relate to the circumstances of the success stories and hearing about a range of options and opportunities.

Working with tutors and mentors also alleviated the high stakes pressure that some students feel in the later years of high school; that they don't belong, that they must achieve academically now or miss out, or that they must make their career decision prior to leaving high school:

*"A lot of students involved have gone well, it has improved their confidence. It challenges their thinking of university and their whole perception of university being too difficult, because they go there for themselves and get to experience it. It also changes their engagement (in school), they take learning very seriously" (Teacher, UTS U@ Uni Summer School Program).*

Continuing a theme from the Interim Report, it is apparent that Bridges is enabling young women to challenge expectations. Teachers reflected that some young female students led insular lives, and that it could be difficult to convince parents to encourage their daughters to plan and pursue higher education opportunities. Bridges was noted to be breaking down this dynamic: encouraging young women to explore the opportunities available to them and draw upon their inherent capabilities, and supporting parental mindset change. As one teacher reflected:

*"Getting girls involved in Science, Technology, Engineering and Mathematics (STEM) has been great. They are very proud of themselves. They have seen that they can do Science etc., and as a result they blitzed the boys.... there are some areas where there*



*is a culture that boys can but girls can't, so beating the boys is showing the girls they can do other things than housekeeping and babysitting; it shows the girls another pathway."* (Teacher)

The outcomes achieved by Bridges in supporting students' confidence are explored further in Alice's Story (below) and the *LEAP - Macquarie Mentoring (Refugee Mentoring)* case study (see Chapter 15).

#### **How Bridges supports students confidence and motivation – Alice's Story**

*"I went to the Design Summer School...I loved it. I knew before I went that I wanted to do fashion design after school but experiencing it first-hand made it so much easier to know that I still wanted to do it after school. We made dresses out of recycled material; I learnt a lot about myself and what I wanted to do after school. I met great new people, I learnt that designing is not just what it seems and I learnt what my limits were with design. The Summer School teachers didn't judge what I wanted to design; all my ideas were valid so I grew in confidence."*

Reflecting on what has changed following her participation in Summer School, Alice reported that: *"Before I did Summer School I didn't care about my schooling. I wasn't interested. I just kind of cruised through.....after going to UTS and seeing university life it made me realise that if I want to get there I'm going to have to try a lot harder and I do... I study this year! I've never studied before. UTS has taught me how to study and it definitely has helped me understand why I think school is important, why I want to go to university and how I can get there."*

Alice's father reflected that the program has solidified in his daughters' mind that she wants to pursue fashion design as a career and has shown her that it is within reach. He has witnessed a change in his daughter's engagement and motivation in school: *"She can be very nonchalant when you talk to her but this program has woken her up a bit...she wants to go to school, wants to be involved in stuff with the school... She is taking things more seriously and I think the program contributed to that. He also noted that his daughter is "more willing to engage in discussion about her future"*.

Source: KPMG

#### **7.2.3 Evidence of contribution to increased motivation**

Participation in Bridges programs is also raising students' motivations toward further study, and inspiring thoughts about not only university, but also future career opportunities. Feedback from students suggests that they are more willing to engage in their current studies and consider options for future study after participating in Bridges.

Teachers estimated that 77 per cent of students (n = 18,901) were more engaged<sup>119</sup> post their participation in Bridges activities.

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<sup>119</sup> As the confidence interval for this estimate is moderately wide (71 to 83 per cent), this suggests that the true positive response rate for this indicator is at least 77 per cent. The evaluation can, therefore, conclude that there was a high impact on student engagement.



Table 18: Impact on educational engagement, 1 Jan 2012 to 31 Dec 2014<sup>120, 121</sup>

Indicator	Estimated number	Lower 95%	Upper 95%	Estimate d %	Lower 95% (%)	Upper 95% (%)
<b>Educational engagement</b>						
<b>Students for whom teachers report greater engagement in school</b>	18,901	17,544	20,258	77%	71%	83%

Source: Bridges to Higher Education data.

Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.

Primary school students became more engaged in learning – be it science, reading or maths, they looked forward to Bridges activities and involved themselves enthusiastically:

*"It was great giving our students the opportunity to drive their experiments and really get a feel for the scientific process. The students absolutely adored their mentors, and the thought of these special scientists coming to help them each week was a huge highlight. While in the initial phases students needed a great deal of scaffolding in developing ideas, they really jumped on board the scientific process as the weeks rolled through and really got a lot out of it" (Teacher, ACUgate: MyScience).*

Some limited qualitative feedback from teachers and principals<sup>122</sup> suggests improved engagement is manifesting itself in a reduction in challenging behaviours, non-attendance, lateness and suspensions. This was thought to relate to a number of interrelated factors:

- Capacity to enhance student connection to school. Through participation in Bridges projects, students come to recognise that there are adults (i.e. mentors or teachers) who genuinely care about them as individuals; this positive adult-student relationship, together with the emotionally safe learning environment that Bridges projects create, helps students to see school (and potentially university) as a place where they belong.
- Ensuring Bridges activities are open to all students, not simply the best and brightest or those with existing aspirations to progress to university. As one teacher put it: *"It is that equity of choice and there's kids in the program that perhaps aren't at the same level as other students but it encourages them to work harder.....We have had kids that had selected a non-ATAR pattern of study, who after going to Summer School decided to keep their options open into year 11."*

<sup>120</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

<sup>121</sup> Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.

<sup>122</sup> Reflects feedback from two schools engaged in focus groups in 2014, and several schools that participated in forums in 2013.

- A new understanding among students that there is a direct link between what they do at school and their future career prospects. In this manner, performing well on an assessment task was seen as a pathway to better opportunities.
- Peer influence. Teachers suggested that seeing their classmates (or more senior students) engaged in Bridges activities, being awarded for leadership skills, their effort or improved marks, motivated their peers to work harder at school or aspire to university.

School visits supported the sentiment that post-Bridges participation, secondary school students are returning to the classroom more motivated to complete school and progress to higher education; students were often described as *"achievement oriented"*, *"more likely to push forward in spite of challenges"*, *"goal oriented"*, *"excited and engaged"*, *"dying to see the UAC book"*, *"more keen to go to university"*, *"more likely to engage in self-directed study"* and *"sure that they wanted to pursue a career"*. Outcomes were most likely to be sustained where Bridges activities were sequenced over a number of years such that:

- Activities build upon one another, with information and awareness, translating into confidence and then motivation (towards study and career) over time.
- Students initially learn the subject matter, and then act as mentors to younger participants; this supports the confidence of older students to succeed, while proving a successful engagement and motivation strategy for younger students, who aspire to be like their older mentors.

The achievement of such outcomes is demonstrated through Emma's story below.

#### **Emma's story – How Bridges can support students' motivation to succeed**

Emma, a Year 10 student, participated in the Macquarie *LEAP - Robotics* project. A family member reflected on the change that he has seen in Emma's attitude and motivation towards learning.

*"Prior to this project Emma wasn't interested in uni, she was more of an observer at school. The project gave her that one little push – it opened her mind in regards to what's actually out there. It broadened her perspectives about what can be done and expanded her limits. For her it was about creating and designing something; the idea of creating something that can work, move and do something from her commands. It's not just about countless books and studying rigorously day and night (although these are good things). She can program and do it herself and can do things that she didn't know she could. The projects are good. If they keep pushing students to get involved, it will get results.*

*Now she wants to move into a technological field at university. Recently funding and loans have changed, but she is still interested in going to university."*

Source: KPMG

Such changes are also evidenced in the data. An estimated 69 per cent of students (n = 34,880 participating in relevant projects) self-reported improved motivation to continue to year 12. Further, an estimated 73 per cent of students (n = 8,617) and an estimated 72 per cent of teachers, reported improvement in students' motivation to continue to university<sup>123</sup>.

<sup>123</sup> The confidence intervals for these estimates are narrow, indicating high reliability. Therefore, the evaluation can conclude with confidence that the proportion of students for whom this outcome was reported is very high.

Table 19: Impact on motivation towards higher education, 1 Jan 2012 to 31 Dec 2014.<sup>124</sup>

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
<b>Motivation</b>						
Students self-reporting improved motivation to continue to year 12	34,880	34,190	35,569	69%	68%	70%
Students self-reporting improved motivation to continue to study at university	8,617	8,162	9,071	73%	69%	77%
Students for whom teachers report improved motivation to study at university	8,468	7,417	9,519	72%	63%	81%
<b>Future intentions</b>						
Students reporting a new intention to progress to university	1,438	1,198	1,679	77%	64%	90%

Source: Bridges to Higher Education data

Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.

These impacts were not contained to secondary school students. Rather those students in years 2-6 were also expressing greater interest in university and are even talking about their preferred career. This is demonstrated in the following teacher feedback:

*"Bridges programs have brought on a massive change for kids' learning now and into the future. They have more of an awareness of university, they have something to reach for...we have students walking around now saying that they are going to be an anaesthetist" (Teacher, Compass Bridges activities).*

### 7.3 Summary

The evaluation findings suggest that Bridges projects can act as an effective means to build interest, in-depth understanding and aspirations to attend higher education amongst students who previously have had limited exposure to this environment. Early intervention, continuity of contact, positive role models, the opportunity for students and parents to visit campuses, and creating supportive school cultures, are all important in achieving this intent. When Bridges projects are sequenced effectively to build on and complement each other over a number of years, they demonstrate further effectiveness at facilitating more in-depth awareness of and motivation towards higher education.

In particular, schools that are more inclusive of parents can reinforce the message that university is achievable for their children. Ongoing engagement and tailored strategies to include parents is likely to assist in promoting consistent messages at home and at school.

<sup>124</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

## 8. Building school and community capacity

Bridges is increasing capacity of schools. Through professional development, teachers have had the opportunity to build their practical and discipline specific skills, and as a result are taking more ownership for engaging students in their learning. Post their involvement in Bridges, teachers reported that they had learnt new and innovative strategies to teach in their field and had developed new tools for inclusion in their repertoire. This has enabled teachers to better personalise lesson plans to individual students' developmental needs and interests.

Following the introduction of Bridges, the culture within some schools was reported to be far more aspirational - with high expectations of students' capabilities more likely to be the norm. Key contributors were initiatives that supported teachers' morale and continued enthusiasm, in spite of the challenges often inherent in schools based in low socio-economic areas; the extent to which schools have leveraged Bridges to enhance learning (e.g. through extending the curriculum or introducing new teaching methods); the sustained involvement of multiple Bridges projects in schools; and the positive support from teachers and career advisors for students' aspirations.

It is this comprehensive approach that has fostered a stronger sense of community, better engagement of parents as partners in the learning process, and a more supportive culture within schools. In many cases, the strong presence of Bridges has also encouraged schools to adapt and innovate, effectively ensuring they are taking every opportunity to support students to achieve their potential.

### 8.1 Strategies implemented by Bridges Projects

Forty-one Bridges projects – implemented over the 2012-2014 period - were designed to contribute to school and community capacity, as listed at Appendix D. The common strategies implemented across these projects are outlined below.

Table 20: Bridges strategies to build school and community capacity

**Teacher professional development:** Incorporates activities to enhance teachers' discipline specific knowledge; build understanding of career pathways and higher education options for students; and offer guidance on practical strategies for student engagement. A broad range of activities from classroom to on-campus experiences fit under this category of activity.

**Inclusive school framework:** Includes projects that focus on the inclusion of parents, community members and school stakeholders in school activities in order to create community cohesion; more effectively engage parents; and leverage the skills and insights of community influencers to deliver effective and engaging learning experiences.

**Innovative community partnerships:** Includes activities delivered in partnership between universities, schools, community organisations and relevant others to promote development of innovative offerings for participants. For example, partnerships between schools and Aboriginal and Torres Strait Islander organisations allowed for engaging learning opportunities for students, whilst industry partnerships provide increased insight into career options for students.

Source: KPMG analysis, documents provided by Bridges

## 8.2 Outcomes achieved

Bridges professional development activities have strongly contributed to teacher capacity. The majority of teachers participating in such activities reported being supported in their knowledge, skill development and practice.

Bridges professional development activities were often cited as having re-energised teachers and encouraged capacity building to enable teachers to support *all* students in their learning.

### 8.2.1 Access to professional learning for educators

Bridges has increased teachers' access to professional development activities, supporting both discipline specific knowledge development and practical skills development.

Of all teacher participants in relevant projects, an estimated 96 per cent (n = 252 teachers) reported better access to professional development and an estimated 97 per cent (n = 1,312 teachers) reported being better supported to engage students in their learning.<sup>125</sup>

*Table 21: Impact on professional development access and support, 1 Jan 2012 to 31 Dec 2014<sup>126</sup>*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
<b>Improved access to professional development</b>						
Teachers reporting better access to professional development	252	250	254	96%	95%	97%
Teachers who reported being better supported in their efforts to engage students and/or motivate students to learn	1,312	1,266	1,358	97%	94%	100%

*Source: Bridges to Higher Education data*

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

In the main, teachers were overwhelmingly positive about the professional development opportunities provided through Bridges. However, Bridges activities were reportedly less effective in achieving their outcomes where project coordinators did not seek to tailor activities to school context and students' needs. This may represent an area of focus for Bridges projects going forward.

### 8.2.2 Acquiring new skills and enhancing practice

Bridges professional development activities have built teachers' skills and enhanced their classroom practice. After participating in Bridges professional development and learning

<sup>125</sup> The narrow confidence intervals for these estimates, suggests we can conclude with confidence that the proportion of participating teachers for whom these outcomes were achieved is very high.

<sup>126</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

activities, an estimated 1,445 teachers (97 per cent of participants in relevant projects) reported that Bridges had helped them to expand their teaching practices; 1,435 teachers (95 per cent of participants in relevant projects) reported that they could better apply their learning to their teaching practices; and an estimated 1,275 teachers (98 per cent of participants in relevant projects) reported improved knowledge in their discipline of focus.<sup>127</sup>

*Table 22: Impact on teacher skills and practice, 1 Jan 2012 to 31 Dec 2014*<sup>128</sup>

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
<b>Improved skills among teachers</b>						
Teachers reporting improved knowledge in discipline of focus	1,275	1,263	1,288	98%	97%	99%
Teachers reporting improved skills in discipline of focus	1,326	1,307	1,345	97%	96%	99%
<b>Capacity for teachers to apply learnings</b>						
Teachers reporting that participation had helped them expand their teaching practices	1,445	1,427	1,463	97%	95%	98%
Teachers reporting that they have applied their learnings to their teaching practice	1,435	1,403	1,466	95%	93%	97%

Source: Bridges to Higher Education data

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

These findings are supported by qualitative feedback from evaluation templates and teacher focus groups, which suggest that Bridges has supported teachers to develop their knowledge, skills and practice. Professional development proved most effective where it was hands on, practical and encouraged skills transfer, as opposed to being theoretical. For example:

*"The professional development provided was very hands on. It provided us with resources that were engaging, and gave us strategies to assist students in their physical development" (Teacher, University of Sydney, Compass Supporting basic skills development: Occupational Therapy).*

*"They (the mentors) were always sharing resources (with the teachers) and creating different types of tasks to do with groups. There was one particular task which was kind of like a bonding task. I thought it was brilliant. He (the mentor) created the task and ran it through with me. I created the assessment task – and I sent it to him and he provided me with constructive*

<sup>127</sup> The narrow confidence intervals for each of these estimates mean that we can confidently conclude that there was a strong Bridges' impact on teacher skills and practice, as measured by these indicators.

<sup>128</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.



*feedback. He then passed it on to another high school and all students involved were able to apply that assessment task. This has happened every time I have participated in the program"* (Teacher, University of Sydney Compass).

A number of teachers were clear that they had embedded the learnings into their day-to-day practice, with professional development learnings applied in the classroom so as to offer evidence based and engaging learning activities. For example, the *University of Sydney Compass Word Up project*, enabled one school to transform the school pedagogy to use differentiated learning rather than whole class learning.

A number of teachers reflected that Bridges had provided new tools for inclusion in their repertoire, provided them with new and innovative strategies to teach in their field, allowed them to better personalise lesson plans to individual students' developmental needs, and encouraged greater use of technology.

For example, through Bridges Connect, robotic equipment is available to schools, which has resulted in powerful learning experiences for students, while TVS has provided teachers with resources to add to their suite of tools. Following participation in Bridges Connect, 100 per cent of teachers reported both improved knowledge and improved skills in their discipline of focus.

*"It was a fantastic day and really broadened teaching possibilities"* (Primary School Teacher, Western Sydney)

*"Great opportunity – really educational experience that I can share with my students"* (Primary School Teacher, Rural NSW)

*"Thank you so much for such a rich, empowering opportunity. The students loved it, the teachers were mighty impressed. There were even a few tears and sad moments as we packed them up and the students reflected on the experiences."* (Teacher response to Bridges Connect, Robotics)

Teachers reported that they would often use the classroom resources available for download on the *Enquiring Minds* website and would recommended them to other teachers.

*"I loved how it was set up ... and it showed the links of the videos, it was so easy to use. We've already shared it with the staff here".* (Teacher feedback, Enquiring Minds, TVS)

Further, some schools have used Bridges professional development activities and resources as a platform to better engage the teaching faculty as a whole. Projects such as UTS *U@Uni Sky High! Reaching Teachers*, UWS' *Fair Go*, and ACUgate: *MyScience* provide comprehensive professional development not only to those teachers directly involved in Bridges projects, but other teachers and support staff in Bridges schools. This inclusive model ensures that best practice strategies are shared more widely, thereby benefiting a greater number of students.

Capacity to engage students from Aboriginal and Torres Strait Islander and Culturally and Linguistically Diverse (CALD) backgrounds is also being enhanced, through formal cultural competency training, as well as through exposure to project based activities such as cultural experience days and cultural workshops. As an outcome, teachers have a better understanding of diverse cultures, and better relationships with students. This is illustrated in the excerpt below.

*"The whole training was useful. It opened my mind to Aboriginal culture and I feel I can apply this new knowledge to my method of teaching and interacting with the students to get better results"* (Teacher, University of Sydney Compass: Volunteer Program).



### 8.2.3 Teachers are influencing student outcomes and parent capacity

Bridges projects have contributed to parents' capacity to support their children's learning. Those with the greatest effect promote an inclusive school framework that both engages teachers as partners, and highlights the importance of involving parents in students' learning pathways. Students benefit through increased teacher and parent capacity to support their learning outcomes.

Overall, an estimated 1,436 teachers (89 per cent of all relevant participants) were better able to engage their students in learning, an estimated 805 teachers (92 per cent of relevant participants) were better able to motivate their students and an estimated 313 teachers (90 per cent of relevant participants) reported improved knowledge of higher education options for their students.

*Table 23: Impact on capacity building, 1 Jan 2012 to 31 Dec 2014<sup>129</sup>*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
<b>Flow on benefits to students</b>						
Teachers reporting that they have been better able to engage their students in learning	1,436	1,343	1,530	89%	83%	95%
Teachers reporting that they have been able to better motivate their students	805	779	831	92%	89%	95%
Teachers reporting improved knowledge of higher education options for their students	313	290	336	90%	83%	96%

*Source: Bridges to Higher Education data*

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

Relationships between parents and schools, are in some cases, being strengthened to enhance parent capacity. This is illustrated in the example of the *Compass Occupational Therapy (Professional Development)* outlined below.

<sup>129</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

### Sam's story – How Bridges has built school and community capacity

Sam, a Year 3 teacher, recalled how the University of Sydney Compass: Occupational Therapy (Professional Development) project has built the schools' capacity to better supports' its students.

*"Our school has a large proportion of students that do not have the ability to hold scissors, or have the core stability to sit up straight. This is often due to a lack of parental understanding around the need to develop these skills. Each year, OT university students come into the school to assess students in need of OT support (whether that be for posture, gross motor skills, fine motor skills, concentration) and then work with those students with highest need over a period of time to develop their skills. They also provide training to staff so that we learn strategies and tips to continue to develop these much needed skills in the classroom. The OT students also ran a parent workshop where they used everyday items such as pegs and buttons to give parents strategies to build children's finger strength, coordination and core stability."*

Sam also spoke of a student in her class who has thrived since participating in the program. Sam reflected that the program has supported the student to not only develop fine motor skills, but also to develop personal resilience and confidence.

*"(Prior to her involvement in the program) this student was very fragile, if she got food on her clothes she would burst into tears, if she'd rip something on her paper, more tears, she had no confidence. Now, she no longer cries when little things go wrong, she has really taken off, her reading and maths skills have improved. She is about to leave school and is very confident about high school (whereas 2 years ago this would have devastated her)."*

Source: KPMG.

#### 8.2.4 Evidence of contribution to changing school culture

A number of the Bridges schools faced significant challenges in engaging students in higher education. The target schools are often situated in areas of low socio-economic status, many families are from CALD backgrounds and often speak limited English, parents vary in terms of their educational qualifications (while some have not completed school themselves, others are university educated, more often in their originating country) and their understanding of higher education in Australia is often limited.

Several parents themselves, as well as teachers, suggested that they previously had limited expectations with respect to higher education.

Over the course of the evaluation, Bridges has influenced positive cultural change within schools. Such change has been built on a commitment to challenge expectations, promote student potential and celebrate student achievement; and has been enabled by the engagement and involvement of students, parents, teachers, and community members. This inclusive framework increases the buy-in of parents and community members, drives teacher professional development and student engagement, and contributes to the development of a strong and supportive school culture.

Outcomes related to enhancing school and community capacity are further demonstrated through the GWS Giants AFL Partnership Case Study (see Chapter 15).

A number of factors have supported cultural change efforts within schools. From a students' perspective, the diversity of Bridges projects (as well as school-led and NFP funded initiatives) and the resultant skills developed have enhanced both engagement in learning, and willingness to take part in school activities. Engaging activities and programs have also enhanced the sense of school cohesion, encouraging positive student behaviours. Principals and teachers reflected that this cultural change, while difficult to quantify, is critical.

*"We can demonstrate change through our behavioural data. We had nearly 2000 days suspension before 2008. In 2008 we had 1930 days of suspension, in 2012 we had 316 suspension days, in 2013- we had 457 days of suspensions and we have a growing population. This is a sense of social cohesion and appropriate behaviour in a high school" (Principal with reference to the impact of Bridges, school-led and other funded projects in their school).*

Bridges projects have also supported teacher morale, enthusiasm and commitment. The strong presence in schools has highlighted the value of new, innovative approaches to student engagement and changed teachers' expectations of themselves and of their students. Commitment is further enhanced when teachers evidence the positive change that they can make to students' lives.

*"This is the main thing - I think a few years ago the teaching staff were demoralised in terms of always working hard and not getting where they wanted to. The influence on this was through having tangible, definite programs and a definite plan in the process" (Principal).*

Bridges is also influencing a culture of higher standards and aspirations. An example is the ACUgate Uni Step-Up project, which allows year 11 students to complete university subjects while at school. As well as improving access to university for the students involved, the project has impacted on school culture through a broader university presence in their school. The younger students see the senior students working hard at their university subjects and then going on to university. This has created a school environment where higher education is highly valued and there are raised expectations of students that they will go to university.

*"As a school, we never used to talk about occupations and university before...Now it is on the agenda, we are setting high expectations for our students and trying to make clear that with hard work, everyone can access higher education" (Principal).*

The evaluation has found that participation in Bridges has motivated schools to look beyond their internal capacity to identify strategies that they can pursue to enhance services and supports for students. For example, one Bridges partner school drew upon their long standing relationship with ACU to secure ACU as a key partner in the Mt Druitt University Hub project (The Hub). The Hub, open to all students in the community, aims to explore ways that the school can help students' access higher education. ACU have made a financial contribution to the Hub (to assist with staffing costs) and are regularly engaged with the program. This partnership enables ACU staff to attend school meetings to promote the work of Bridges and raise community awareness of the support available to students; whilst also providing the school with valuable resources, support and advice. The Hub coordinator recently had the opportunity to go out with ACU and see firsthand the projects on offer for students in primary schools. As a result, the school and ACU are now starting to think how they can work together to engage with primary and feeder schools in the community.

### 8.3 Summary

Overall, Bridges is clearly enhancing teacher and school capacity.

Among teachers, Bridges has promoted better access to professional development, improved knowledge and skills, and offered the opportunity to expand teaching practices. As an outcome, benefits are being realised for students, with teachers reporting a stronger capacity to engage their students in learning and support their motivation to learn.

Bridges engagement is also contributing to a more aspirational and inclusive culture, within some schools. Overall, the combination of a wide diversity of projects operating within schools and the care provided by teachers, mentors, and others was thought to be contributing to a more positive school culture and more supportive relationships, between teachers, career advisors and students, within the school.

Such outcomes are enabled by engaging schools in the design of professional development activities and supporting teachers, parents and students themselves to recognise the potential of students to succeed.

## 9. Increasing capacity to access higher education

Under Bridges, universities have focused on formalising and communicating the alternative pathways available to prospective students. Further, substantial time and energy has been invested in strengthening the institutional relationships between TAFEs and universities; as such relationships have a direct impact on TAFE students' capacity to pursue pathways to higher education.

During the establishment of Bridges projects in 2012, both TAFE institutes and universities focused on developing working relationships, noting that prior to Bridges these relationships were limited. Key concepts of the pathways projects were tested including outreach and the opportunity for existing university students to meet with prospective students to share their experiences of entering university via alternative mechanisms.

The UTS and UWS TAFE Pathways projects continued to build on these successful elements in 2014 to contribute to students' increased capacity to access higher education. Pathways activities have been embedded into day-to-day practice, there is stronger transition support to facilitate successful commencement and retention in higher education courses, and feedback loops along with improved data collection, allow universities to monitor student progression outcomes.

### 9.1 What strategies has Bridges implemented

There are fifteen Bridges projects focused on increasing capacity to access higher education, as set out in Appendix D. Projects can be classified as follows:

Table 24: Bridges strategies to increase capacity to access higher education

**Special admission schemes:** enable entry to higher education through recommendation of the school principal or with the support of a community-based organisation. Schemes target either those leaving school or mature age applicants.

**Early access to university courses:** secondary students are able to undertake a selected range of first year university units of study and those who successfully complete their chosen unit of study, can enrol in a related undergraduate degree course, receiving associated credit points.

**Professional development with TAFE teachers:** through meetings to discuss degree programs with TAFE staff and through in-classroom sessions with TAFE and university staff. This connects students to universities and promotes university programs run through TAFE.

**Partnerships with VET/TAFE institutions as a basis to improve TAFE students' access to university courses:** These have required systemic change in the way universities and TAFE institutes work together – to create effective pathways between providers, information sharing, identification and planning for shared priorities and communication with prospective students.

**TAFE outreach:** Programs have conducted various outreach based activities to engage TAFE students and raise awareness of the alternative pathways into university. Strategies included presentations to students in TAFE classrooms or the TAFE campus library, and the facilitation of visits to the UTS campus by TAFE students.

**Credit recognition processes:** Bridges programs have established formal credit recognition arrangements which allow TAFE students to gain credit towards their university degree for subjects completed at TAFE.

Source: KPMG analysis, documents provided by Bridges

## 9.2 Outcomes achieved

This section assesses how well Bridges is contributing to *increasing capacity to access higher education*.

### 9.2.1 Strengthening of partnerships

Universities and TAFEs have continued to strengthen and expand the collaborative nature of their relationships. Relationships have broadened from peer-to-peer, project officer level relationships focused on operational and logistical considerations, to include senior executive participation and endorsement of the Bridges approach to widening participation.

Senior executive involvement in the Bridges partnership demonstrates the high value placed on the relationships with TAFEs, and provides champions with responsibility for garnering institutional support for Bridges activities where previously interest and understanding may have been limited. The explicit support and direction of senior management is crucial to ensure a continued focus on widening participation activities, given competing institutional demands and pressures. The strength of the institutional relationships has also contributed to a shared understanding of each institution's operating environment and the articulation of shared objectives, which underpins the success of Bridges activities.

The positive outcomes that have been achieved through university and TAFE partnerships are outlined through the *Pathways VET Sector* and the *Sydney TAFE – UTS component of the UTS TAFE Pathways Project* Case Study (see Chapter 15).

Over the evaluation period, UTS and UWS have undertaken significant effort to establish and enhance partnerships with TAFE providers to strengthen students' pathways to higher education. Bridges success in this domain is reflected in Table 25 below, which measures the improvements in institutional relationships at the end of December 2014 as compared to the program inception (see Appendix G for partnership continuum). At the commencement of the partnership, the status of the partnership between UTS and TAFE institutes involved in the *UTS TAFE Pathways Project* partnership was rated as 'low' on the continuum, with the relationship based largely on principles of 'awareness and information sharing'. By 2014, the status of the partnership was reported to have improved significantly, and rated as high, with UTS reporting a strong collaboration representative of a tangible step towards sustained and positive change in the relationship.

The UWS relationship with TAFE institutions through its *Pathways/VET Sector* project started from a stronger standpoint, initially rated as collaborative on the partnership continuum. Over the course of the evaluation, the relationship was strengthened to achieve the highest rating on the partnership continuum – genuine partnership.

In addition, the partnership and feedback mechanisms between TAFEs and universities facilitate knowledge sharing as to the practices required to support effective transition from TAFE to university. Feedback from TAFE coordinators suggests that students are better prepared for university after working with university lecturers and are more ready for university assessments after the melding together of assessment styles.

*Table 25: Status on the partnership continuum, Progress from partnership inception to December 2014<sup>130</sup>*

Project	Status on partnership continuum at inception	Stats on partnership continuum at end of December 2014
UTS – TAFE Pathways Project	1	4
UWS - Pathways/VET Sector	4	5

*Source: Bridges to Higher Education data*

### 9.2.2 Participation in Bridges establishes pathways from TAFE to university

Data suggests that participating in Bridges is assisting students move through TAFE to enter university. The number of credit transfers and articulation arrangements between TAFE and universities has increased to 186 in 2014, from nil in 2012.

*Table 26: Increasing capacity to access higher education, 1 Jan 2012 to 31 Dec 2014<sup>131, 132</sup>*

Indicator	Number involved 2012	Number involved 2013	Number involved 2014
<b>System change</b>			
Number of new pathways developed	202	166	53
Number of credit transfer and articulation arrangements	-	184	186
Schools involved with alternative pathway applications	4	11	8

*Source: Based on information provided by Bridges.*

Bridges projects have increased students awareness of alternative pathways to higher education, which in turn has enhanced students' confidence that university is a real and achievable goal.

<sup>130</sup> Status on the partnership continuum was reported using a scoring system in 2014, which measured the improvements of the intuitional relationships between TAFE and universities at the end of December 2014 as compared to the program inception. The scoring system ranged from 1 (lowest) to 5 (highest).

<sup>131</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

<sup>132</sup> Statistical estimation was unable to be performed for these indicators.



*Table 27: Increased awareness of alternative pathways, 1 Jan 2012 to 31 Dec 2014*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
<b>Students reporting increased awareness of alternative pathways</b>						
Students reporting increased awareness and knowledge of diverse pathways (e.g. TAFE)	29,987	29,554	30,420	87%	85%	88%

Source: Bridges to Higher Education data

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

This data is supported by feedback from the qualitative templates and interviews, which suggest that Bridges plays an important role in developing pathways for students. This is achieved via access to university mentors or speakers, goal-setting classes, and campus visits and sharing pathways information on credit recognition and transfer opportunities.

Launched in 2014, the innovative pilot program UWS *Diploma Plus*, has facilitated TAFE students' exposure to a higher education environment and understanding of pathways. In its first year, *Diploma Plus* has engaged 130 students, with 30 per cent lodging an application to commence university in 2015. Of those students surveyed, 80 per cent agreed or strongly agreed that attending the master class session/s encouraged them to seriously consider university as their next step. The pilot was deemed successful with recommendations to expand the program to other community services diploma courses in 2015.

Up to date and easily accessible information as to pathways has also facilitated opportunities for students to transfer more easily between TAFE and university. The formalisation of such pathways under Bridges, have resulted in clear expectations and agreed arrangements between institutions. This has empowered students with the knowledge required to plan and take ownership of their decisions.

Credit recognition arrangements continued to be an important pathway mechanism in 2014: the *UTS TAFE Pathways Project* supported the Faculty of Design, Architecture and Building (DAB) to finalise 76 formal credit recognition arrangements between TAFE diplomas/advanced diplomas and DAB courses, including 36 TAFE pathways into the second year of university study. In the last twelve months, UTS has more than doubled its number of formal TAFE credit recognition arrangements, and now has 167 credit recognition arrangements in place between TAFE qualifications and UTS degrees, listed on its Credit Search Tool. In addition, university staff commented on the signal this sends to TAFEs and students; that these pathways are valued and that universities are committed to supporting students to follow their aspirations to enrol at a university.

Bridges projects that share relatable experiences have also motivated students to pursue alternative pathways. Sharing personal experiences and providing clear information about how TAFE-university pathways may be pursued, improves students' confidence that university entry is achievable:

*"Bringing an ex-TAFE student along was a great addition to the presentation. He made my goals seem more attainable and realistic" (Student, UTS TAFE Pathways Project).*

*"The thing I enjoyed most about the day was talking and discussing things with the presenter [a university student]" (High school student).*

This feedback was supported by TAFE teachers, who cite the difference in attitudes from students following involvement in Bridges programs and presentations at TAFE:

*"The UTS students' presentations... were all very engaging and understood the needs of their audience. They presented as positive role-models... our students could relate well to them" (Head Teacher, Tertiary Preparation Certificate).*

### 9.2.3 Alternative entry

Bridges is also assisting students enter university, providing flexibility with respect to ATAR requirements and allowing students to complete university credits while at high school.

For example, recognising that ATAR may not reflect the different circumstances of students studying the HSC, the ACUgate *Principal's Recommendation Program* works with high schools to identify students who are talented but are experiencing difficulty gaining university entry due to their ATAR. Over the 2012-2014 period, there were 69 applicants for entry, with 50 applicants accepted (73 per cent).

Similarly, the ACUgate *Uni Step-Up* program provides high school students with the opportunity to complete two units of university study while still in year 11. ACU provides wide-ranging support to enable development of those skills required to thrive at university (e.g., how to write, how to think critically, how to better analyse ideas/concepts, how to construct an essay, and how to best answer essay questions). Student feedback suggests the program is effective in terms of developing students' study skills and confidence in the processes of transition.

Students are also exposed to TAFE pathways through their participation in university campus visits. The result is a better understanding of the various means to access university (and that direct to university, is but one pathway):

*"They showed us different alternatives and pathways like TAFE, and how to cross over from it. It was a stress reliever – dealing with the pressure of 'you have to get this ATAR or you can't go'. They also gave us information on bonus points, scholarships and how to apply" (Student, Macquarie University campus visit).*

### 9.2.4 Transition support and improved data monitoring

Bridges projects focus on supporting successful transitions between TAFE and university. While some universities have their own first year student transition program, Bridges has worked to understand the unique experiences of TAFE students who make this transition. Transition activities engage students early in the year (before classes commence), to support their understanding of the range of support services available and avenues where assistance is required. For example, *Let's Talk Uni*, a UWS TAFE Pathways project, aims to support students' transitions by assisting them to manage their expectations of university and facilitating opportunities for students to socialise with their peers. It is hoped that these strategies will give students a realistic understanding of university life, and contribute to their sense of belonging. Feedback provided by participants demonstrates that *Let's Talk Uni* improves VET students retention in the early weeks post transition; an acknowledged challenge. Bridges funding was

initially used to develop and deliver this initiative, however, with strong support of senior university leaders, the intent is that UWS will cover the costs of the initiative into the future. This development highlights the value of pilot funding in enabling innovative ideas to be tested and refined in a safe environment. This process can be used effectively to demonstrate benefits and gain support for ongoing funding.

Universities are undertaking analyses of pathway outcomes data, to better understand the challenges students experience during transition, so as to implement targeted support for retention. For example, the *UTS TAFE Pathways Project* is seeking to analyse data about how students are managing and performing at university, together with student experience data, to gain a broader understanding of students' engagement, motivation, commitment and ability to succeed at university. Such data collection, complemented with research as to prospective students' needs and interests, will provide the evidence-base and rationale to further strengthen the supports and processes required to facilitate a successful transition from TAFE.

#### **Sarah's Story: How Bridges has supported student transitions to higher education**

Sarah, a former TAFE student, reflected on the value that she gained from participating in the students gained from participating in the UTS TAFE Pathways project.

*"I really believe [the project coordinator] played a massive role in helping with our transition from work/TAFE to university. There were so many little things like emailing tutors we didn't think we were allowed to do - sounds weird I know. Without guidance we would have been stuck not knowing what to do or without our group tutor to mention the things we had no clue about. It would be great if the uni could provide [the project] with more funding because [the project] deserves it!! I really enjoyed my first year at UTS, here's hoping that next year is just as good!"*

#### **9.2.5 Relationship with schools**

Student feedback suggests stronger awareness of alternative pathways to university other than the ATAR, and that this is motivating some students to complete high school with the confidence that higher education opportunities are more likely to be open to them.

However, while universities demonstrated stronger and deeper relationships with TAFEs and schools through their involvement in a range of Bridges projects, it is apparent that there is limited integration between TAFE Pathways projects and Bridges projects undertaken in schools. Schools that lacked their own explicit partnerships with TAFE institutions were less likely to be aware of TAFE pathways or be in a position to promote them to their students. These schools were also less likely to recognise the benefits of TAFE as further study option in and of itself, and were more likely to continue the perception that TAFE is a less desirable alternative to university. This is a consideration for schools.

### **9.3 Summary**

The information and data provided to the evaluation suggests that Bridges is increasing capacity to access higher education through improving pathways to university for prospective higher education applicants. Students and teachers are commenting on greater awareness of TAFE-university transitions and greater motivation to pursue higher education.

Bridges is also supporting more systemic change in university-TAFE relationships and pathways mechanisms. Investment over time has supported stronger relationships at the institutional level, which is contributing towards project sustainability as universities and TAFEs embed partnership

practices and key project activities in their day to day work. There is a general increased awareness amongst university staff of TAFE students and their specific transition experiences and needs, and use of continued feedback loops ensures that programs are adjusted and refined to maximise impact for their target cohorts.

## 10. Supporting Aboriginal and Torres Strait Islander students

Bridges is offering benefits to Aboriginal and Torres Strait students, families, teachers and community members. Through the provision of culturally relevant, engaging and tailored information and activities, and access to mentors and role models, students have developed academic and practical skills, and are showing more interest and confidence towards higher education. Bridges has successfully engaged both parents and the Aboriginal and Torres Strait Islander communities, which in turn has enhanced their understanding of higher education offerings and pathways, and strengthened their capacity to support students to achieve their potential.

Critical to the success of Bridges in this domain is its collaborative approach to the engagement of Aboriginal and Torres Strait Islander communities. Through their joint commitment and effort, Bridges partners have developed targeted, engaging and informative projects and resources to support Indigenous students, families, and communities, understanding of, and aspirations towards, higher education.

### 10.1 What strategies has Bridges implemented

Eleven Bridges projects have a specific focus on engaging Aboriginal and Torres Strait Islander students in higher education, as set out in Appendix D. The key strategies employed across these projects can be broadly categorised as:

Table 28: Bridges strategies to support Aboriginal and Torres Strait Islander Students

**Culturally sensitive program delivery:** To facilitate culturally sensitive program delivery, Aboriginal Elders and respected community members are engaged in the design and facilitation of projects and activities. This approach strengthens the legitimacy and integrity of Indigenous specific projects whilst exposing students to a broad range of cultural experiences and activities such as traditional games and cultural identity workshops.

**Access to role models through formal mentoring programs and campus based or community events:** to provide students and their families the opportunity to engage with Aboriginal and Torres Strait Islander university students and academic and support staff, and gain insights into university life.

**Strategic and coordinated projects and program delivery:** Bridges has implemented a considered and consistent strategy to support engagement of Aboriginal and Torres Strait Islander students. This has been facilitated through central coordination points, the development of comprehensive and accessible resources tailored to Aboriginal and Torres Strait Islander students, and working closely with schools to tailor program activities to their needs.

**Engaging broader community through events:** A number of projects run community wide events and forums to enhance parent/community awareness and knowledge of higher education and strengthen community aspirations.

Source: KPMG analysis, documents provided by Bridges

## 10.2 Outcomes achieved

Aboriginal and Torres Strait Islander Australians are significantly under-represented in higher education. The 2012 *Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People* found that well targeted university outreach programs can support students to better address common barriers to higher education.<sup>133</sup> This is an area of strategic focus for Bridges.

Through a range of culturally appropriate and targeted project activities, Bridges is enhancing Aboriginal and Torres Strait Islander students' awareness of, and aspirations towards, higher education. Bridges has also provided targeted and relevant information and tools to parents and communities to enable them to support students' engagement, academic preparedness, and outcomes.

### 10.2.1 Evidence of improved cultural connections

Bridges projects have raised students' awareness of Aboriginal and Torres Strait Islander culture through cultural enrichment activities; fostered positive learning and cultural pride through students' interactions with Aboriginal and Torres Strait Islander Elders and role models; and built students' peer networks through ongoing engagement and support and ready access to online platforms.

*"I know him he's from Bourke like me (referring to one of the role models in the brochures). I didn't know he was studying at uni. I think I will give him a call."*(Student, referring to Indigenous Prospectus).

Qualitative evidence suggests that Bridges projects are enabling Aboriginal and Torres Strait Islander students to learn more about their culture.

*"It's wonderful for the kids to feel part of Yalbalinga and to be able to explore their culture on the university campus."* (Aboriginal Education Officer, ACU Meet the Professor)

This has been further enhanced by projects (such as University of Western Sydney's *Pathways to Dreaming*) that provide students the opportunity to participate in hands on activities with an Aboriginal and Torres Strait Islander theme. These activities not only allow Aboriginal and Torres Strait Islander students to engage with their culture, they also support whole-of school cultural awareness.

Bridges has increased Aboriginal and Torres Strait Islander students' support and peer networks through activities that enable students to engage with their peers from other schools, as well as with Aboriginal and Torres Strait Islander university students. The benefits of this approach are particularly evident for students from rural and remote communities; teachers reported that these students often feel that higher education is an unrealistic or unattainable goal, have limited

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<sup>133</sup> Department of Education and Training (2012), *Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People – Final Report*, Department of Education and Training, Federal Government, Canberra.

understanding or experience of university life and, without Bridges, often do not have the funds to access such projects. Outcomes in this domain are more likely to be maintained if connections are able to be maintained (e.g. through an online interactive portal or follow up school visits) following project participation. It should be noted that the extension of these activities beyond the funding period is contingent on the availability of further funding.

### 10.2.2 Evidence of improved academic performance and preparation

Bridges projects are contributing to students' academic performance and participation through the facilitation of tailored, hands on activities that enhance student engagement and develop academic and practical skills.

As outlined in Table 29, across projects focused specifically on Aboriginal and Torres Strait Islander students, teachers reported improved academic self-confidence for an estimated 5,846 students (77 per cent) after participating in Bridges activities. An even greater increase in confidence in their own academic abilities was articulated by Aboriginal and Torres Strait students themselves (an estimated 85 per cent, n = 6,953).<sup>134</sup>

Across all relevant projects, 97 per cent of parents and carers (n = 196) reported an increased ambition for their child, and an estimated 88 per cent (n = 178) became more involved in their child's education and school.<sup>135</sup>

*Table 29: Impact on Aboriginal and Torres Strait Islander students' academic preparedness and outcomes, 1 Jan 2012 to 31 Dec 2014*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimate d %	Lower 95% (%)	Upper 95% (%)
<b>Self-esteem and sense of self-efficacy in mastering academic tasks</b>						
Students self-reporting greater confidence in their academic abilities	6,953	6,607	7,299	85%	81%	89%
Parents and carers reporting an increase in ambitions for their child	196	195	198	97%	96%	98%
Students for whom teachers report greater confidence in academic abilities	5,846	4,966	6,727	77%	66%	89%
Parents and carers more involved in their child's education (as reported by teachers)	178	167	190	88%	82%	94%

<sup>134</sup> Based on the confidence intervals for these estimates, the evaluation can confidently conclude that the proportion of students demonstrating these outcomes is reasonably high.

<sup>135</sup> The following indicators: Parents and carers reporting an increase in ambitions for their child; Parents and carers more involved in their child's education, and Parents and carers more involved in the school (as reported by teachers); were only reported on by the NISEP Program.



Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
Parents and carers more involved in the school (as reported by teachers)	178	167	190	88%	82%	94%

Source: Bridges to Higher Education Data

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

Qualitative feedback from teachers and students supports these findings. Teachers reported that projects that provide students with opportunity to utilise leadership skills and direct their own learning through hands on activities have significantly contributed to students' academic capacity and confidence. For example, Macquarie's LEAP - *National Indigenous Science Education Program (NISEP)* places Aboriginal and Torres Strait Islander students in the role of leaders of science based activities. Students are required to present findings to their peers, parents and the wider public. This approach engages and empowers students, and supports the development of skills that will enable them to continue with their schooling; and give them the confidence to strive towards higher education.

*"The program increased the level of engagement with science of rural and regional communities of Australia with high Indigenous populations and increased confidence in science, especially by Indigenous Youth" (Principal, NISEP)*

Bridges has also enhanced teacher capacity to engage with and support Aboriginal and Torres Strait Islander students. Through the provision of cultural competency training and increased exposure to Aboriginal and Torres Strait Islander cultural activities, teachers have developed the insight and skills to optimise students' learning experience and improve their academic performance.

*"The whole training was useful. It opened my mind to Aboriginal culture and I feel I can apply this new knowledge to my method of teaching and interacting with the students to get better results" (Teacher, University of Sydney Compass: Volunteer Program).*

### 10.2.3 Evidence of increased awareness, confidence and motivation

Bridges has increased awareness of higher education by providing Aboriginal and Torres Strait Islander students, families and communities with clear, accessible and relevant information; and has enhanced students' confidence and motivation towards higher education by showcasing the positive experiences of Aboriginal and Torres Strait Islander mentors and role-models. Outcomes achieved in this domain are further illustrated in the University of Sydney *Wingara Mura Burrabugu Summer Program* Case Study (see Chapter 15).

#### Awareness

As a result of their participation in Bridges projects, Aboriginal and Torres Strait Islander students have developed a stronger awareness of the diversity of university entry pathways, the range of university offerings, and the benefits of higher education.

*"I enjoyed everything, I learnt that I am definitely going to uni to study. When I first came (to the program) I was just interested in music but this experience has widened my options."*  
(Student, Wingara Mura Bunga Barrabugu Summer Program)

As illustrated in Table 30, of all the students participating in relevant<sup>136</sup> projects, an estimated 88 per cent (n = 1,280 students) reported a greater awareness of what university offers, with 82 per cent (n = 582) reporting greater awareness of potential career paths. Further, better knowledge of the higher education and options available for their child was reported by 96 per cent (n = 242) of parents and carers.<sup>137</sup>

*Table 30: Impact on Aboriginal and Torres Strait Islander students' awareness of higher education, 1 Jan 2012 to 31 Dec 2014*<sup>138</sup>

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
<b>Awareness of potential career/ post-school options</b>						
Students reporting greater awareness of what university offers	1,280	1,244	1,316	88%	85%	90%
Students reporting greater awareness of potential career pathways	582	550	614	82%	77%	86%
<b>Parent and carer knowledge</b>						
Parents and carers reporting better knowledge of the higher education options available to their child	242	236	247	96%	93%	98%
Parents and carers reporting better knowledge of the benefits associated with higher education	239	233	244	94%	92%	97%

Source: Bridges to Higher Education Data

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

### Motivation and confidence

Bridges projects are supporting students' motivation towards higher education through tailored, activities that enhance students' engagement and ambition. As demonstrated below, teachers

<sup>136</sup> 'Relevant' implies projects that target Aboriginal and Torres Strait Islander students.

<sup>137</sup> As the confidence interval for these estimates is relatively narrow, the evaluation can confidently conclude that the proportion of students and parents demonstrating greater awareness of higher education post Bridges involvement is very high.

<sup>138</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

estimated that 86 per cent (n = 6,528) of students were more engaged in school after participating in Bridges. Improved motivation to continue to year 12 was reported by an estimated 88 per cent (n = 9,818) of students and this was supported by an estimated 98 per cent (n=238) of teachers reporting an increase in ambition for their students.<sup>139</sup>

*Table 31: Impact on Aboriginal and Torres Strait Islander students' motivation towards higher education, 1 Jan 2012 to 31 Dec 2014<sup>140</sup>*

Indicator	Estimated number	Lower 95%	Upper 95%	Estimated %	Lower 95% (%)	Upper 95% (%)
<b>Education engagement</b>						
Students for whom teachers report greater engagement in school	6,528	5,867	7,189	86%	78%	95%
<b>Motivation</b>						
Students self-reporting improved motivation to continue to year 12	9,818	9,506	10,129	88%	85%	91%
<b>Changes in cultural expectations about higher education</b>						
Teachers reporting an increase in ambitions for their students	238	232	244	98%	96%	100%*

Source: Bridges to Higher Education Data

*Note: Statistical estimates were produced for the number and percentage of all participants who reported positive outcomes for 2012, 2013 and 2014. The 95 per cent confidence interval (95 per cent upper and lower bound) for each question provides a range within which the true number or percentage is likely to fall.*

Bridges has supported parent and student awareness of higher education through the development of consistent messaging, information and resources tailored to the Aboriginal and Torres Strait Islander community. The Indigenous Project Group have driven many initiatives including the Indigenous Models of Achievement episodes, Indigenous Community Forums, National Centre for Indigenous Excellence Family Day; and the production of a cross University Indigenous Propectus. The IPG have also developed strategies to ensure that all students can access critical resources. For example, transferring TVS – Indigenous Models of Achievement to an online platform has ensured that students from remote and rural Aboriginal and Torres Strait Islander populations are able to access the projects online without the barrier of distance.

<sup>139</sup> The confidence interval for these estimates is relatively narrow, indicating high reliability for these estimated. Accordingly, the evaluation can confidently conclude that the proportion of students demonstrating greater motivation towards university is very high.

<sup>140</sup> Multiple projects could report to one indicator – refer to Appendix F for project breakdown by indicators.

### **Indigenous Prospectus: How Bridges has made university a reality for Aboriginal and Torres Strait Islander students**

The *Indigenous Project Group* (IPG), developed the Indigenous Student Prospectus which showcases all five of the Bridges participating universities and Indigenous Student Centres and outlines the range of courses, financial support options, and scholarship programs available across universities. This ensures that Aboriginal and Torres Strait Islander people have access to clear and consistent information from a single source. The following reflections from teachers and indigenous community members highlight the benefits of this initiative:

*"It is visually appealing for our students and is providing them and their families with clear and concise information."*

*"What a great starting point for an Indigenous student thinking about going to uni."*

*"It is so important for our (Aboriginal) students to have lots of role models and be surrounded by them so that success, and going to uni, becomes the norm not the exception."*

Prior to participation in Bridges projects, many Aboriginal and Torres Strait Islander students and parents reported little interaction with, and understanding of, higher education settings. Qualitative feedback from parents and students suggests that participation in Bridges has "opened their eyes" about the higher education options and has effectively "demystified the university application and admission process". This has assisted students and parents to realise that higher education is a valuable and tangible goal.

*"We need more information like this..., more on Indigenous support schemes, scholarships and how to get into uni." (Aboriginal and Torres Strait Islander community member)*

Projects that have facilitated meaningful engagement with Aboriginal and Torres Strait Islander university students have also contributed towards students' increased confidence and motivation towards higher education. Through community events, mentor programs and information sessions, Bridges projects have showcased the positive experiences and outcomes achieved by Aboriginal and Torres Strait Islander university students; this has in turn enhanced students' confidence that they too have the capacity to engage in higher education.

*"I have loved talking to Chris (indigenous student); he has told me so much about studying at Uni" (Student).*

#### **10.2.4 Evidence of increased community capacity**

Bridges projects have increased Aboriginal and Torres Strait Islander community capacity through a range of inclusive and culturally relevant strategies, including community forums, information nights and events. As a result, communities are recognising the importance of higher education and the need to promote higher education.

The Bridges universities have established strong relationships with schools with a high proportion of Aboriginal and Torres Strait Islander students. Building relationships with schools over the long term builds trust, and facilitates the provision of tailored activities and interventions. Other universities have sought to establish strong partnerships with external organisations to assist in raising awareness of Bridges projects, whilst also providing Aboriginal and Torres Strait Islander communities with access to multi-layered support.

The TVS Indigenous Models of Achievement series has had particular success in building community capacity by demonstrating, at a practical level, both the pathways to access higher education and the tangible benefits that higher education can bring. The series presents Indigenous role models who tell their own stories about access, study and hurdles they overcame to attend university. Research conducted with Indigenous focus groups prior to the production of the series showed more Indigenous role models were needed to provide inspiration to younger people, as well as older people who feared they were not “cut out” for further study. The program focuses on grass roots achievers of all ages – those fresh out of school, people who returned to study after work, marriage and children, women and men. The expert Indigenous commentators in the series comment on the difficulties faced by Indigenous people, and how important it is for the Indigenous community to help each other through obtaining an education.

The focus by Bridges on building relationships and providing long term support to schools and students is reflected in focus group feedback. Teachers and principals highlighted the limitations of widening participation programs that adopt a sporadic approach to school engagement, and highlighted that projects could not expect to influence change through a one-off event or information booklet. It is evident, from the perspective of Bridges partners and schools, that real change can only be influenced through continued effort, consistent support and persistent engagement.

Building community capacity was also highlighted by Bridges as a mechanism to support project sustainability. Establishing strong partnerships with schools and private organisations allows critical knowledge to be retained within communities. This can be embedded through professional development activities within schools, or the establishment of a consortia arrangement that taps into the resources of other organisations. For example, *NISEP* is enabled through strong partnerships between Macquarie University, Indigenous university students, partner schools, local communities, Indigenous Elders, and science outreach and education organisations. This consortia arrangement increases the self-sustaining capacity of the project, as more individuals’ and organisations have an understanding of the project and an appreciation of its benefits. For further information on this project, refer to Chapter 15.

### 10.3 Summary

Evaluation data and qualitative feedback suggests Bridges has increased Aboriginal and Torres Strait Islander student’ academic preparedness and motivation. Students and teachers alike reported that tailored cultural enrichment activities have led to greater awareness of Aboriginal and Torres Strait Islander culture and a greater awareness of university offerings. Further, Bridges is also improving cultural connections for Aboriginal and Torres Strait Islander students and their families through initiatives that recognise and celebrate Indigenous culture.

Key enablers reflected the engagement of Aboriginal and Torres Strait Islander Elders and communities, ensuring resources and activities were culturally relevant and providing students with Aboriginal and Torres Strait Islander role models.

## **11. University applications and progression**

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NSW UAC data<sup>141</sup> was analysed to identify whether there was any Bridges impact on the rate at which Year 12 students were accepted into university.

A key finding was that both Bridges and non-Bridges schools experienced growth in the proportion of university applicants receiving an offer, between the pre Bridges period (2008-2011) and the post Bridges period (2012-2013). For Bridges schools, that proportion increased, on average, by 5.37 per cent of students and by 3.15 per cent for non-Bridges schools.

However, the increase for Bridges schools was markedly higher than for non-Bridges schools. While testing showed this difference was not statistically significant, the analyses suggest that Bridges has supported a higher offer rate among its participating schools (compared to non-Bridges schools).

Focusing on the results for schools in low socio-economic areas alone, identifies a clear Bridges effect. In this case, there was a statistically significant difference between Bridges and non-Bridges schools. That is, the average increase in rates of Bridges applicants receiving an offer was significantly higher than that of non-Bridges schools. The size of the difference (5.13 per cent) is substantial and supports the conclusion of a Bridges specific effect among schools in low socio-economic areas for this indicator.

### **11.1 Overview of the approach**

The UAC data were analysed to determine whether any potential Bridges effect could be identified and, if so, what was the size of such an effect and did it vary for different subgroups of schools.

Two indicators were chosen for this analysis:

- Proportion of Year 12 students applying to university
- Proportion of university applicants receiving an offer of a place.

For each school, the change in each indicator from the pre Bridges period to the post Bridges period was calculated. For this purpose, the pre Bridges period was defined as the years from 2008 to 2011, inclusive. The post Bridges period was defined as the years 2012 and 2013.

These change indicator variables were then compared between Bridges and non-Bridges schools using student's t-test. These t-test comparisons were done for different subsets of schools, according to the attributes of interest (i.e. school socio-economic status, located within or outside GWS and metropolitan vs regional/remote).

### **11.2 Preliminary analysis**

Table 32 compares that rate for the pre Bridges period (2008-2011) with that for the post Bridges period (2012-2013).

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<sup>141</sup> UAC data analysed were for students of NSW schools.

*Table 32: Comparison of proportion of Year 12 students accepted to university, Bridges schools with non-Bridges schools, All schools\*, 2008-2011 compared with 2012-2013*

	Pre Bridges			Post Bridges		
	Year 12 students	University offers		Year 12 students	University offers	
Not Bridges	197,101	101,794	51.65%	102,495	56,406	55.03%
Bridges	82,519	34,041	41.25%	44,830	19,709	43.96%
All schools	279,620	135,835	48.58%	147,325	76,115	51.66%

\* NSW schools only.

Source: KPMG, Data provided by UAC

As the table shows, university acceptance rates increased between pre and post Bridges periods for both Bridges and non-Bridges schools. The increase for non-Bridges schools was larger than that for Bridges schools (+3.39 per cent and +2.71 per cent, respectively).

The other notable feature of Table 32 is that the pre-Bridges university acceptance rate was markedly lower (by more than 10 per cent) for Bridges schools than for non-Bridges schools. This difference reflects that the Bridges schools were far more likely to be in low socio-economic areas, relative to the non-Bridges schools. Such schools historically have lower university acceptance rates than other schools. Given this difference in composition for the two groups of schools, it was important that the UAC data analysis considered the risk that schools' presence in a low socio-economic area may have affected any potential Bridges effect on university acceptance rates.

Table 33 and Table 34 show that this risk was real and allows its impact to be estimated. Table 33 includes only schools in low socio-economic areas in the comparison of university acceptance rates between Bridges and non-Bridges schools. Table 34 limits the comparison to other (schools not in low socio-economic areas) schools. The two tables make clear that the Bridges intervention was focused on schools with a low initial rate of university acceptance and that it had a different impact on schools in low socio-economic areas, than other schools. This latter conclusion follows from the observation that, while Bridges schools experienced higher post Bridges university acceptance rates regardless of socio-economic status, non-Bridges schools in low socio-economic areas actually experienced lower acceptance rates in the post Bridges period.

*Table 33: Comparison of proportion of Year 12 students accepted to university, Bridges schools with non-Bridges schools, LSES schools\*, 2008-2011 compared with 2012-2013*

	Pre Bridges			Post Bridges		
	Year 12 students	University offers		Year 12 students	University offers	
Not Bridges	28,888	11,123	38.50%	15,732	5,908	37.55%
Bridges	45,423	16,661	36.68%	24,947	9,884	39.62%
All schools	74,311	27,784	37.39%	40,679	15,792	38.82%

\* NSW schools only.

Source: KPMG, Data provided by UAC



*Table 34: Comparison of proportion of Year 12 students accepted to university, Bridges schools with non-Bridges schools, Non-LSES schools\*, 2008-2011 compared with 2012-2013*

	Pre Bridges			Post Bridges		
	Year 12 students	University offers		Year 12 students	University offers	
Not Bridges	168,213	90,671	53.90%	86,763	50,498	58.20%
Bridges	37,096	17,380	46.85%	19,883	9,825	49.41%
All schools	205,309	108,051	52.63%	106,646	60,323	56.56%

\* NSW schools only.

Source: KPMG, Data provided by UAC

This initial analysis pointed to the need for more detailed investigation of the UAC data to confirm this apparent Bridges effect, quantify it and understand its mechanism. Two potential mechanisms for Bridges to change university acceptance rates were considered in this analysis. The first mechanism is through changes to students' awareness and attitudes towards university as a post secondary option leading to increased rates of application to university. The second is through changes in the quality of applications made leading to increased rates of acceptance for applications made.

The following two indicators were considered fit for purpose:

- Proportion of Year 12 students applying to university—changes in this indicator would reflect students' awareness and attitudes towards university as a post secondary option.
- Proportion of university applicants receiving an offer of a place—changes in this indicator would reflect the quality of applications made.

Changes in either or both of these indicators could have contributed to the observed improvement in university acceptance rates for Bridges schools in low socio-economic areas relative to non-Bridges schools in low socio-economic areas. The analyses for each indicator are presented in the following two sections and the findings are summarised in section 11.5.

### 11.3 Proportion of Year 12 students applying to university

Table 35 shows the results of the comparison<sup>142</sup> between all Bridges schools and all non-Bridges schools for the change in this indicator. It is clear from the table that neither Bridges nor non-Bridges schools experienced material changes in the proportions of Year 12 students applying to university. As a result, the t-test result shows no statistically significant difference in those changes between these two groups of schools.

<sup>142</sup> Comparisons were made of the pre Bridges to post Bridges change in proportions, between Bridges schools and non-Bridges schools. Student's t-test was used to test for statistical significance. Standard errors and confidence intervals were produced to aid interpretation of the t-tests' results and of effect sizes.

*Table 35: Comparison of change in proportion of Year 12 students applying to university, Bridges schools with non-Bridges schools, All schools\*, 2008-2011 compared with 2012-2013*

Schools	Sample size	Mean change	Standard error	Lower Bound	Upper Bound
Not Bridges	567	+0.52%	0.40%	-0.27%	+1.31%
Bridges	213	+0.86%	0.59%	-0.30%	+2.01%
Combined	780	+0.61%	0.33%	-0.04%	+1.26%
Difference		+0.34%	0.71%	-1.06%	+1.74%

t = +0.4769

Degrees of freedom = 778

P = 0.3168

\* NSW schools only.

Source: KPMG, Data provided by UAC

Table 36 shows the results of the comparison between Bridges schools and non-Bridges participating schools in low socio-economic areas. This table shows that, on average, the Bridges schools experienced growth in proportion of applicants receiving offers (+0.25 per cent), while the non-Bridges schools experienced a decrease (-1.69 per cent). Nonetheless, statistical testing found this difference not to be significant.

The confidence intervals for both groups of schools contain zero, which indicates that the average change itself is (statistically) indistinguishable from zero. This confidence interval is quite wide, suggesting significant uncertainty for this result.

Taken as a whole, these observations suggest any Bridges effect on the proportion of Year 12 students applying to university, among Bridges schools in low socio-economic areas, is too small to distinguish from random variation in that proportion among schools in low socio-economic areas generally. However, it is likely that Bridges is contributing to stronger quality applications, leading the positive trend in acceptances noted in section 11.4.

*Table 36: Comparison of change in proportion of Year 12 students applying to university, Bridges schools with non-Bridges schools, LSES schools\*, 2008-2011 compared with 2012-2013*

Schools	Sample size	Mean change	Standard error	Lower Bound	Upper Bound
Not Bridges	144	-1.69%	+1.11%	-3.87%	+0.50%
Bridges	136	+0.25%	+0.81%	-1.35%	+1.85%
Combined	280	-0.75%	+0.69%	-2.11%	+0.62%
Difference		+1.94%	+1.37%	-0.76%	+4.64%

t = +1.4157

Degrees of freedom = 278

P = 0.0790

\* NSW schools only.

Source: KPMG, Data provided by UAC

The analyses for other subgroups of schools, including metropolitan status, whether or not the school was in GWS and whether or not the school participated in a Bridges project supported by HEPPP, also did not produce evidence of a Bridges effect.

## 11.4 Proportion of university applicants receiving an offer of a university place

Table 37 shows the results of the comparison between all Bridges schools and all non-Bridges participating schools. A key finding was that both Bridges and non-Bridges schools experienced growth in proportions of university applicants receiving an offer, between the pre Bridges period and the post Bridges period. This is likely to reflect the broader context: principally the uncapping of university places is likely to affect schools participating in Bridges and those non-participating schools equally; and there are a range of other programs to which schools have access (i.e. provided by other universities and various not-for-profit organisations).

For Bridges schools, that proportion increased, on average, by 5.37 per cent of students and by 3.15 per cent for non-Bridges schools. This finding demonstrates this indicator was increasing generally, regardless of Bridges.

The second important finding is that the increase for Bridges schools was markedly higher than for non-Bridges. While testing showed this difference was not statistically significant, the confidence interval for the difference (from +0.24 per cent to +4.19 per cent) supports the view that a Bridges effect operated to produce a tendency for rates of applicants receiving offers to increase more among Bridges schools than among non-Bridges schools.

*Table 37: Comparison of change in proportion of university applicants receiving an offer of a place, Bridges schools with non-Bridges schools, All schools\*, 2008-2011 compared with 2012-2013*

Schools	Sample size	Mean change	Standard error	Lower Bound	Upper Bound
Not Bridges	545	+3.15%	0.54%	+2.09%	+4.22%
Bridges	210	+5.37%	0.85%	+3.70%	+7.04%
Combined	755	+3.77%	0.46%	+2.87%	+4.67%
Difference		+2.22%	1.01%	+0.24%	+4.19%

t = +2.2049

Degrees of freedom = 753

P = 0.0139

\* NSW schools only.

Source: KPMG, Data provided by UAC

Table 38 shows the results of the comparison between Bridges schools and non-Bridges schools in low socio-economic areas. In this case, there was a statistically significant difference between Bridges and non-Bridges schools. That is, the average increase in rates of applicants receiving an offer was significantly higher than that of non-Bridges schools. The size of the difference (5.13 per cent) is substantial and supports the conclusion of a Bridges specific effect among schools in low socio-economic areas for this indicator.

It is also worth noting that the increase observed for non-Bridges schools (0.97 per cent) is not statistically distinguishable from zero. This can be seen from the fact that the confidence interval for this increase includes zero. In contrast, the interval for Bridges schools is well separated from zero. These observations further support the finding of a Bridges effect being present.

*Table 38: Comparison of change in proportion of university applicants receiving an offer of a place, Bridges schools with non-Bridges schools, LSES schools\*, 2008-2011 compared with 2012-2013*

Schools	Sample size	Mean change	Standard error	Lower Bound	Upper Bound
Not Bridges	133	+0.97%	+1.34%	-1.69%	+3.62%
Bridges	134	+6.09%	+1.25%	+3.62%	+8.57%
Combined	267	+3.54%	+0.93%	+1.77%	+5.37%
Difference		+5.13%	+1.83%	+1.52%	+8.74%

t = +2.7956

Degrees of freedom = 265

P = 0.0028

\* NSW schools only.

Source: KPMG, Data provided by UAC

Table 39 shows the results of the comparison between Bridges schools and non-Bridges schools in areas not categorised as low socio-economic. It is clear from the table that there is no Bridges effect found among these schools. Both the t-test result and the confidence interval for the difference in average changes are consistent with this conclusion.

*Table 39: Comparison of change in proportion of university applicants receiving an offer of a place, Bridges schools with non-Bridges schools, Non-LSES schools \*, 2008-2011 compared with 2012-2013*

Schools	Sample size	Mean change	Standard error	Lower Bound	Upper Bound
Not Bridges	412	+3.86%	+0.57%	+2.74%	+4.98%
Bridges	76	+4.10%	+0.77%	+2.57%	+5.62%
Combined	488	+3.90%	+0.50%	+2.92%	+4.87%
Difference		+0.24%	+0.95%	-1.64%	+2.11%

t = +0.2497

Degrees of freedom = 486

P = 0.4015

\* NSW schools only.

Source: KPMG, Data provided by UAC

The analyses for other subgroups of schools did not produce meaningful results for this indicator. Collectively, these findings suggest that there was a likely Bridges effect on schools in low socio-economic areas, which operated to produce higher than expected growth in the proportion of applicants to university who received an offer. No such effect was present for other subgroups of schools.

## 11.5 Summary

The findings presented in this chapter support the conclusion that university acceptance rates among schools in low socio-economic areas were improved by the Bridges program. Any Bridges effect among other schools was either non-existent or too small to be detected.

These findings suggest that there was a Bridges effect on schools in low socio-economic areas, which operated to produce higher than expected growth in the proportion of applicants to university who received an offer. That is, the average increase in rates of Bridges applicants receiving an offer was significantly higher than that of non-Bridges schools. The size of the

difference (5.13 per cent) is substantial and supports the conclusion of a Bridges specific effect among schools in low socio-economic areas for this indicator.

This suggests that Bridges is contributing to the quality of applicants to universities, and therefore, increasing the likelihood of acceptance.

## **12. Cost benefit analysis**

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A cost benefit analysis was undertaken to compare the value of the additional investment made in Bridges with the outcomes derived from the program. This analysis found that an approximate net monetary benefit of \$30 million was realised from the implementation of Bridges, which reflects monetised benefits in the order of \$46 million from an additional investment of around \$16 million. This equates to a return of \$2.80 for each additional dollar invested in the program. Importantly, these benefits increase substantially where the analysis focuses on schools within low socio-economic areas alone: a return of at least \$6.00 is realised for each additional dollar invested in schools within low socio-economic areas.

These results reflect observed improvements in the rate of higher education offers made to attendees at NSW schools where Bridges projects are delivered (compared to other NSW schools). Specifically, analysis of UAC data identified a 2.22 per cent increase in the proportion of applicants receiving an offer, which (adjusting for acceptance and attrition) corresponds to an additional 562 higher education completions over the evaluation period. This effect is more pronounced for schools within low socio-economic areas, with an improvement of 5.13 per cent identified for these schools.

Published research attributes substantial economic benefits to higher education qualifications. Adapting figures drawn from OECD analysis and a combination of other credible sources, the economic benefit of obtaining a higher education qualification was estimated to be approximately \$80,000-\$83,000 (2014 dollars) per person. This figure reflects the additional costs incurred in the short term (i.e. course costs, foregone income) and longer-term benefits generated for the individual and Government (increased income, taxation revenue). Importantly, the outcome of the quantitative cost benefit analysis understates the true impact of Bridges. It does not reflect the impact on higher education participation for younger cohorts impacted by Bridges, as this effect was not yet able to be observed in UAC data.

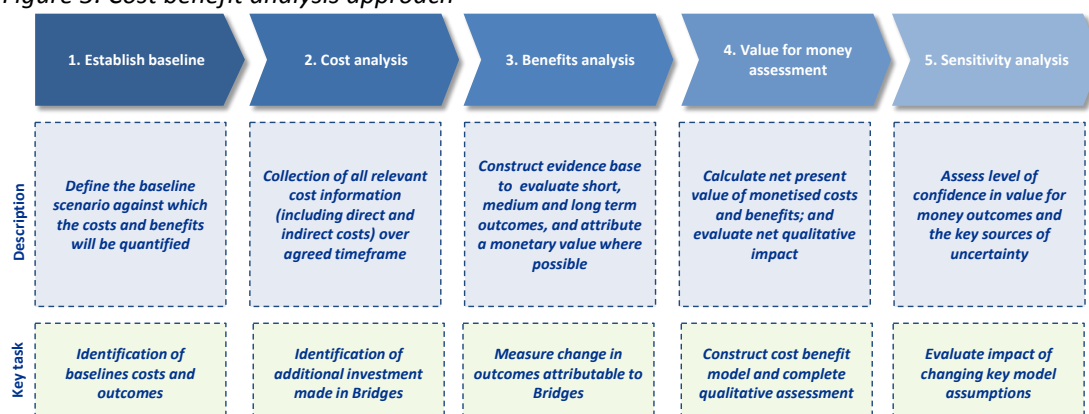
### **12.1 Overview of the cost benefit approach**

The purpose of the cost benefit analysis was to determine whether the additional investment in Bridges is justified by the short, medium and long-term outcomes derived from the program.

The analysis focused on the value of the financial investment in Bridges made by Government and participating universities, the quantitative monetary benefits realised from increased participation in higher education, and a range of qualitative non-monetary impacts drawn from the broader evaluation and literature. A standard cost benefit analysis framework was adopted to compare the present value of the investment over an agreed timeframe, with the present value of the benefits derived by participants as a result of their participation in the Program.

Figure 3 summarises the overall approach adopted for the analysis.

**Figure 3: Cost benefit analysis approach**



Source: KPMG

This approach reflects with the *NSW Government Guidelines for Economic Appraisal* (NSW Treasury, 2007), which provides guidance for the conduct of economic analysis for publically funded investment in NSW, and is consistent with the approach outlined in other best practice government guidelines (i.e. Australian Government, UK Government)<sup>143</sup>.

## 12.2 Establishing the baseline

In accordance with good practice, an incremental approach was adopted for the analysis, which requires the definition of a baseline scenario or counterfactual. This is a hypothetical scenario, which represents the investment that would have been made and the outcomes achieved but for the implementation of Bridges in 2011.

For the purposes of this analysis, the baseline was defined as:

- Continued investment by the five universities in initiatives related to the 'widening participation agenda'. This required an analysis of pre-existing activity by each University, with only those projects that were replaced or expanded through Bridges included in the baseline (refer below for detailed assumptions).
- Outcomes derived from the baseline investment in initiatives related to the 'widening participation agenda' (refer below).

The specific assumptions related to each component of the baseline are outlined below.

### 12.2.1 Assumed baseline costs

The identification of baseline costs required universities to identify initiatives in place, during the period from 2008 to 2011, which were replaced or expanded by Bridges projects. It was assumed that these initiatives (and the corresponding investment) would have been ongoing, but for the implementation of Bridges.

Table 40 outlines the assumptions applied by each university in estimating their baseline expenditure. This highlights the complexity in arriving at a robust estimate. For example, staff

<sup>143</sup> Refer [http://www.treasury.nsw.gov.au/\\_data/assets/pdf\\_file/0016/7414/tpp07-5.pdf](http://www.treasury.nsw.gov.au/_data/assets/pdf_file/0016/7414/tpp07-5.pdf) (accessed 12 February 2015)



typically worked across projects, some of which formed part of the defined 'baseline' activity, which required a proportion of their related costs to be included in the estimated baseline costs.

*Table 40: Baseline assumptions*

University	Approach / assumptions
<b>Macquarie University</b>	<ul style="list-style-type: none"> <li>Estimated as widening participation activities undertaken prior to Bridges funding (i.e. predominantly HEPP funding for partnership activities).</li> <li>While HEPPP funding was provided for participation and partnership activities, only the partnership component was included as this reflects outreach programs with schools.</li> </ul>
<b>University of Sydney</b>	<ul style="list-style-type: none"> <li>A Structural and Diversity Adjustment Fund grant (2008-2011) was used to establish the Compass schools engagement program.</li> <li>For the purposes of the CBA, the costs of the projects established and delivered from this fund (which then rolled into Compass-Bridges) were delineated from any other projects that may have been running in the University.</li> </ul>
<b>UTS</b>	<ul style="list-style-type: none"> <li>UTS defined 'pre-existing activities' as programs and initiatives aimed at improving participation of students who are under-represented in higher education. This included programs designed and implemented from 2008 to 2011 by the UTS Equity and Diversity Unit directly, and as part of the UTS Widening Participation Strategy.</li> <li>When identifying 'pre-existing activities', UTS included programs and initiatives that were continued with Bridges funding and/or replaced with Bridges funded programs from 2012 onwards.</li> <li>One third of Equity and Diversity Unit staff salaries were included for this period, which reflected the approximate proportion of student outreach work at this time.</li> </ul>
<b>UWS</b>	<ul style="list-style-type: none"> <li>UWS identified the full cost of activities related to the widening participation agenda, which comprised HESA funding of around \$20 million received via the Structural Adjustment Fund, and an additional allowance for time spent by university staff working on the related programs and initiatives.</li> <li>Based on a review of individual projects, it was estimated that 30 per cent of this total amount related to projects that were expanded or replaced through Bridges, with the remaining amount representing HEPP institutional funding and core funding for other programs. This second component was excluded from the analysis.</li> </ul>
<b>ACU</b>	<ul style="list-style-type: none"> <li>Minimal pre-existing activity and expenditure was recorded and included in the analysis.</li> </ul>

The table below provides a summary of baseline cost information provided by participating universities for the pre Bridges period (2008 to 2011), which was then extrapolated to approximate the investment that would otherwise have occurred post Bridges (2012 to 2014).

*Table 41: Estimated baseline expenditure (2008 to 2014, nominal dollars)*

University	2008	2009	2010	2011	2012*	2013*	2014*
ACU	\$0.00m	\$0.00m	\$0.07m	\$0.11m	\$0.09m	\$0.09m	\$0.09m
University of Sydney	\$0.00m	\$0.48m	\$0.89m	\$0.98m	\$0.78m	\$0.78m	\$0.78m
UTS	\$0.46m	\$0.67m	\$0.92m	\$1.72m	\$0.94m	\$0.94m	\$0.94m
MQ	\$0.00m	\$0.00m	\$0.36m	\$0.26m	\$0.16m	\$0.16m	\$0.16m
UWS	\$1.20m	\$1.35m	\$1.50m	\$2.70m	\$1.69m	\$1.69m	\$1.69m
<b>Total</b>	<b>\$1.67m</b>	<b>\$2.49m</b>	<b>\$3.74m</b>	<b>\$5.79m</b>	<b>\$3.66m</b>	<b>\$3.66m</b>	<b>\$3.66m</b>

*Source: 2008 to 2011 data provided by each university in response to a specific data request; 2012 to 2014 approximated as the average of the preceding years (where there was expenditure) for each university*

As shown above, baseline expenditure for the period of the evaluation was approximated as \$3.66 million per annum (nominal dollars).

#### 12.2.2 Assumed baseline outcomes

The baseline outcomes, in terms of participation in higher education, were identified through the analysis of UAC data (as presented in Chapter 11) for schools where there was no Bridges related activity (refer Table 42).

*Table 42: Baseline outcomes – non-Bridges schools*

Non-Bridges schools	2008	2009	2010	2011	2012	2013	2014
Enrolments	47,944	48,930	49,843	50,384	51,001	51,494	47,944
Applications	28,080	28,711	29,570	30,404	31,053	31,198	28,080
Offers	23,847	25,056	26,050	26,841	27,664	28,742	23,847
Application rate	58.6%	58.7%	59.3%	60.3%	60.9%	60.6%	58.6%
Offer rate	84.9%	87.3%	88.1%	88.3%	89.1%	92.1%	84.9%

*Source: UAC data*

Two key measures were identified for comparison as part of the cost benefit analysis, namely:

- Application rate – the proportion of enrolled students who applied to universities in NSW
- Offer rate – the proportion of students applying who were offered a place in NSW universities.

The analysis essentially used the non-Bridges schools as a comparator group, with the application and offer rates calculated for these schools forming the baseline against which the performance of Bridges schools could be compared.

### 12.3 Cost analysis

The economic analysis sought to identify the full additional cost associated with Bridges over the evaluation period (i.e. 2012 to 2014). This represents all Bridges related expenditure (Government funded and University funded) during this time, less the assumed baseline expenditure.

Table 43 presents total Bridges related expenditure for each university, centralised Bridges related expenditure, and the component of this expenditure identified as additional for the purposes of the cost benefit analysis. Bridges related expenditure included establishment costs, program delivery costs (staff and non-staff), program management / administration costs, and allowance for overheads.

*Table 43: Additional expenditure attributable to Bridges (2012 to 2014, nominal dollars)*

Expenditure category	2012	2013	2014	Total
ACU	\$0.23m	\$0.39m	\$0.49m	\$1.12m
University of Sydney	\$1.41m	\$1.68m	\$1.68m	\$4.78m
UTS	\$0.07m	\$1.06m	\$1.07m	\$2.21m
MQ	\$0.98m	\$1.10m	\$1.45m	\$3.53m
UWS	\$1.17m	\$2.99m	\$3.54m	\$7.71m
Collaborative projects	\$1.63m	\$1.01m	\$0.92m	\$3.56m
Central administration	\$1.55m	\$1.53m	\$0.65m	\$3.74m
<b>Total Bridges expenditure</b>	<b>\$7.05m</b>	<b>\$9.77m</b>	<b>\$9.82m</b>	<b>\$26.64m</b>
<b>Additional expenditure</b>	<b>\$3.39m</b>	<b>\$6.11m</b>	<b>\$6.15m</b>	<b>\$15.66m</b>

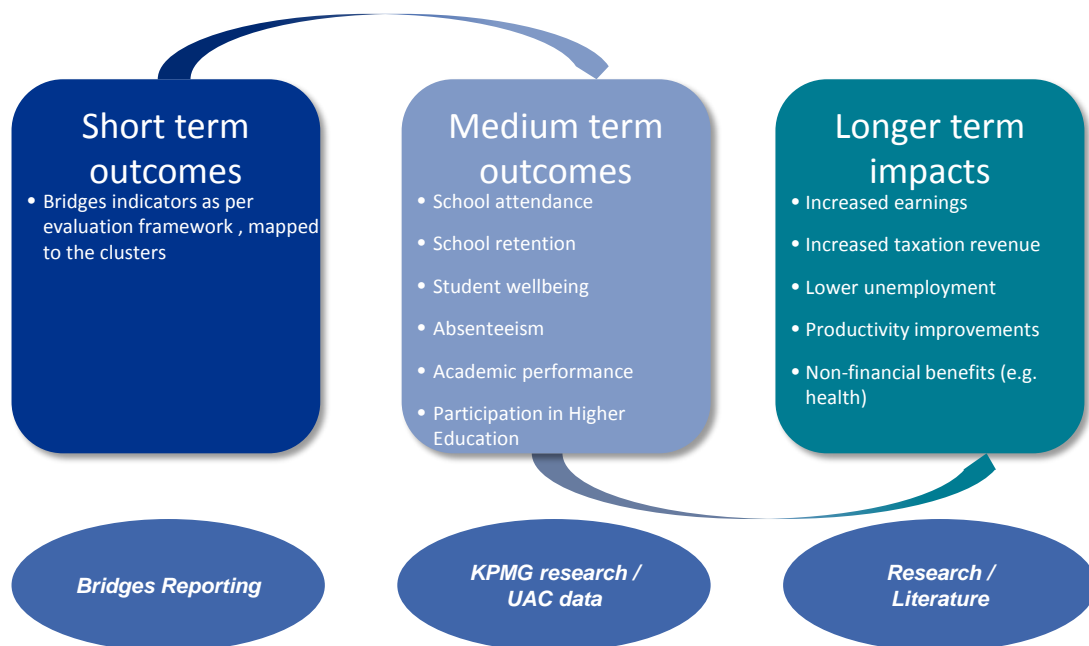
*Source: Bridges expenditure information provided by each university in response to a specific data request. Additional expenditure calculated as the difference between this amount and estimated baseline expenditure.*

As shown above, the component of Bridges related expenditure assumed to additional equates to around \$15.66 million (nominal dollars) over the evaluation period. Converted to 2014 dollars, this represents a total additional investment of **\$15.98 million**.

### 12.4 Benefits analysis

The benefits analysis considered a range of short, medium and longer-term impacts derived from participation in the Program (refer Figure 4).

Figure 4: Summary of outcomes and evidence base



Source: KPMG

Within the above benefits framework, the economic analysis focused on the medium and longer term outcomes derived from Bridges, with the quantitative monetary analysis focused particularly on evidence of the key economic benefits flowing to individuals and Government from increased participation in higher education (i.e. increased earnings, increased taxation revenue, and lower unemployment).

The performance of Bridges in delivering the identified short term outcomes is assessed as part of the broader evaluation activities (refer Chapters 6 through 10).

#### 12.4.1 Monetised benefits

The quantitative monetary analysis focused on estimating the economic benefits attributable to any measurable increase in higher education participation as a result of Bridges. This required the identification of the 'Bridges effect' with respect to increased participation in, and completion of higher education courses, and estimating the economic value of this improvement.

##### *Estimating the Bridges effect*

The impact of Bridges on participation rates for higher education was based on the outcomes of the UAC data analysis, which sought to identify changes in the rates of application to university per year 12 enrolled student, and changes in the rates of offers made per university application. Differences in both rates were calculated at the school level, with the results compared between pre and post Bridges periods, and between Bridges and Non-Bridges schools. This analysis was undertaken for all schools, and for schools categorised as 'low socio-economic status'.

Table 44 summarises the outputs of the UAC data analysis used in the cost benefit modelling.

*Table 44: UAC data analysis – quantification of the 'Bridges effect'*

Rate	Schools groups	Mean change All schools	Mean change Low SES schools
<i>Application rate (applications per enrolled student)</i>	Bridges schools	+0.86%	+0.25%
	Non-Bridges schools	+0.52%	-1.69%
	Difference	+0.34% (p=0.3168)	+1.94% (p=0.0790)
<i>Offer rate (offers made per application)</i>	Bridges schools	+5.37%	+6.09%
	Non-Bridges schools	+3.15%	+0.97%
	Difference	+2.22% (p=0.0139)	+5.13% (p=0.0028)

Source: KPMG analysis of UAC data (refer Chapter 11 for further details on approach and assumptions)

The key findings of the UAC data analysis can be summarised as follows:

- There was no distinguishable change in the application rates between the pre and post Bridges periods for both Bridges and non-Bridges schools (across all schools and in examining schools in low socio-economic areas in isolation).
- There was a distinguishable improvement in the offer rate for Bridges schools compared to non-Bridges schools (+2.22 per cent), with this improvement more pronounced for schools in low socio-economic areas (+5.13 per cent).

This identified increase in the rate of higher education offers (in aggregate and for schools in low socio-economic areas) underpins the benefits analysis. Table 45 calculates this improvement in terms of the number of additional individuals receiving a higher education offer, and the number of additional completions (adjusting for acceptance and attrition rates).

*Table 45: Estimated increase in higher education offers and completions attributable to Bridges*

School type	Measure	2012	2013	2014
All schools	No. applications	11,584	12,134	12,532
	No. additional offers	257	269	278
	Additional completions	180	188	194
Low SES schools	No. applications	6,038	6,234	6,464
	No. additional offers	310	320	332
	Additional completions	216	223	232

Source: KPMG calculation and analysis based on UAC data

Key assumptions relating to this table are:

- The number of higher education applications was sourced from UAC for 2008 to 2013. The 2014 figure was approximated based on the growth rate experienced for preceding years.
- The number of additional offers was based on the UAC data analysis, which identified a 2.22 per cent increase in the offer rate for all Bridges schools, and a 5.13 per cent increase for Bridges schools in low socio-economic areas.
- The number of additional completions was calculated using publicly available data for higher education acceptance and attrition rates. Specifically, an assumption was made that 79.3 per cent of offers would be accepted, with higher education commencing within 1-2 years. This reflects an acceptance rate of 69.3 per cent for students from low socio-economic backgrounds<sup>144</sup>, and a deferral rate of 12.9 per cent of which 75 per cent commence within 1-2 years<sup>145</sup> (i.e. 9.7 per cent).

Overall, this equates to an additional 562 individuals completing a higher education degree as a result of Bridges (671 for schools in low socio-economic areas).

#### *Attributing a monetary value to the observed 'Bridges effect'*

There is extensive research and literature that identifies a positive economic impact associated with the attainment of higher education degrees. This work incorporates both public and private returns from higher education, and typically comprises the following costs and benefits:

- Additional private and public investment in higher education course costs
- Income foregone by individuals during their participation in higher education and the related taxation revenue foregone by Government
- Additional lifetime earnings for those individuals who complete a higher education degree and the related additional taxation revenue generated for Government.

Two alternative valuation approaches were adopted: application of a single point estimate of the economic benefits; and a disaggregated approach, which considered the identified costs and benefits separately.

#### *Single point estimate – OECD data*

The OECD publication, *Education at a Glance 2011: OECD Indicators*, informed a single point estimate of the private and public returns from higher education:

- Estimates of private benefits comprise: private cost of education, earnings foregone during education, additional lifetime earnings, additional income tax paid, reduction in unemployment benefits / assistance received.
- Estimates of public benefits comprise: public cost of education, foregone tax on earnings, additional taxation revenues, reduction unemployment benefits / assistance paid

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<sup>144</sup> Department of Education and Training, Selected Higher Education Statistics – 2013 Student Data, accessed via website 13 February 2015

<sup>145</sup> Data sourced from Longitudinal Surveys of Australian Youth

After removing double counting, OECD estimated an average economic benefit across males and females of \$168,164 (2005 USD) per individual. For inclusion in the analysis, this figure was converted into 2014 dollars (AUD) and an adjustment applied to reflect differences in the discount rates used.<sup>146</sup>

This resulted in an approximate economic benefit of **\$83,000 per person** (2014 AUD) from participation in higher education.

#### *Disaggregated approach*

This approach sought to separately quantify the different costs and benefits attributable to participation in higher education (refer Table 46 below).

*Table 46: Benefits assumptions – disaggregated approach*

Component	Source / assumption
Additional cost of higher education	Grattan Institute, Graduate Winners (2012) provides the annual funding for different courses and student contributions. Assuming a 4 year degree, the average total cost of an undergraduate degree is around \$80,000 (2014 AUD). <sup>147</sup>
Foregone income and taxation revenue	Estimated based on ABS data for age group and qualification level (Year 12), and adjusted for unemployment rate for cohort. Taxation revenue foregone based on PAYG tax brackets sourced from ATO. Assuming 4 year degree, this equates to a total earnings foregone (and tax revenue) of approximately \$45,000 (AUD). <sup>148</sup>
Additional lifetime earnings and taxation	Grattan Institute, Graduate Winners (2012) estimates the difference in median lifetime income between Year 12 and a Bachelor degree to vary between \$800,000 for females and \$1.116m for males. In accordance with convention this difference is assumed to be 80 per cent attributable to higher education (i.e. \$770,000). This figure includes around \$300,000 in additional taxation revenue paid to Government. <sup>149</sup>

These estimates were modelled over a hypothetical working lifetime from 18 to 65, with a real discount rate of 7 per cent applied to future costs and benefits. This resulted in an estimated aggregate benefit of **\$80,000 per person**.

#### *Estimated monetary benefit of Bridges*

Table 47 combines the estimated increase in higher education offers attributable to Bridges with the estimated economic value of a higher education qualification, and provides an estimate of the monetary economic benefits derived from Bridges.

<sup>146</sup> The OECD figure was adjusted to reflect a 7 per cent real discount rate (as per NSW Government requirements). This calculation was approximate and based on an assumed distribution of costs and benefits over a hypothetical lifetime. Other adjustments included assumed cost escalation of 2.5 per cent per annum between 2005 and 2014 (based on the midpoint of the Reserve Bank's target range for inflation), and conversion to AUD (based on the average USD/AUD exchange rate for 2014).

<sup>147</sup> Norton, A. 2012, *Graduate Winners: Assessing the public and private benefits of higher education*, Grattan Institute

<sup>148</sup> Australian Bureau of Statistics, 2014, *6306.0 - Employee Earnings and Hours*, accessed at <http://abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyCatalogue/27641437D6780D1FCA2568A9001393DF?OpenDocument>.

<sup>149</sup> Norton, A. 2012, *Graduate Winners: Assessing the public and private benefits of higher education*, Grattan Institute



*Table 47: Calculation of monetary economic benefit (2012 to 2014)*

Bridges impact	All schools	Schools in low socio-economic areas
Additional higher education completions	562	671
Economic benefit per individual (2014 dollars)	\$80,000-\$83,000	\$80,000-\$83,000
<b>Aggregate monetised benefit (2014 dollars)</b>	<b>\$44.97m-\$46.65m</b>	<b>\$53.71m-\$55.72m</b>

*Source: KPMG calculation*

As shown above, there is estimated to be an aggregate economic benefit of around **\$45 million** (2014 dollars) related to increased participation in higher education as a result of Bridges, with this effect more pronounced for Bridges activities in schools categorised as of low socio-economic status.

It should be recognised that this analysis is likely to understate the true impact of Bridges on participation rates for higher education. This is due to the fact that projects funded through Bridges target a range of age cohorts, from primary students to later secondary students, and therefore the full impact on the rate of offers received for higher education is not captured within the year range of UAC data analysed. For example, while activities targeted to early secondary school students may ultimately increase their participation in higher education, this impact will not be reflected in UAC data for several years.

#### **12.4.2 Non-monetised benefits**

In addition to the benefits quantified above, there is a range of other impacts likely to be attributable to Bridges, which have not been monetised and are instead considered qualitatively. This approach reflected the limited evidence available within the evaluation timeframe, the challenges in attributing causality, and the inherent difficulty in reliably measuring and quantifying these impacts in monetary terms.

##### *Non-financial benefits of higher education*

While the quantitative analysis has monetised key economic benefits attributable to increased participation in, and completion of, higher education, research suggests there are also a range of non-financial impacts that should be recognised.

Recent research identified the following impacts:

- *Wellbeing* and happiness – current evidence suggests there is a correlation between education and life satisfaction.
- *Volunteering* – research has shown a strong correlation between higher education and volunteering rates, with some evidence of causality. Research conducted in the United States suggests volunteers are more likely to have a degree; in fact those people with more than 13 years of education make up for more than 60 per cent of all volunteers. The rationale for this relationship comes from the perspective that education offers, with education thought to increase both empathy and awareness of social problems.

- *Social distance and relationships* – research suggests university graduates are much more likely to display tolerance and possess stronger social relationships.
- *Civic participation* – there is evidence that graduates are more likely to belong to civic groups, such as cultural, aid and church groups, and are more likely to be working in a job they consider useful for society. Research conducted in the United States suggests that after controlling for income, university graduates are also more likely to donate to charity.
- *Health* – there is a strong link between university and physical and mental health outcomes. That is, the more educated an individual, the better their health and that of their family, in terms of physical health, (infant) mortality and psychological well-being.
- *Crime* - there is a strong relationship between education and crime, noting that the research primarily focuses on school completion. Professor Kenny at Sydney University found that educational failure is a significant factor in marginalising young people who later begin to offend. According to survey results, 84 per cent of male youth offenders and 93 per cent of females had left school by Year 10 and shared a history of chronic truanting and suspension before they left. This is further substantiated in a retrospective study of young people permanently excluded from school in the United Kingdom. The researchers found that just under half (44 per cent) of those for whom full records were available had a record of offending following their exclusion from school, but had no recorded prior history of offending behaviour leading up to this event.<sup>150 151 152 153 154</sup>

There is also evidence that graduates generate fewer claims than non-graduates on Government social programs. This enables government financial resources to be used for other public benefit spending, or for lower overall taxation levels. In the two years before 2010, 12 per cent of graduates had relied on government payments as their main source of income for at least some of the time, which represents less than half the income support reliance of non-graduates.<sup>155</sup> However, not all the advantages of graduates can be attributed to their higher education experience. The people who become graduates were always likely to be less reliant on income support, due to factors such as socio-economic status.

#### *Other impacts likely to be derived from Bridges activities*

Table 48 summarises other economic and social benefits likely to be derived from Bridges. These areas are aligned with the short and medium term outcomes targeted by the Program.

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<sup>150</sup> Lochner, Lance. 2004. "Education, Work, and Crime: A Human Capital Approach."

*International Economic Review* 45 (3): 811–843.

<sup>151</sup> Chapman, B. J., Weatherburn, D., Kapuscinsky, C. A., Chilvers, M. and Roussel, S. (2002) *Unemployment duration, schooling and property crime*, Australian National University, Centre for Economic Policy Research

<sup>152</sup> Lochner, Lance. 2004. "Education, Work, and Crime: A Human Capital Approach."

*International Economic Review* 45 (3): 811–843.

<sup>153</sup> Savage J. and Norton A., Non-financial benefits of Higher Education – analysis supporting Grattan's Graduate Winners Report, Grattan Institute, August 2012

<sup>154</sup> Savage J. and Norton A., Non-financial benefits of Higher Education – analysis supporting Grattan's Graduate Winners Report, Grattan Institute, August 2012

<sup>155</sup> ABS (2011b) Microdata: General Social Survey, CURF, Australia 2010 (cat. no. 4159.0.30.003), catalogue number Australian Bureau of Statistics.

Table 48: Summary of potential impacts

Impact	Evidence
<b>Educational aspirations</b>	<b>Bridges tangibly contributes to educational aspirations [See Section 7.2.3].</b> Educational aspirations have been found to have a substantial influence on educational outcomes. A recent study has found that individuals (in grades eight through 12) who aspire to attend university are 15-20 per cent more likely to do so compared with those who do not. <sup>156</sup>
<b>Improvements to school completion</b>	<b>Bridges motivates students to complete school [See Section 7.2.3].</b> Young people who complete school are far more likely to continue with their studies (62.4 per cent, compared to 35 per cent for year 11 leavers); attend university as opposed to TAFE (four in ten Year 12 leavers were at university, whereas three in ten early leavers were at TAFE); or be in full-time education or work (75 per cent, compared to 54 per cent who left after year 11). <sup>157</sup> Rates of school completion are an important determinant of future employment, with research showing that 24 year old Australians who have not completed upper secondary education or its equivalent are more than twice as likely to be unemployed as 24 year olds who have completed that level of education. <sup>158</sup>
<b>School engagement</b>	<b>Bridges contributes to school engagement [See Section 7.2.3].</b> There are productivity benefits of improving school engagement. National Reform Agenda (2007) initiatives to improve literacy and numeracy were estimated to result in a 0.27 per cent increase in productivity by 2030 (assuming a 0.08 increase in workforce participation). <sup>159</sup>
<b>School culture</b>	<b>Bridges is contributing to positive school cultures with impacts for Bridges participants as well as their peers [See Section 8.2].</b> A strong school culture, when internalised, can motivate teaching staff to work towards achieving the best possible outcomes for vulnerable and at-risk students. The teacher's sense of accountability is reinforced by principal leadership that supports that culture. Research suggests positive school culture may also influence early school leaving. In one recent study, students noted that 'caring, supporting, and respectful teachers who believed in their ability to succeed in school had a significant impact on their lives' and 'were one of the most critical components of their persistence with school.' In this context, students began to recognise

<sup>156</sup> Homel, J & Ryan, C (2014), Educational outcomes: the impact of aspirations and the role of student background characteristics, NCVER, Adelaide.

<sup>157</sup> Robinson, L & Lamb, R (2012), How young people are faring, The Foundation for Young Australians, Melbourne.

<sup>158</sup> Council for the Australian Federation (2007). *Federalist Paper 2: The Future of Schooling in Australia*. Available at <http://www.dpc.vic.gov.au/>.

<sup>159</sup> Productivity Commission (2007) *Potential benefits of the National Reform Agenda*.

Impact	Evidence
	that ultimately they would get something out of staying in school. <sup>160</sup> <b>Bridges is having this effect.</b>
<b>School connectedness</b>	<p><b>Bridges is contributing to school connectedness and social cohesion [See Sections 7.2.2, 7.2.3 and 8.2.4].</b></p> <p><i>The Wingspread Declaration: A National Strategy for Improving School Connectedness</i>, a major literature review from the University of Minnesota<sup>161</sup> explored the positive impacts of school connectedness. They found that students are more likely to succeed when they feel connected to school. Further, increasing the number of students connected to school is likely to impact on academic performance; incidents of fighting, bullying, or vandalism; absenteeism; and school completion rates.</p> <p>Other studies suggest a clear link between student's social connectedness and their academic engagement with their studies. Students with both high levels of social connectedness and academic engagement are often those achieving high levels of academic success in their chosen program.<sup>162</sup></p> <p>Connection to school is positively related to self-esteem, optimism, and positive peer relationships and is negatively related to the development of behavioural problems, antisocial tendencies, depression, anxiety, and suicidal ideation<sup>163</sup>. School connectedness may also buffer students against the effects of a negative home environment.<sup>164</sup></p>
<b>Better academic self-concept and performance</b>	<p><b>Bridges is contributing to students' academic self-concept [See Section 6.3.1].</b></p> <p>The research demonstrates a direct, positive relationship between students' academic self-concept and academic success.</p> <p>A longitudinal study suggested that students who consider their academic performance to be average or below average, relative to their peers, may be less likely to achieve their aspirations (to complete year 12 or go on to higher education) compared with those who consider their performance to be above average<sup>165</sup>. Other studies suggest the more students' feels positive about their</p>

<sup>160</sup> Knesting, K., (2008) Students at Risk for School Dropout: Supporting Their Persistence Preventing School Failure, 52.4 (Summer 2008, 3-10.

<sup>161</sup> University of Minnesota (2003) Wingspread Declaration: A National Strategy for Improving School Connectedness, University of Minnesota. Accessed 4 June 2014 at: [www.allaboutkids.umn.edu/WingfortheWeb/schooldeclaration.pdf](http://www.allaboutkids.umn.edu/WingfortheWeb/schooldeclaration.pdf)

<sup>162</sup> Loukas, A., Roalson, L. A., & Herrera, D. A. (2010). School connectedness buffers the effects of negative family relations and poor effortful control on early adolescent conduct problems. *Journal of Research on Adolescence*, 20, 13–22

<sup>163</sup> Loukas, A., Roalson, L. A., & Herrera, D. A (2010), *ibid*.

<sup>164</sup> Maddox, S. J., & Prinz, R. J. (2003). School bonding in children and adolescents: Conceptualization, assessment, and associated variables. *Clinical Child and Family Psychology Review*, 6, 31–49.

<sup>165</sup> Homel, J & Ryan, C (2014), *Educational outcomes: the impact of aspirations and the role of student background characteristics*, NCVER, Adelaide.

Impact	Evidence
	ability, the higher their likely achievement <sup>166</sup> and that under achievement may become a vicious cycle whereby underachievers do not believe that they have the ability to achieve, and so they will spend little effort in studying, and will easily give up when facing difficulties <sup>167</sup> .

Source: KPMG literature review

## 12.5 Value for money assessment

Table 49 identifies the estimated monetised costs and benefits attributable to Bridges. The figures provided should be considered indicative of the magnitude of benefits likely to be derived from Bridges, rather than a definitive or reliable estimate of the return Government should expect from its investment.

*Table 49: Estimated net quantitative impact of Bridges (2014 dollars)*

Component	Estimated impact
<i>Additional cost impact (2014 dollars)</i>	\$15.98m
<i>Estimated benefits (2014 dollars)</i>	\$44.97m-\$46.65m
<b>Net impact (2014 dollars)</b>	<b>\$28.99m-\$30.67m</b>
<b>Benefit cost ratio</b>	<b>\$2.81-\$2.92</b>

Source: KPMG analysis

The above identifies an approximate net monetary benefit of around **\$30 million** realised from the implementation of Bridges, which equates to a return of around **\$2.80 per additional dollar invested** in the program. As demonstrated above, this result is largely driven by the impact of the program on schools in low socio-economic areas, with a more significant impact on higher education participation recorded at these locations.

This aggregate benefit understates the true impact of Bridges, with neither the impact on higher education participation for younger age cohorts nor the substantial non-monetary benefits attributable to the Program incorporated within this figure.

### 12.5.1 Analysis of impact of Bridges on Years 10 to 12 students

Given the reliance on UAC data obtained for 2012 to 2014, the quantitative cost benefit focuses on improvements to higher education participation rates for older student cohorts impacted by Bridges (i.e. Years 10 to 12). Younger cohorts targeted by the Program are not represented in the most recent UAC figures. This means that while the full additional cost of the Program (delivered across all age cohorts) is incorporated in the analysis, the quantitative monetary benefits are only partially represented (i.e. the impact on higher education participation for younger cohorts was unable to be measured).

<sup>166</sup> Ahmed, W., & Bruinsma, M. 2006. A structural model of self-concept, autonomous motivation and academic performance in cross-cultural perspective. *Electronic Journal of Research in Educational Psychology*, 10(4):551-572. Available from: [www.investigacion-psicopedagogica.org/revista/.../Art\\_10\\_144.pdf](http://www.investigacion-psicopedagogica.org/revista/.../Art_10_144.pdf)

<sup>167</sup> Lau, K.L., & Chan, D.W. (2001). Motivational characteristics of under-achievers in Hong Kong. *Educational Psychology*, 21(4):417-430.

Table 50 summarises the approximate quantitative impacts of Bridges if only the costs and benefits relevant to Year 10 to 12 students impacted by the Program are considered. This required the costs to be approximated based on the number of projects targeted to this cohort, which implicitly assumes that funding is evenly distributed between Bridges projects, and that baseline expenditure is distributed across cohorts in the same proportions as Bridges related expenditure.

*Table 50: Summary of Bridges impacts for students Years 10 to 12*

Component	Estimated impact
<i>Adjusted cost estimate (2014 dollars)</i>	\$6.92m
<i>Estimated benefits (2014 dollars)</i>	\$44.97m-\$46.65m
<b>Net impact (2014 dollars)</b>	<b>\$38.05m-\$39.73m</b>
<b>Benefit cost ratio</b>	<b>6.50-6.74</b>

Source: KPMG analysis

As shown above, if only the share of Bridges funding expended on older student cohorts is considered, the estimated net impact of this investment is around \$39 million, which equates to a return of more than \$6.50 for each additional dollar invested.

#### 12.5.2 Analysis of impact of Bridges on students in low socio-economic schools

Table 51 summarises the quantitative impacts of Bridges if only the costs and benefits associated with the delivery of Bridges projects at schools in low socio-economic areas are considered. Again, this required the costs to be approximated, as the actual distribution of Bridges funding across schools in low socio-economic areas and other schools is unknown. Therefore, to estimate the proportion of Bridges funding directed to schools in low socio-economic areas, the proportion of year 12 enrolments in these locations was used as a proxy.<sup>168</sup> This approach implicitly assumes that funding is evenly distributed across all year 12 students enrolled in Bridges schools, and that baseline expenditure is distributed in the same proportion as Bridges related expenditure.

*Table 51: Summary of Bridges impacts for schools in low socio-economic areas*

Component	Estimated impact
<i>Adjusted cost estimate (2014 dollars)</i>	\$8.95m
<i>Estimated benefits (2014 dollars)</i>	\$53.71m-\$55.72m
<b>Net impact (2014 dollars)</b>	<b>\$44.76m-\$46.77m</b>
<b>Benefit cost ratio</b>	<b>6.00-6.23</b>

Source: KPMG analysis

As shown above, if only the share of Bridges funding expended at schools in low socio-economic areas is considered, the estimated net impact of this investment is around \$45 million, which equates to a return of at least \$6.00 for each additional dollar invested.

<sup>168</sup> Based on enrolment numbers sourced from UAC, it is estimated that approximately 56 per cent of Bridges funding was expended in schools categorised as being in low socio-economic areas. This is based on the number of year 12 enrolments in schools in low socio-economic areas that received Bridges funding, as a proportion of total year 12 enrolments in all schools that received Bridges funding.

## 12.6 Sensitivity analysis

This section examines the sensitivity of the above analysis to variations in key assumptions. This reflects the inherent uncertainty in attributing longer term or whole of life outcomes to the participation in Bridges.

The alternative scenarios considered include:

- *Discount rate* – application of alternative discount rates.<sup>169</sup> In accordance with NSW Treasury Economic Appraisal Guidelines, a real discount rate of 7 per cent has been applied in the core analysis, with variations to this rate tested through the sensitivity analysis (i.e. 4 per cent and 10 per cent).
- *Bridges effect* – adjustment to the estimated 'Bridges effect' on offer rates for higher education, which were calculated as a 2.22 per cent relative improvement in the offer rate compared to non-Bridges schools. The sensitivity analysis tests the implications of a more or less pronounced Bridges effect (i.e. +/- 1 per cent).
- *Baseline expenditure* – the core analysis includes an assumed baseline level of expenditure. The sensitivity analysis considers a more conservative scenario, where baseline investment excluded and the full cost of Bridges is incorporated in the analysis.

Table 52 describes the alternative scenarios considered as part of the sensitivity analysis, and compares the results for each scenario to the core analysis.

*Table 52: Summary of sensitivity analysis*

Sensitivity test	Assumption varied	Net impact	Benefit cost ratio
<i>Core analysis</i>	Nil	\$28.99m-\$30.67m	2.81-2.92
<i>Discount rate</i>	4% real discount rate	\$86.32m-\$97.00m	6.40-7.07
	10% real discount rate	(\$3.61m)-\$2.01m	0.77-1.13
<i>Bridges effect</i>	Increased offer rate (+1%)	\$49.24m-\$67.67m	4.08-4.23
	Reduced offer rate (-1%)	\$8.73m-\$9.66m	1.55-1.60
<i>Baseline expenditure</i>	No pre-existing investment	\$17.72m-\$19.41m	1.65-1.71

Source: KPMG analysis

As shown above, with the exception of the application of a higher discount rate, the monetary impact of Bridges remains strongly positive. While a real discount rate of 10 per cent produces a more marginal result (reflective of future benefits being discounted more), this result does not include the significant benefits that were unable to be monetised as part of the analysis.

<sup>169</sup> Discount rates are applied in economic appraisal to enable comparison of costs and benefits within a common time dimension. This reflects the concept of time preference, with future costs and benefits discounted to calculate their present value.



## 12.7 Summary

The cost benefit analysis undertaken demonstrates the significant positive return on investment derived from Bridges. This reflects the observed improvements in the rate of higher education offers made to students at schools where Bridges projects are delivered, and the substantial economic benefits attributable to the higher education qualifications obtained by those students. The positive impact identified for Bridges is more pronounced for projects delivered at schools in low socio-economic areas.

Importantly, the outcome of the quantitative cost benefit analysis understates the true impact of Bridges. It does not include accepted qualitative benefits unable to be expressed in monetary terms, and it also does not include the impact on higher education participation (and completion) for younger student cohorts impacted by Bridges, as this effect was not yet observable in UAC.

## PART III: KEY LESSONS

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## 13. Summary of key findings

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Over the three years to December 2014, Bridges has implemented 96 diverse university led and central and collaborative projects to improve higher education participation amongst those traditionally under-represented in higher education.

The partnership underpinning Bridges is adding value to university partners and schools alike - raising the profile of efforts to address under-representation in higher education, creating a strong brand profile with which partners and schools are proud to be associated, enabling better coordination of work with schools, supporting more effective use of shared resources and greater choice of university led programs.

Bridges is promoting the participation of schools, teachers, parents and students through effective consultation and engagement, a tailored approach to meeting the diversity of school and community needs, clever program design, and the development of interactive and innovative resource materials, many of which will continue to add value long after Bridges comes to an end.

Evaluation findings suggest that Bridges projects are associated with the following positive outcomes for students, parents and teachers:

- Students self-reported being better prepared for university (an estimated 92 per cent), having greater confidence in their academic abilities (an estimated 87 per cent) and being more motivated to attend university (an estimated 73 per cent). Teachers also suggest their students are more engaged in school (an estimated 77 per cent) and are showing better academic outcomes (an estimated 99 per cent).
- Parents self-reported greater ambitions for their child (an estimated 97 per cent), being more knowledgeable about higher education (an estimated 79 per cent) and its benefits (90 per cent), and that they were more able to support their child's higher education goals (an estimated 94 per cent).
- Teachers self-reported better access to professional development (an estimated 96 per cent), better knowledge in their discipline of focus (98 per cent) and better knowledge of the education options available to their students (an estimated 90 per cent).

### 13.1 Value of the collaboration

The core partnership between the five Bridges universities has only strengthened over time. By July 2013, all partners had signed up to a shared vision of widening participation, effectively aligning their strategic interests to achieve this intent. There were clear and established governance structures, through the Management Committee, PAG and Project Groups.

The PAG brought together the collective resources and experience of a wide range of stakeholders – from school principals, to DEC and the Foundation for Young Australians – supporting a broader focus on how Bridges can achieve further equity and inclusion for all young people, particularly those who are under-represented in higher education, to drive enhanced social and economic outcomes for the future.

The creation of a dedicated project position to oversee Bridges, enabled each university to focus on the core Bridges implementation role, i.e. delivering on its funded projects.

The strength of the current arrangements is reflected in the Project Leads and Management Committee responses to the VicHealth Partnership Analysis<sup>170</sup> tool, which is commonly used to assess, monitor and maximise the ongoing effectiveness of partnerships established by organisations. Bridges achieved an aggregate score of 138 which denotes that the partnership is based on genuine collaboration.

The strength of this collaboration is offering a wide range of benefits for the participating universities. Bridges lends the universities a strong credibility. This reflects that the partnership is operating in the interests of under-represented students and communities; rather than marketing entry into a particular university, the partnership is promoting a 'shared message' about the value of higher education overall.

Bridges has also created a strong brand profile, with which university partners, community agencies and schools are proud to be associated. This brand creates the capacity to engage widely, and achieve buy-in from schools. It also adds value to each of the participating university's reputations as advocates for social justice and equity of opportunity.

Bridges has clearly broken down barriers between institutions and enhanced the capacity for shared effort. This is most apparent in terms of the impact of the central and collaborative projects. For example:

- the *Parents* and *Rural and Remote Projects* both act in an influencer or advisory capacity, offering knowledge, guidance and support to university and other central and collaborative projects.
- *Bridges Connect* has enhanced the efforts of all universities to widen participation through utilising various classroom technologies to build capacity, broaden aspiration and provide academic enrichment to target schools in communities under-represented in higher education.
- The *SEPG* enabled delivery of widening participation messages in a dynamic, engaging and interactive format that would not have been possible of one university working alone.

Communities of practice have enhanced the capacity to share lessons and experiences between universities and problem solve collectively.

Finally, partnership adds weight to the widening participation agenda; in an environment of fiscal constraint and competing priorities, the importance of reaching under-represented communities can be lost. Bridges offers strength in numbers; effectively a coalition of senior cross-university widening participation practitioners to champion the cause.

Schools also noted the benefits of Bridges, relative to the previous siloed approach.

The extent of resourcing for the collaboration has allowed for scale, depth and reach, far greater than universities would have been able to achieve individually. Bridges covered a wide geographic area, range of year levels and target groups (from Aboriginal and Torres Strait Islander communities, to students from refugee backgrounds) and activities. Reach has also been enhanced through the development of shared resources, with the SEPG matrix identified as a key contributor.

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<sup>170</sup> VicHealth 2011, *The partnerships analysis tool*, Victorian Health Promotion Foundation, Melbourne

The five universities have also been able to better coordinate their engagement with schools and students. This was thought to have allowed for greater choice, diversity and a stronger ownership of the projects operating within their school.

This new capacity has seen the evolution of the university-school relationship from what a number of informants perceived as one-way communication to that of collaboration in the interests of meeting school needs and requirements.

Other benefits include the use of more consistent messaging: all universities are talking the same language in terms of the value of higher education.

## 13.2 Projects implemented under Bridges

Bridges has implemented 88 university led projects and eight central and collaborative projects collectively designed to influence academic preparedness and outcomes, support awareness, confidence and motivation towards higher education, support school and community capacity and enable access to higher education.

Bridges projects achieve this through engaging with students, parents, schools and communities through: on-campus activities; university outreach into schools; partnerships with schools, TAFE institutes, community organisations and relevant others to strengthen school and community capacity; teacher professional development; curriculum enrichment; tutoring and mentoring; and summer camps (or study skills courses) and other similar efforts.

Projects vary in terms of their scale, duration and intensity, ranging from smaller projects run on a one-off or irregular basis, to others which represent longer term or sustained activity. Bridges projects can be clustered in terms of the outcomes they aim to achieve, as set out in the table below.

*Table 53: Bridges projects and outcome areas*

Outcome area	Type of Bridges projects
<b>Building academic preparedness and outcomes</b>	Often provide: <ul style="list-style-type: none"> <li>• individual/small group tutoring and mentoring</li> <li>• access to events or courses (often on university Campuses) to build academic or study skills</li> <li>• utilising technology (such as online homework programs) to support independent study or academic performance.</li> </ul>
<b>Building awareness, confidence and motivation</b>	Offer school students access to: <ul style="list-style-type: none"> <li>• role models and mentors</li> <li>• curriculum enrichment activities</li> <li>• on-campus experiences (or tasters) so that they may live and breathe campus life</li> <li>• on-line activities to build knowledge of career options and/or university student requirements</li> <li>• other dynamic platforms, such as theatre or TV series, which expose students to experts in their field or students similar to themselves.</li> </ul>

Outcome area	Type of Bridges projects
	<p>Offer parents access to:</p> <ul style="list-style-type: none"> <li>• On-campus activities/education sessions for parents to demystify the university experience</li> <li>• Forums to present information on higher education options</li> <li>• Participation in community events to establish university presence</li> <li>• School meetings with parents focusing on students' study options</li> <li>• interpreter services to improve knowledge and understanding for parents from culturally and linguistically diverse backgrounds</li> </ul>
<b>School and community capacity building</b>	<p>A focus on:</p> <ul style="list-style-type: none"> <li>• creating and maximising the value from partnerships between universities, schools, community organisations and relevant others</li> <li>• teacher professional development training (including building teachers' knowledge in specific study disciplines and/or of career pathways and higher education options for students)</li> <li>• parent education and training, to enable them to support their child's learning, development and educational goals</li> <li>• curriculum enrichment activities that encourage new teaching methods or tools to be embedded into classroom practices and curriculum.</li> </ul>
<b>Access to higher education</b>	<p>Generally focused on expanding awareness of the multiple pathways into University and creating new more innovative partnerships and access programs. Activities include:</p> <ul style="list-style-type: none"> <li>• university information sessions for TAFE students</li> <li>• collaborative partnerships between University and TAFE staff in the development of programs and in joint promotion activities</li> <li>• improved alignment of targeted programs to streamline transition between Universities and TAFE</li> <li>• introduction of new equity access schemes (Principal's Recommendation Scheme) that improve access for high potential students below the cut-off scores</li> </ul>
<b>Engaging Aboriginal students in higher education</b>	<p>Designed to:</p> <ul style="list-style-type: none"> <li>• often work through Aboriginal Elders or students, offering a culturally competent response</li> </ul>

Outcome area	Type of Bridges projects
	<ul style="list-style-type: none"> <li>enable Aboriginal students and parents to experience the university campus directly, demystifying university life</li> <li>offer tutoring and/or mentoring to open students' eyes to the possibilities that university offers, through access to positive Aboriginal students as role models.</li> </ul>

Source: KPMG

### 13.3 Engagement of the target populations

Over the three year period to December 2014, Bridges has substantially grown the number of schools, students, teachers, and parents engaged. This reflects the increasing partnership momentum over time, Bridges increasing profile and credibility in schools and communities, use of SEPG matrix to better target resources and the roll-out of new projects over time.

- A total of 314 schools participated in Bridges projects in 2014, twice the participating number in 2012 (n=157).
- More than three times as many students participated in Bridges in 2014 (n=73,000), as compared to 2012 (n= 23,261).
- Teacher participation in Bridges has increased significantly over the evaluation timeframe. Bridges engaged a total of 3,186 teachers in 2014, an increase of 151 per cent over 2012 (n=1,268)<sup>171</sup>.
- Parent participation has also continued to increase over the evaluation period. While Bridges projects directly engaged 1,409 parents in 2012, by 2014 this had grown to a total of 9,185 parents.

### 13.4 Outcomes achieved for Bridges participants

These evaluation findings – which are based on the reports of students themselves, teachers and parents - collectively provide evidence of the impact of Bridges on academic preparedness, confidence and motivation, capacity to access university and school and community capacity.

#### 13.4.1 Academic preparedness and outcomes

Involvement in Bridges is clearly enhancing students' academic preparedness and outcomes. Participation in tutorial schemes, workshops, summer schools and mentoring programs is supporting both technical skills, such as literacy and numeracy, and practical skills, related to time management, team work, and leadership.

Bridges content and skill based programs provide students with the tools to strengthen their academic pursuits, whilst programs that expose students to university life through hands on learning demonstrate that university is an attainable and desirable goal, thereby enhancing students' incentive to study.

<sup>171</sup> Note that according to census data, there are 64,000 school teachers in Greater Sydney, and around 31,000 in inner West and Greater Western Sydney.



Both students and teachers reported benefits with respect to the practical elements of Bridges programs, citing an increased capacity to study independently and set clear and realistic study goals. This finding is supported by quantitative evidence, with an estimated 9,457 students (91 per cent) self-reporting better study skills, and an estimated 6,154 students (92 per cent) reporting that they felt better prepared for university as an outcome of their participation in Bridges.

*"The maths lecturer taught us how to study and ways of working. Because maths is a weakness for me this really helped me in school." (Student: ACUgate: Year 12 English and Mathematics Workshops)*

Bridges participation is also promoting students' academic self-esteem and mastery - 87 per cent of students (n = 33,781) self-reported greater confidence in their academic abilities,<sup>172</sup> while teachers reported improvement for an estimated 83 per cent of students (n = 8,951).<sup>173</sup> Student focus groups supported these conclusions, with students noting that Bridges has helped them build emotional resilience and confidence by encouraging them to step out of their comfort zones, and has given them strategies to overcome negative or self-defeating thoughts.

*"The (project) made him more confident about doing more things, because before (the project), he didn't think he could do well. It also changed him being awarded (for the project). He felt proud. At the beginning he was all over the place and didn't know what he wanted to do – but now he is thinking of going into construction and doing a traineeship." (Parent – UWS Your Tutor)*

Teachers noted that self-confidence was manifesting itself in Bridges participants being more willing to ask for help, answering questions with confidence in class, and believing more in their capacity to succeed. Teachers also noted that students' who participated in Bridges were more likely to volunteer to leadership positions within the school.

Where Bridges has concurrently engaged parents, parental attitudes towards higher education are changing. This is reflected in increased expectations of their children's achievement and a strengthened capacity to support their children's academic goals. An estimated 97 per cent (196 parents) reported greater ambitions for their child, with 1,434 parents (94 per cent of participants in relevant projects) reporting an increased capacity to support their child with their higher educational goals.

In some instances, the strong presence of Bridges in schools has contributed to a whole of school cultural change, whereby teachers have begun to set higher expectations and standards for *all* students; in turn, students have recognised that they have a capacity to achieve and are determined to meet those expectations.

*"Through my involvement with Bridges, I found out that the top children in Year 8 at other schools were learning about homeostasis, and this made me realise the top children in our Year 8 should know about this. I was too focused on pitching the course to be appropriate to the whole grade. It helped us to insert some stage 6 ideas into our teaching" (Teacher, the University of Sydney Kickstart).*

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<sup>172</sup> The confidence interval for these estimates was narrow indicating high reliability for these estimates.

<sup>173</sup> The confidence interval for this second indicator is moderate (75 per cent to 91 per cent). This suggests that the true positive rate is likely to be at least 75 per cent, supporting the conclusion of a high impact on confidence in academic abilities.

### 13.4.2 Awareness, confidence and motivation towards higher education

Overall, Bridges projects have increased awareness, confidence and motivation towards higher education. After participating in Bridges, students and parents are more aware of available courses and fields of study, subject and ATAR requirements, the various pathways to university, financial support options and the benefits of obtaining higher education qualifications.

Bridges programs encourage the development of social capital to facilitate in-depth discussions about higher education opportunities. This is particularly important for students who may be the first in their family to consider studying at a university. Bridges offers extended benefits when students continue the conversation at home with families; effectively exposing parents and siblings to their newfound knowledge and enthusiasm, and shifting perceptions of higher education, its accessibility, and its benefits.

*"This has opened her mind to what's actually out there and broadened her perspective about what can be done. Prior to this she wasn't interested in uni. Now she wants to move into a technological field" (Parent, Macquarie LEAP - Robotics).*

As a result, students are more aware of higher education offerings and opportunities. Overall, 90 per cent (n=24,392) of students surveyed reported a greater awareness of what university offers and 89 per cent (n=35,852) of students surveyed reported greater awareness of potential career paths. Further, the data suggests that Bridges projects are having a significant impact on increasing parents' knowledge of university options (79 per cent) and their understanding of the benefits associated with higher education (90 per cent).

Confidence is also improving. Post Bridges participation, many students perceive higher education as a more attainable goal. This has positive implications for students beyond the Bridges cohort: participants often encourage and inspire their peers and students in younger year levels to consider higher education.

Greater motivation to complete year 12 and a university pathway was also noted as a positive change for students involved with Bridges, with an estimated 69 per cent of students (n = 34,880 participating in relevant projects) self-reporting improved motivation to continue to year 12. Teachers reported that students are more willing to study and work harder to achieve their academic potential once they are aware of the value of a higher education qualification and how their school studies relate to their future aspirations. Feedback also suggests students are more ambitious in terms of their future educational and career prospects.

Improvements in students' motivation were also attributed to the engaging programs delivered by Bridges, with teachers estimating that 77 per cent of students (n = 18,901) were more engaged post their participation in Bridges activities. Primary school students became more engaged in learning – be it science, reading or maths, they looked forward to Bridges activities and involved themselves enthusiastically:

*"It was great giving our students the opportunity to drive their experiments and really get a feel for the scientific process. The students absolutely adored their mentors, and the thought of these special "scientists" coming to help them each week was a huge highlight. While in the initial phases students needed a great deal of scaffolding in developing ideas, they really jumped on board the scientific process as the weeks rolled through and really got a lot out of it" (Teacher, ACUgate: MyScience).*

### 13.4.3 School and community capacity

Bridges is increasing the capacity of schools. Through increased access to professional development, teachers have had the opportunity to build their practical and discipline specific skills, and as a result are taking more ownership for engaging students in their learning, with an estimated 97 per cent (n = 1,312 teachers) reporting that they feel better supported to engage students in their learning.

Bridges professional development activities have built teachers' skills and enhanced their classroom practice. After participating in Bridges professional development and learning activities, an estimated 98 per cent of teachers in relevant projects (n=1,275) reported an improved knowledge in their discipline of focus and 97 per cent of teachers in relevant projects (n=1,445) reported that Bridges had helped them to expand their teaching practices

*"The professional development provided was very hands on. It provided us with resources that were engaging, and gave us strategies to assist students in their physical development."*  
(Teacher, University of Sydney, Compass Supporting basic skills development: Occupational Therapy).

Students' have benefited from enhanced teacher capacity, with an estimated 1,436 teachers (89 per cent of all relevant participants) self-reporting that they are now better able to engage their students in learning. Further, some schools have used Bridges professional development activities and resources as a platform to better engage the teaching faculty as a whole to drive cultural change.

Following the introduction of Bridges, the culture within some schools was reported to be far more aspirational - with high expectations of students' capabilities, more likely to be the norm. This related to initiatives that have supported teachers' morale and continued enthusiasm, in spite of the challenges often inherent in schools based in low socio-economic areas; the extent to which schools have used Bridges strategically to enhance learning (e.g. through extending the curriculum or introduce new teaching methods); the sustained involvement of multiple Bridges projects in schools; and the positive support from teachers and career advisors for students' aspirations.

### 13.4.4 Capacity to access higher education

Under Bridges, substantial time and energy has been invested in strengthening the institutional relationships between TAFE and universities. Over the course of the evaluation, the nature of these relationships has broadened from peer-to-peer project officer relationships focused on operational and logistical considerations to include senior executive participation and endorsement of the Bridges approach to widening participation. The strength of the institutional relationships has also contributed to a shared understanding of each institution's operating environment and the articulation of shared objectives, which underpins the success of Bridges activities.

High school students are also showing greater knowledge and awareness of the benefits of a TAFE education, including that TAFE can offer a pathway to higher education (an estimated 87 per cent). Bridges is also assisting students enter university, providing flexibility with respect to ATAR requirements and allowing students to complete university credits while at high school.

*"They showed us different alternatives and pathways like TAFE, and how to cross over from it. It was a stress reliever – dealing with the pressure of 'you have to get this ATAR or you can't*

*go'. They also gave us information on bonus points, scholarships and how to apply" (Student, Macquarie University campus visit).*

Bridges projects that share relatable experiences have also motivated students to pursue alternative pathways and enhanced aspirations towards higher education. Data suggests that participating in Bridges is assisting students move through TAFE to enter university. The number of credit transfers and articulation arrangements between TAFE and universities has increased to 186 in 2014, from nil in 2012.

*"Bringing an ex-TAFE student along was a great addition to the presentation. He made my goals seem more attainable and realistic" (Student, UTS TAFE Pathways Project).*

Bridges are also supporting successful transitions between TAFE and university. While some universities have their own first year student transition program, Bridges has worked to understand the unique experiences of TAFE students who make this transition through the collection and analyses of pathway outcomes data, to inform development of activities and interventions that support retention.

#### 13.4.5 Achieving outcomes for Aboriginal and Torres Strait Islander students

Bridges is offering benefits to Aboriginal and Torres Strait students, families, teachers and community members. Through the provision of culturally relevant, engaging and tailored information and activities, and access to mentors and role models, students have developed academic and practical skills, and are showing more interest and confidence towards higher education. These findings are supported by the data, whereby an estimated 85 per cent of students (n = 6,953) reported an improved academic self-confidence, 88 per cent (n = 1,280 students) reported a greater awareness of what University offers, and 82 per cent (n = 582) reported greater awareness of potential career paths.

*"I enjoyed everything, I learnt that I am definitely going to uni to study. When I first came (to the program) I was just interested in music but this experience has widened my options." (Student, Wingara Mura Bunga Barrabugu Summer Program)*

Bridges has successfully engaged both parents and the Aboriginal and Torres Strait Islander communities, which in turn has enhanced their understanding of higher education offerings and pathways, and strengthened their capacity to support students to achieve their potential. Following their participation in Bridges, an estimated 88 per cent (n = 178) of parents became more involved in their child's education and school. Further, better knowledge of the benefits associated with higher education and options available for their child was reported by 96 per cent (n = 242) of parents and carers.

### 13.5 Analysis of university acceptance rates

NSW UAC data was analysed to identify the Bridges impact on rates of application to university per Year 12 enrolled student and rates of offers made per university application. Rates of applications to university and offers made per university were compared for periods pre and post Bridges. The pre-Bridges period comprised the years 2008-2011 and the post-Bridges period comprised the years 2012 and 2013.

The findings support the conclusion that **university acceptance rates among schools in low socio-economic areas were improved by the Bridges program**. Any Bridges effect among other schools was either non-existent or too small to be detected.

These findings suggest that there **was a Bridges effect on Bridges schools in low socio-economic areas, which operated to produce higher than expected growth in the proportion of applicants to university who received an offer.** That is, the average increase in rates of Bridges applicants receiving an offer was significantly higher than that of non-Bridges schools. The size of the difference (5.13 per cent) is substantial and supports the conclusion of a Bridges specific effect among schools in low socio-economic areas for this indicator.

This suggests that Bridges is contributing to the quality of applications to universities, and therefore, increasing the likelihood of acceptance.

## **13.6 Common features of successful Bridges projects**

Analysis of participant reflections and qualitative feedback highlights a range of factors that have influenced the success of Bridges projects.

### **13.6.1 Support for parents**

Parent engagement is crucial as many students will be first in family to go to university and will need the support of their parents and extended family in order to complete year 12, and often maintain the level of motivation and academic success to progress to higher education. Parents' support requirements vary dependent on student year level:

- For primary school students, there is strong value in engaging parents directly in the learning process and providing parents with the skills to support their child's development and learning. Such engagement can support parent's sense of self-efficacy with parents themselves reporting improved reading skills and understanding of their child's developmental needs as a result of their involvement, and being more equipped to support their child's education.
- For secondary students, interventions should use a multi-faceted approach: building parental understanding of higher education; use an inclusive culture to reinforce that higher education is achievable for their child; providing practical advice about support requirements (e.g. creating the right atmosphere for study at home); and building parents' understanding of how to encourage positive study habits and an academic focus.

Tailoring to parental characteristics is also important, noting that: many parents are from CALD backgrounds; literacy levels and therefore, confidence to support their child academically, varies; some may have had a university education themselves, often in their home country, but are struggling to understand the Australian system; compared to others who may lack understanding of what university is about, or the value it might offer their child.

### **13.6.2 An approach that aligns with students' age and stage of development**

For children in the primary years, support should first and foremost comprise strategies that enhance children's development, in terms of language, literacy, numeracy and fine motor skills. This recognises that children from low socio-economic backgrounds who fall behind their peers in the early primary years, may struggle to catch-up. This should be enhanced by activities that engage students in learning, and encourage them to aspire to higher education.

Those in secondary school may benefit from campus experiences and similar projects that, demystify university, and build awareness, confidence and motivation to attend. However, projects that are then focused on academic success – building both technical skills in areas such

as mathematics, and practical skills in time management or self-directed study – are crucial, especially as students reach their later years of high school.

### **13.6.3 Clearly defined project objectives; objectives that align to that of Bridges**

It is also important that projects have clear objectives, and these objectives align directly to those of Bridges. This should include consistent messaging about the value of learning, the capacity of students to achieve, and the strategies required to reach study and higher education goals. While this point may appear to be a given, schools noted that some projects 'while obviously a lot of fun for the student, did not appear to enhance these messages'.

### **13.6.4 Continuity of effort, complementarity of projects over a several year timeframe and intensity of support**

When Bridges activities are sequenced effectively to build on each other over a number of years, contribution to awareness, confidence, motivation and academic preparedness appears to be enhanced. Students benefit from long-term and intensive support, strong relationships, and ongoing follow-up. This might start with an immersive, on-campus experience and be followed by in-school visits or on-line tutoring, in the longer term. Alternatively, programs may involve weekly in-school mentoring sessions, linked directly to the school's curriculum.

Importantly, continuity of engagement and support may be achieved through a single long term project, or multiple projects that offer complementary messages and support over a number of years.

### **13.6.5 A tailored approach – recognising the unique needs of students, schools and different communities**

Projects should reflect the needs of individual schools, adapt to school's cultural, community and the characteristics of its students. The approach worked best where universities consulted schools, effectively adopting a community development approach, with an attempt to tailor projects to best suit the staff and students at each school.

Professional development activities proved most effective when adapted to local school context and teacher needs. Strategies that were hands on, practical and encouraged skills transfer, as opposed to being theoretical, worked best. Outcomes were further enhanced when teachers themselves were involved in designing professional development activities, with a stronger capacity to embed learnings into classroom practice.

Support that is individualised to students was also important. Where possible mentors, tutors, volunteers and academics should be matched with a similar school community to their own, allowing for strong role modelling, positive peer-to-peer support and a genuine understanding of community needs to build pathways to university. Such an approach is noted to make university 'real' and 'achievable' for students.

### **13.6.6 Building positive and supportive school cultures**

An inclusive culture, that promotes high aspirations and values all students, sets the stage for confidence, motivation and academic success. Cultural change is aided by work to increase teachers' expectations of themselves and of their students, such that achievement is the norm, a focus on school connectedness and cohesion, and work that engages students in learning. Senior students acting as positive role models can also be important, i.e. where younger students see



senior students engaging in Bridges projects, persisting with their school work and then going on to university, this can create an environment whereby higher education is highly valued and there are high expectations that students will go to university.

An important part of this is Executive Support from schools themselves, with principals and teachers often demonstrating high levels of commitment to the widening participation agenda, and a strong belief as to the potential of their students.

#### 13.6.7 Strategies that build students' confidence, aspiration and sense of achievement; making students feel like they belong at university

Students value acknowledgement of achievement and that this has a positive influence on academic confidence, motivation to study and pursue higher education. Various approaches have been adopted to achieve this intent, ranging from certificates of participation through to large award ceremonies held at university auditoriums. Teachers reinforced the value of this public recognition saying that students felt proud when receiving their certificates.

Such confidence can be further enhanced by providing students with a sense of belonging at university and a belief that they could fit in. Projects achieve this intent through extended periods of engagement on campus (be this to undertake English and Mathematics tutorials or summer school) and normalising higher education within the school community, through consistent engagement of academics, mentors and university students. Ceremonies that value students and celebrate their abilities and successes are also important.

#### 13.6.8 Promoting effective transitions

The literature notes the importance of continuing to engage students over time in order to optimise academic outcomes. Several Bridges projects have engaged with primary feeder schools to provide a continuum of consistent support to students, in the transition from the primary to high school, rather than episodic intervention. Further, effective transition support is instrumental to university – for example, TAFE Pathways creating clarity of what to expect, preparing students for differences in the academic approach and supporting their retention in the early stages of their university careers.

### 13.7 Barriers and challenges

#### 13.7.1 Varied level of tailoring to school interests and school cohort

Students themselves were most likely to comment on the extent to which programs aligned with their own interests and were, therefore, likely to engage them in higher education. Some schools noted that access to mentoring was sporadic, and focused on the early secondary years; there was a call in another school for activities that stepped beyond science:

*"They should show us all the fields. We know they want women to get into science, but we should know about all education and what's out there for us."* (Student)

Teachers in two schools commented that they were unaware of the broader range of Bridges activities; rather they understood the school had taken those programs on offer to give their students the best possible chance to progress to higher education.



### **13.7.2 Selection of students**

To enable a school culture where it is the norm for students to strive for success and do their best, teachers highlighted the importance of entire year level groups accessing Bridges, rather than just the brightest, most dedicated students. These schools that recognised that they should target those students with the potential to achieve or just on the cusp, who will benefit most from additional support.

However, as noted in school visits this was not the norm. Some schools clearly targeted those students already likely to attend university, with access to Bridges treated as a reward for academic success. In doing so, schools may be limiting the potential value of Bridges, effectively providing access to only those students most likely to attend university. In addition to being inequitable, such targeting fails to recognize that all students have potential: Bridges may equally encourage students to remain at school, or pursue a TAFE Pathway; alternatively through encouragement, support and a culture of high expectations, students' untapped potential (and capability to progress to university) may emerge.

### **13.7.3 Support to enable parents to support their children's educational aspirations.**

Engaging parents more widely remains an ongoing challenge and Bridges reaches eight times as many students, as it does parents. Many parents were noted (in the teacher focus groups) to not attend parent-teacher evenings or school open nights, often had not completed school, had low literacy levels themselves, and/or were from non-English speaking backgrounds, making communication a challenge. There is an opportunity for schools to provide more comprehensive and ongoing support to parents. Sharing practical strategies that parents can adopt to set academic expectations and support their children's academic preparedness, is a consideration.

### **13.7.4 TAFE noticeably absent**

Bridges has contributed to stronger awareness of alternative pathways to university other than the ATAR, which is motivating some students to complete high school with confidence that a TAFE pathway is within their reach. However, it is apparent that there is limited integration between TAFE Pathways projects and Bridges projects undertaken in schools. Schools that lacked their own explicit partnerships with TAFE institutions were less likely to be aware of TAFE pathways or be in a position to promote them to their students. This is a consideration for schools.

### **13.7.5 Importance of schools capitalising on Bridges to support a broader more strategic impact**

Schools have a key role in sustaining the Bridges impact, effectively keeping the value of higher education and students' confidence, motivation and academic capacity alive during times that Bridges is not engaged with students. Visits to schools demonstrate varied efforts in this regard: schools could be embedding Bridges messages through reflective discussions with students about what they are gaining through Bridges, providing resources (such as the UAC guide) post University visits and having career advisors more consistently engaged in classrooms.

Within some schools, the extent to which the Bridges message was retained was dependent on individual students.

## 13.8 Cost benefit analysis

A cost benefit analysis was undertaken to compare the value of the additional investment made in Bridges with the short, medium and long-term outcomes derived from the Program. This analysis found an approximate net monetary benefit of \$30 million was realised from the implementation of Bridges, which reflects monetised benefits in the order of \$46 million from an additional investment of around \$16 million. This equates to a return of \$2.80 for each additional dollar invested in the program. If only the investment made by Bridges in low socio-economic schools is considered, a return of at least \$6.00 for each additional dollar invested is estimated.

## 13.9 Future directions

Given funding for Bridges ceases at end June 2015, future directions focus on those requirements to support sustainability and to enable universities to maximise the value of any future investment.

- Future direction 1 – A more proactive focus on sustaining the good practices projects already initiated through Bridges, noting future funding limitations. This could include ensuring the following strategies (already in train) are systematically applied, where relevant to all Bridges efforts:
  - Continuing to maintain materials and resources, such as the 'Make your Mark website'.
  - Translating the Bridges materials into accessible on-line resources that teachers can download and apply within a classroom setting.
  - Running professional development sessions with schools, enabling educators to lead selected Bridges type activities into the future.
  - Working with schools to link Bridges initiatives to the curriculum at all year levels.
  - Supporting schools to work within their own networks and communities for leaders and inspirational speakers, to provide positive role models for students.
  - Continuing to engage schools, particularly those in rural and remote areas, in the use of technologies such as Connected Classrooms. This should promote better access to engaging lessons and shared resources in the longer term.
  - Assisting schools to embed the culture of high academic expectations for all students. In this regard, use of frameworks that assess school culture and identify opportunities to support 'greater inclusion' might be of value.
- Future direction 2 – Sustaining the partnership between the five universities, and expanding this to other universities. This recognises the continued value to be derived from collaboration in terms of economies of scale and breadth of reach into schools, as well as the capacity for shared learnings and practice improvement. Universities can also continue to benefit from the strong Bridges brand that is seen to act in the interests of under-represented students, rather than any one institution.
- Future direction 3 – Disseminating the benefits of the Bridges initiative, as highlighted through the evaluation, so they are widely known. There is demonstrated evidence as to the effectiveness of the Bridges interventions, in terms of engaging students in learning and widening participation. There are clear benefits to schools, communities, DEC, universities,

TAFE institutes and the Australian Government in maintaining effort. Such benefits should be shared with funders (Australian Government and DEC) and Vice Chancellors, to encourage continued commitment and influence future investment decisions.

- Future direction 4 – Establishing and implementing defined criteria, so as to prioritise projects for future funding.

Within the current context of competing demands and funding priorities, universities may be unable to sustain the Bridges effort in the absence of dedicated resources. The following criteria could be used to prioritise projects for funding:

- Extent to which the project clearly contributes to Bridges objectives
  - Evidence based
  - School feedback as to priority from a school and student perspective
  - Demand
  - Ratio of costs, to potential reach
  - Capacity to be sustained by schools with minimal support, post an introductory period
- Future direction 5 – Support for strategic decision-making by schools, to maximise impact.

In some cases universities were noted to engage with schools through a community development framework, ensuring that activities and projects are developed in conjunction with the school and address their identified needs. At the end of each year, consultation with each school supports continuous quality improvement in projects and the school-university engagement approach.

There is an opportunity to implement a consistent community development approach across all schools, engaging schools in a more strategic discussion to determine what their school, requires and what will maximise positive school culture and potential.

Ideally this would discuss:

- The nature of their cohort – age, cultural background, skills and interests
  - School culture – the extent to which it creates expectations of and promotes outcomes for all students
  - School capacity – teacher and social capital
  - Current resources and networks
  - Priorities
  - The projects (across Bridges as a whole) that will offer the best fit.
- Future direction 6 – Influencing the broader policy framework
- Over the last three years (and the preceding period), the five universities have gained strong insights, as to the requirements to change the life trajectories of under-represented communities. The learnings from this work could inform a clear strategy – applicable across the school, TAFE, university sector and vulnerable youth sector overall – setting out:

- The range of different interventions and supports that students need at different points of their education journey (i.e. early years, middle years, high school, and post-secondary) to achieve success.
- Requirements for effective transition – between high school and higher education; between TAFE and universities.
- How the continuum of Bridges and similar supports, not only support progression to higher education but add value by supporting job readiness and preparing students for work.
- How Bridges type interventions (i.e. those that support academic preparedness, confidence, motivation and awareness, school and community capacity, and access to higher education) not only contribute to the widening participation agenda, but can support better outcomes for young people overall.

Such a framework could be particularly important in the context of the proposed reforms to Australia's welfare system and service cuts outlined in the 2014-15 Commonwealth Budget, the National Commission of Audit Report and A New System for Better Employment and Social Outcomes 2015 (the McClure report).

Some of the key objectives of these reforms are to reduce welfare expenditure and long term welfare dependence, encourage people to work, as work is seen as the path out of disadvantage and effect culture change such that welfare is not seen as an entitlement. Initiatives, such as Bridges, have a broader and tangible role to play in addressing this agenda.

## 14. Case studies: Central and collaborative projects

### 14.1 The Parents Project

#### **Case study: The Parents Project**

The *Parents Project* is a collaborative group focused on the development and expansion of activities and resources that help parents, guardians and carers, encourage students to succeed in school and consider higher education. Recognising parents and carers as being important influencers in students' lives, the project aims to increase parents' capacity to support students to aspire to, engage with and succeed in higher education. Through collaboration with other projects, the *Parents Project* is also contributing to a body of knowledge about engagement of parents in higher education and making recommendations for best practice in this area. The *Parents Project* is involved in a wide range of projects and activities to better engage with parents and carers both directly and indirectly, with examples including:

- Campus visits and community information sessions for parents and community leaders at each of the five university campuses taking part in Bridges. Three of these visits involved a themed event to target specific cultural groups, and included Indigenous, Pasifika and Arabic focused events. These visits were supported by community Elders, university students and staff from diverse backgrounds, with community workers and interpreters where required.
- Resource development and distribution through events held by the *Parents Project* and through cross collaboration with other Bridges project groups. Examples included the provision of feedback on content, design and distribution of the Indigenous Prospectus (Indigenous Excellence) group; printing and distribution of flyers for parents attending the Bridges Theatre in Schools production; development of parent/carer information sheets for children involved in the Bridges Connect Lego Robotics program; and distribution of flyers for parents of students participating in the Bridges Connect Video Conferences.
- School and community development through the engagement of a wide range of school and community organisations across both metropolitan and rural areas of NSW. This involved establishing relationships and working with key community influencers and leaders across schools and communities to provide capacity building sessions and support in planning and delivery of student and parent/carer engagement activities.
- An information audit was completed to ascertain the nature of existing information about higher education available to parents living in greater Western Sydney. This audit considered printed and electronic resources, as well as available support and training for parents about the HSC. The project also consulted with a range of stakeholders to explore opportunities to collaborate and share resources.

#### **Impacts**

The *Parents Project* delivered a robust Campus Visits program in 2014 in collaboration with schools, DEC, Bridges partners and community organisations. These events provided opportunities for powerful and meaningful exchanges between parents, many of whose children would be the first in their family to attend university, and university staff and students about the importance of school, higher education and their link to careers.

There is evidence that the experience of a Campus Visit and the associated information sessions supported parents in improving students' academic progress and outcomes. Of 260

parents interviewed, 98.5 per cent agreed that the campus visits and accompanying activities helped them to support their children and future education and career goals. Many parents commented on the importance of "commitment, endurance and hard work", "support and encouragement from parents", and encouragement to "study hard at school." One parent shared the following comment:

*"As a parent it is my job to motivate my child every day, encouraging them to keep studying". (Parent)*

The evaluation of the Campus Visits also demonstrated positive impacts on parental awareness of higher education pathways and capacity to access higher education. Nearly all parents surveyed reported the event increased their knowledge of the benefits of a university education (97.2%, n=276), and increased their awareness of what university offers, including courses and career paths (97.5%, n=270). 100% (n=11) of parents attending a regional information session indicated that the session increased their awareness of alternate entry programs for rural and remote students into higher education.

Feedback from key stakeholders involved in the *Parents Project* indicates that the engagement and strengthening of relationships with schools and communities has had positive impacts on building the capacity of community influencers and teachers. A community development worker engaged through the project in 2014 commented that:

*"We are so delighted to be able to work together on this project and we (the team) believe that this information is vital for parents in our community". (Key informant)*

Key stakeholders in schools also provided positive feedback on resources distributed to schools by the *Parents Project*, such as the new Parent DVD and Indigenous Prospectus. A Careers Advisor from a regional school commented:

*"Wow – fantastic resources (great videos)! Will definitely be using these in my work education classes! I'll liaise with the Aboriginal Education officer too".*

#### **Critical features that have influenced outcomes**

In 2014, the *Parents Project* continued to understand the important role played by parents and carers when making decisions about higher education with their children and respects their right to be informed. Through providing current and relevant information to parents, the project has been able to demystify university, answer common questions and help parents from underrepresented communities to develop an understanding of the value of university. Further by providing information in simple and accessible formats the program was able to achieve a high level of participation from parents and carers with English as a second language.

Also critical to the success was its engagement of community influencers, allowing for development of multiple touch points in reaching parents and students in higher education. The information sessions and resources developed by the project have raised the confidence and capacity of community influencers in engaging parents and students in conversations about higher education. Through working collaboratively with other Bridges projects, this has further enhanced reach and has reinforced key messages to parents about higher education.

Source: Information provided by Bridges

## 14.2 Schools Engagement Project Group

### **Case Study – Schools Engagement Project Group (SEPG)**

The SEPG works to identify opportunities for greater coordination and collaboration regarding school engagement.

One of the main activities of the SEPG has been to develop 'the Matrix', which is a monitoring tool that captures the location and intensity of projects being delivered by the five universities across Department of Education and Communities (DEC) regions. The Matrix allows the SEPG to identify those universities that are operating in each region by school, and where collaborative projects are operating. The Matrix also supports understanding of those school communities that are over or under-served with respect to Bridges projects, enabling better use of Bridges resources. For example, the Matrix highlighted that the breadth of high schools involved in Western and South Western Sydney was much higher than expected. This has allowed universities to expand into new or relatively less serviced schools or look to engage primary schools.

Importantly, the Matrix is maintained to ensure the information is up-to-date to inform future partnerships with schools.

The SEPG is also working on other projects, such as the new low socio-economic background indicator introduced after the federal election, with consideration been given to how best to use the new indicator in the Matrix. The group has also worked with UAC to facilitate additional data sharing around the new indicator. This has benefited both the universities and the UAC, and may provide for a data source in any future evaluations of Bridges (or similar) projects.

### **Key achievements**

In order to ensure that the Matrix is accurate and up-to-date, collaboration from all five universities has been essential to engage the university community beyond SEPG members. This has been a key achievement of the SEPG group and Bridges more broadly, demonstrating the strength of collaboration and trust between the universities.

The Matrix has also been used to inform future strategic growth, with the SEPG now perceived as an expert group with respect to targeting and approaching schools. The Matrix has enabled the five universities to consult with each other more effectively and has facilitated strategic decision making about where Bridges resources are best allocated.

The Matrix has been disseminated to all university Bridges Project leads to ensure school communities are targeted in a collaborative way. This has seen a change in practice from universities working in isolation within particular school communities, to working together to support and complement the work of other universities.

### **Future directions**

Drawing on the success of the Matrix, there is potential to better coordinate school year-based projects amongst the universities. The emphasis would be on optimal sequencing of interventions – offered across universities - to achieve longer term impact. This recognises that cumulative and regular participation of students allows for messages about the value of higher education to be reinforced and for ongoing support.

Source: Information provided by Bridges



### 14.3 Indigenous Project Group

#### **Case study: Indigenous Project Group**

The Indigenous Project Group (IPG) focuses on the development and expansion of activities that assist students, teachers, parents and carers, to encourage Indigenous students to stay in school and consider higher education. In 2014, the IPG continued to offer expert knowledge and advice (when sought) and has endeavoured to raise awareness of Indigenous community participation in all of the Bridges universities projects/programs. The IPG continues to focus on increasing the participation of Indigenous people in the Bridges projects through engagement with meaningful and appropriate programs in primary schools, high schools and the wider community.

Another focus of the IPG has been to develop resources to engage with Indigenous communities to encourage participation in higher education. In 2013, Indigenous Models of Achievement was produced, and in 2014 the IPG developed and produced an 'Indigenous Specific University Prospectus' (ISUP) otherwise, referred to as the 'Indigenous Excellence – Write Your Own Story' brochure.

Currently the IPG and other relevant sections of the universities (in particular the scholarship offices) are collaborating with the Aurora Project – The Aspiration Initiative, to develop a single application scholarship portal for Aboriginal and Torres Strait Islander students.

Examples of work conducted by the IPG include:

- Development of an Indigenous Specific University Prospectus (ISUP) to showcase all Indigenous student centres, and outline courses, financial support and pastoral care that is tailored for Indigenous students. This involved extensive consultations with Indigenous stakeholders and representatives in the design of the ISUP.
- Working with projects with their campus visits. In the process of doing this, they requested advice from the Indigenous group to better engage with community Elders Indigenous. In this way, the Indigenous project group was able to ensure the event was culturally sensitive.
- Input into the Welcome Day at ACU for parents. The IPG ensured there was an Indigenous staff member from each university co-hosting the talk.

#### **Critical features that have influenced outcomes**

Collaboration has been crucial, including to support shared university effort to engaging the cohort in university. This was evidenced through the development of the ISUP, as each university contributed knowledge, time and resources to ensure that the brochure was a quality product.

Due the smaller target population, there is great competition with respect to encouraging Indigenous students to participate in university. However, the Bridges universities have put this aside and are now working in a collaborative way for the common goal. Amongst the IPG, there is now the sentiment that it is not as important which university students attend, rather the intent is that they attend a university.

Another critical feature reflects the use of multiple touch points and continuous relationship building within the school community and wider community. For example, when the resources are being used in schools and communities, continuous relationship building is taking place and this leads to students, schools and communities then participating in different Bridges individual university programs as well as collaborative Bridges programs.

Source: Information provided by Bridges

## 14.4 Schools Engagement Theatre in Schools

### **Case study: Schools Engagement Theatre in Schools**

In 2013 the SEPG launched the inaugural roadshow of the Theatre in Schools (TiS) project. Designed to dispel myths about higher education, and to encourage and motivate early high school students to think about their future choices, a production called Onwards and Upwards saw its second year of rollout in 2014.

Onwards and Upwards is a high impact, interactive visual and musical performance that raises awareness and understanding of the different pathways to higher education. Delivered primarily to year 7 students, the performance was delivered in 21 metropolitan schools and 18 regional schools in Dubbo, the Central Coast, Goulburn and Lismore. Onwards and Upwards follows a number of young actors who, based on their own individual capabilities, attributes and learning style, explores a different learning pathway that is right for them, and raises awareness and understanding of the different pathways in to HE including VET pathways.

Onwards and Upwards uses a multi-media platform to complement the performance. Embedded in the show is a motivational film that shows the diversity of a University campus and extra-curricular activities that are available, a film that highlights the importance and benefits of attending a university open day, and an introduction to the Make Your Mark website.

Providing a one-stop-shop for information to inform early stage decision making about further education, The Make Your Mark website complements and supports the significant on-the-ground work the universities are undertaking in partnership with schools and communities.

Additional resources were developed by the SEPG to scaffold the performance. Pre-performance worksheets were designed to give a context to the upcoming show and to introduce the concept of making informed choices for future career education and planning. The post performance resource was designed to reinforce the key messages delivered during the Theatre in Schools performance and to encourage further investigation into education and careers.

### **Impacts**

4110 students attended the Onwards and Upwards performance with 82 per cent of students reporting stronger ambitions towards attending university as a result of the Theatre in Schools experience. In addition, 87 per cent of students agreed they were more likely to stay at school and complete year 12 and 81 per cent of teachers stated the performance will result in students have a greater engagement in school.

### **Critical features that have influenced outcomes**

Based in evidence that the identification with the characters portrayed is often a pre-requisite for attitudinal and behavioural change, the SEPG requested that the actors were representative of a diverse community cohort, in particular reflecting the communities of participating schools. Having actors that students can relate to makes the experience more authentic and provides positive role modeling for the school students.

Ensuring the script was not a 'one size fits all' was also critical to engaging both the metropolitan and regional students. Whilst some of the perceived barriers, such as finance, pertain to both cohorts, it was important to address the specific concerns of the regional

students. Consultation and input was received from rural teachers, outreach staff and the Country Education Foundation to ensure the SEPG incorporated targeted and relevant information.

#### **Future Directions**

The project has great scope and reach, and through the performance itself, there is a clear indication that it has contributed to strong outcomes. To encourage the conversation regarding higher education even further, having dedicated workers that present a follow-on workshop to targeted students in each school would have a strong impact on reinforcing messages, and allow for students to ask individual questions about further education.

In addition to this, the delivery of a 10-20 minute abridged version of Onwards and Upwards to engage with parents would be an ideal way to bring parents into the conversation. Parents and carers continue to be the main influencers on students' future pathways. Providing critical information about the benefits of higher education in this engaging way can assist parents who are not confident to talk about this with their children, to feel more confident to do so.

*Source: Information provided by Bridges*

## 14.5 Bridges Connect

### **Case study: Bridges Connect**

Bridges Connect utilised various classroom technologies to build capacity, broaden aspiration and provide academic enrichment to target schools in communities under-represented in higher education. The target group for this project is Primary School and Secondary School students and teachers.

Three main sub-projects were coordinated under the Connect banner:

- Teacher Professional Learning – Teacher training in using various classroom technologies such as the Connected Classroom, Interactive White Board, Video Conferencing, iPads and Robotics. The main outcome was to build school/teacher capacity and equip teachers with the necessary tools to engage students in the classroom.
- Video Conference Series – curriculum and careers based video conferences were presented by university academics and researchers via the DEC Connected Classroom technology. The main outcomes were to provide curriculum enrichment and broaden aspirations toward higher education and the student's knowledge about career possibilities.
- Connect Robotics in Schools – A diverse program that engaged students, teachers and parents in robotics and made linkages to STEM careers. The main outcome was curriculum enrichment and to build school/teacher capacity, and broaden knowledge of careers in the area of STEM. Robotics was used as a tool to engage students in the classroom and offer hands-on approaches to complement the theory learnt in the classroom.

### **Impacts**

*Improving students' academic preparedness and outcomes:*

Within the Robotics in Schools Program, teachers are reporting improved learning progress for their students. The common improvements that teachers observed were improved skills in programming and ICT literacy, numeracy and literacy, problem solving, improved ability to work in teams, perseverance and improved time management.

*"Well it certainly made them think about numeracy in a different application rather than just working out sums. So it was a different way for them to apply it" (Secondary School Teacher, Rural NSW)*

*"We did some art and they wrote a story about a robot and the different things that the robot could do, where it took on life of its own and things like that. They made improvements in their literacy, in their descriptive writing, because they had seen the robots moving" (Primary School Teacher, Sydney)*

*Increasing students' awareness, confidence and motivation toward higher education:*

This outcome was achieved by the Connect Robotics in Schools Program and the Video Conference Series. The aim was to improve the awareness of potential career options that were available to students if they had an interest. In surveys taken 99.8 per cent of student's reported greater awareness of their potential career pathways after taking part in projects.

*"A great opportunity that has definitely helped me choose the correct career path after year 12. Especially as many students, including myself, were having problems selecting which area to go into. Thank you so much for letting us know about this!" (Student, Rural NSW)*

**Building school and community capacity:**

96.4 per cent of teachers report being better supported in their efforts to engage students and/or motivate them to learn. This was mainly achieved by the Robotics program.

*"Loved the day. Thanks to all involved for funding and opportunity. Without this it would be impossible for our school to come on board. Thanks so much" (Principal, Rural NSW)*

100 per cent of teachers reported that participation had helped them expand their teaching practices and also have been able to apply their learnings to their teaching practices.

*"It was a fantastic day and really broadened teaching possibilities" (Primary School Teacher, Western Sydney)*

**Critical features that have influenced outcomes**

With reference to the Robotics in Schools Program, key to the project's success is that all relevant stakeholders, including Principals and nominated teachers are involved in the decision making process. Teachers also need to be trained to use the resource and offer this to all their students, rather than just as a one-off experience. Further, parents should be informed as to the activities their child is undertaking at school and robotics related career options, so that they can assist their child in early career discussions.

In regards to video conferences with the schools, it is critical to continue to work with DEC as they are best informed as to the resources and content enrichment that schools require. DEC are also up to date with emerging changes to the curriculum, helping to ensure the offering remains relevant.

Support should be provided to schools not only in metropolitan, but in rural and regional communities within NSW, as they have such a great need for resources and value any opportunity to enrich student learning.

**Future Directions**

Bridges Connect have focused on ensuring that the practices and processes introduced through Bridges can be sustained after the funding period, as highlighted by the following examples:

- Teacher Professional Learning workshops - these were run so to increase teacher knowledge and skills and enable teachers to run robotics with all their students, no matter the school in which they work.
- Video conference series – presentations were filmed, along with accompanying slides and uploaded to YouTube so teachers and students can access these resources free of charge and continue to use the videos as classroom tools.

Source: Information provided by Bridges

## 14.6 UAC Web Project

### **Case study: UAC Web Project**

The core objective of the Bridges 'Make Your Mark' website project is to provide a clear, accessible and comprehensive website with both general information and information tailored for specific groups of prospective students (e.g. rural and regional, mature aged, Indigenous), and information for the key influencers of prospective students (e.g. parents, school staff, employers). In so doing, the website also aims to build the aspirations of low socio-economic communities.

The website particularly takes into account the needs of low socio-economic communities, given their historically low participation rates, but also provides information for other relevant groups within the broader community.

The website features stories of four different individuals and how they overcame barriers and challenges to enter higher education. The stories are designed to inspire and respond to the audience's concerns and challenges. It is also set up as practical and useful resource for those exploring further education options.

### **Impacts**

In the nine-month period to November 2014, there were 22,129 unique visits to the Make Your Mark website and a total of 27,222 sessions (including returning visitors).

While the Make Your Mark web project has developed a web survey, it would not be appropriate to comment on the outcomes or draw conclusions given the small number of respondents to the survey (n=10).

### **Future Directions**

The UAC web project has established a number of processes to ensure that the Make your Mark website can be maintained following the conclusion of Bridges funding. This includes vesting the day-to-day maintenance of the site with UAC and the establishment of post-launch governance processes. UAC is prepared to continue maintenance of the site in its current form on an ongoing basis using UAC resources and within existing governance arrangements with UAC participating institutions.

*Source: Information provided by Bridges*

## 14.7 TVS

### **Case study: TVS**

As part of Bridges, TVS has provided three television programs: Enquiring Minds, Models of Achievement and Indigenous Models of Achievement. All three are multi-platform projects not only broadcast on Sydney's only community television station licence holder, but via its community television affiliates around Australia, and websites associated with each program.

Enquiring Minds is an 11-part children's series, encouraging children from low socio-economic communities (aged between 7 to 12 years) to turn their childhood interests into a career through higher education. The series premiered on TVS in March 2013, and has been repeated once in 2014. The television series links to an interactive website – [www.enquiringminds.com.au](http://www.enquiringminds.com.au) - which includes videos of the series, extra material, lesson plans for teachers mapped to the Australian Curriculum, and a fun learning game for school children. The website is smartboard compatible, meaning teachers can easily use the series as a learning tool in the classroom. In addition to an award nomination in last year's Australian Teachers of Media awards, Enquiring Minds was nominated for Outstanding Youth Program in the 2014 Antenna Awards, the national awards recognizing programs broadcast on community television.

Models of Achievement is a 10-part series aimed at 18 to 45-year-olds. The intent is to encourage a mature cohort, from low socio-economic communities to pursue higher education by sharing the stories of individuals who changed their lives through higher education, including refugees, those who had history of substance abuse, individuals who did poorly at school, and people from non-English speaking backgrounds. The series premiered in June 2013 and was repeated once in 2014. It also links to its own website – [www.modelsofachievement.com.au](http://www.modelsofachievement.com.au) – with capacity to view the stories from all participants in the program.

Indigenous Models of Achievement premiered in April 2014. This three-part inspirational series showcases the stories of individuals from Indigenous backgrounds who have changed their lives through higher education. Aimed at Indigenous communities, the series also features respected Aboriginal community leaders commenting on why education is important for Indigenous communities, how higher education differs from secondary education, and what Indigenous students can expect from a university.

### **Impacts**

All three series increase awareness of the value of higher education by showing how professionals become qualified in their jobs (i.e. through higher education), how to access higher education, what can be accessed, and how higher education can change lives.

Enquiring Minds puts the value of higher education as "you can be anything you want with higher education"; it takes childhood passions and relates them to the higher education pathway.

Models of Achievement and Indigenous Models of Achievement contribute to increasing the awareness of the value of higher education through telling the stories of people who have overcome obstacles to discover their own paths. It also improves understanding of pathways to enable lifelong learning by demonstrating how higher education has improved these Australians' lives.



Indigenous Models of Achievement in particular helps build community capacity to increase access to higher education by presenting Indigenous role models who tell their own stories about access, study and hurdles they overcame to attend university.

**Critical features that have influenced outcomes**

The inspirational nature of all three programs, combined with a website offering practical educational tools that can be used in a classroom environment, make a difference to students, teachers and parents. In Enquiring Minds, students are introduced to the concept of higher education through an engaging, fun and curiosity-driven format of TV segments, classroom activities and an educational game. Further, teachers are able to easily access fully curriculum-mapped lesson plans on a range of topics, and parents are encouraged to discuss higher education earlier in their child's lives through watching the television show, or discussing the school day's activities with their child.

Models of Achievement reaches out to a wide audience to show that lives can be changed through higher education, no matter what your life circumstance. Feedback has been received from students, parents, and teachers about the inspirational nature of the program, while members of the community have responded positively through mediums such as Facebook; enquiries were received about when the next episode was on "because I missed the last one", "where can I view the launch program because I missed it" and other similar requests.

Indigenous Models of Achievement reaches out to its target audience in a very similar way. Segments of this program are available via the UAC Make Your Mark website, which targets a very specific part of the population – Indigenous people – currently underrepresented in higher education.

**Future Directions**

All three series are available to view online, which makes these project sustainable beyond their television broadcast dates. Enquiring Minds has also been mapped against the Australian Curriculum.

*Source: Information provided by Bridges*

## 14.8 Rural and Remote

### **Case study: Rural and Remote**

The Rural and Remote Project group acts as an influencer - whereby representatives from the universities meet to coordinate the rural and remote response as part of the overall Bridges initiative. The group works in collaboration with other project groups and undertakes general advocacy work to ensure that other Bridges Project Groups consider students and communities in rural and remote areas when planning their respective activities.

Examples of activities undertaken by the Rural and Remote Project Group include:

- A mapping exercise of activities undertaken by individual universities in rural and remote areas
- Collaborative activities, for example working with Bridges Connect to coordinate Robotics in Schools program delivery in rural and remote areas, with the SEPG to deliver Theatre in Schools to rural and remote schools, and with the Parents Project Group to provide information for parents in rural and remote areas (funded through the Parents project)
- Providing recommendations to other project groups, including to the Web Project Group on the rural and remote sections of the Make your Mark website.

### **Impacts**

The Rural and Remote Project Group has been successful in undertaking advocacy to ensure that key central and collaborative projects, including Bridges Connect Robotics in School, Theatre in Schools, and Parents and Community Engagement Sessions were accessible to rural and remote communities. For example, through the group's advocacy, Bridges Connect Robotics in Schools, which was running successfully in a large number of schools in Western and South Western Sydney was expanded to four rural areas of NSW: Dubbo, Broken Hill, Young Region and Northern Rivers.

The Group was also able to contribute to an update of the Make your Mark website to ensure that content reflected the concerns and barriers unique to rural and remote communities.

Content was also tailored for the Parents and Community Engagement Sessions that were run in rural and regional areas. As a result, 80 per cent of parents (over the 2012- 2014 period) who responded to feedback indicated that they had better knowledge of the higher education options available to their child (n=541) and 90 per cent agreed that they better understood the benefits of higher education (n=616).

### **Critical features that have influenced outcomes**

Appropriate tailoring and targeting of information and resources that resonate with rural and regional communities is critical to achieving successful outcomes for the cohort.

### **Future directions**

Continuing to add value to other widening participation efforts, and ensuring messages as to the value of higher education continue to be promoted among rural and regional communities.

*Source: Information provided by Bridges*

## 15. Case studies: Bridges university projects

### 15.1 ACUgate: Come to Dinner

#### **Case study: Come to Dinner**

ACUgate: *Come to Dinner* is a program that invites Aboriginal and Torres Strait Islander primary school and high school students, their families, Aboriginal and Torres Strait Islander staff (teachers, community liaison officers etc), and wider Aboriginal and Torres Strait Islander community members, Elders and organisations to a dinner function at ACU. As part of this program, participants visit the ACU campus, meeting Aboriginal and Torres Strait Islander ACU students to discuss their stories and experiences of university life. The evening also involves either a cultural activity or presentation from inspirational Aboriginal and Torres Strait Islander Aboriginal and Torres Strait speakers. During 2014, the program collaborated with the National Centre of Indigenous Excellence (NCIE) and their National Aspirations and Careers camp team (NASCA) to extend the Come to Dinner event to students involved in those programs.

The program aims to encourage the aspiration and participation of Aboriginal and Torres Strait Islander students in tertiary education by building relationships between participants, their families, and communities, with the university. Central to the program are the culturally appropriate activities organised and run by Aboriginal and Torres Strait Islander staff and students that support the open and honest discussions that take place about university, its practicalities, and its potential for students. As such, the program works at two levels: building the aspiration and participation of Aboriginal and Torres Strait Islander students, and more broadly celebrating Aboriginal and Torres Strait Islander culture.

The *Come to Dinner* project aims to target the aspiration and participation of Aboriginal and Torres Strait Islander students in higher education through not only direct work with students, but the social and community supports around them. In this way, messaging around higher education can be reinforced throughout communities. Three *Come to Dinner* events were held in 2014, of which two were held in collaboration with the NCIE, National Aspirations and Careers team, Yalbalinga and Equity Pathways. The events involved 12 schools, reaching 80 Aboriginal and Torres Strait school students, more than seven teachers, 20 Aboriginal and Torres Strait ACU students, as well as 34 others (including families of students, ACU staff, community members and staff from collaborating organisations).

Aligning with the program's approach of providing consistent messaging at multiple levels of influence, a supporting component of the program has been follow up activities with schools after each *Come to Dinner* event.

#### **Impacts**

During the *Come to Dinner* events there is information exchange about university life, post-school pathways to university and access schemes. Feedback from students and teachers involved in the program, point to its success in changing the attitudes of students and staff. Students appear to have more understanding of what university involves and its benefits, as well as what is required to get to university, while teachers are more appreciative of Aboriginal and Torres Strait culture and have higher aspirations for their students.

### Students

The *Come to Dinner* program reached 80 school students in 2014. Before taking part in the program, students often do not know anything about higher education; feedback and anecdotal evidence now suggest that students know more about what is involved in university, as well as what's required to transition to university. Following involvement in *Come to Dinner* activities, students are reported to be more willing and motivated to ask questions about the practicalities of going to university. Teachers have reported that there was an improved motivation in 95 per cent of their students. This attests to the success of the program and its culturally appropriate, community focused approach to engaging Aboriginal and Torres Strait Islander students in higher education.

### Teachers

The *Come to Dinner* program works on two levels; encouraging student aspiration and participation, and celebrating Aboriginal and Torres Strait culture. Both of these aspects of the program have reported to have had an impact on teachers. Teachers are reported to have both more of an appreciation for Aboriginal and Torres Strait culture, and have stronger aspirations for their students.

### Key achievements

The program has a culturally appropriate and tailored approach in engaging Aboriginal and Torres Strait Islander students, their families and communities. It is wholly organised and run by Aboriginal and Torres Strait staff and students, who have facilitated the aspirations of Aboriginal and Torres Strait students through sharing their own experiences, and having discussions around what university means for students and how to get there. The success of the program is seen in a reported improvement in motivation to attend university by 95 per cent of students.

### Critical features that have influenced outcomes

As a program targeting Aboriginal and Torres Strait students' aspiration and participation in higher education, it was imperative that the program be culturally appropriate in its delivery. The Aboriginal and Torres Strait ownership of the program allows for a truly targeted and culturally appropriate experience; invitations, food, entertainment, and the overall experience of the event lays the groundwork for explicit conversations about higher education in potential students' lives by facilitating a culturally appropriate and inclusive space where potential students can develop a sense of belonging at university. The frequency of contact and face-to-face delivery of the program are recognised as core success features of the program. Through ongoing regular communication, engagement and relationship building within communities, students and schools, the program has facilitated deep relationships between involved parties.

The involvement of Aboriginal and Torres Strait staff and students in organising and running *Come to Dinner* events, and their follow up activities, has been critical and enabled the program to build credible relationships with students and their surrounding support networks and communities.

The program recognises the importance of environmental and social contexts of Aboriginal and Torres Strait Islander students and aims to build relationships with the ACU Aboriginal and Torres Strait Islander Relationship Manager, schools, Aboriginal education officers, and

students. The program also recognises the importance of involving and gaining the trust of Elders and other community members as a critical feature to program success.

Recent collaboration with other Aboriginal and Torres Strait organisations and ACU facilities during 2014 improved the reach of the program, evidenced by a marked increase in the number of school students participating in the program in comparison to previous years.

The *Come to Dinner* program capitalised on the dialogue initiated about higher education in the lives of Aboriginal and Torres Strait Islander students at dinner events, by following up with schools after the event and continuing those relationships. ACU Aboriginal and Torres Strait Islander students for example have gone to schools and spent one on one time with year 11 and 12 students, sharing their stories with them, leading to an increased motivation to attending university; the program has found that sitting down and building strong interpersonal relationships with people has been a key enabling factor of this program.

Source: Information provided by Bridges

## 15.2 ACUgate Meet the Professor

### Case Study – ACUgate: Meet the Professor

The ACUgate: Meet the Professor project seeks to raise students' aspiration and awareness of university; develop cultural and social capital; and increase parents' awareness of educational pathways (including high school, TAFE and university). The target age group is upper primary school students, in years 4 to 6, from low socio-economic, Aboriginal and Torres Strait and underrepresented communities. The program targets ACU partner primary schools identified as being in a low socio-economic community and having a student cohort underrepresented in higher education. The project works individually with schools to ensure that activities are tailored to the specific needs of the schools, are culturally appropriate and are linked into the current school's curriculum and teaching priorities. A typical campus visit involves a tour of the ACU campus for students and their parents or carers, providing them the opportunity to meet key university staff and participate in interactive activities linked to both the university courses and the school curriculum. Throughout this activity, the students interact with ACU students and hear about their university experiences. Leadership activities are often included, and students are able to have the experience of presenting in the university auditorium.

In 2014, nine Meet the Professor days were provided to nine primary schools. Of these schools, four had previously been involved in the program in 2013 but with the involvement of a different cohort of students. On campus activities involved the health sciences, business, science and exercise science faculties, career services and the Student Success office.

### Impacts

#### Students

The main objective of the *Meet the Professor* program is to demystify universities for students who may not have much experience with higher education. Many students involved in the program, may (potentially) be the first person in their family to attend university, and may not live close to a university. For this reason, students commented on the importance of becoming familiar both with the concept of university, as much as the physical buildings. Many students spoke of how valuable they found attending on-campus activities; meeting university academics also enabled relationship building. Feedback from teachers supports this, and indicates that students are now talking about higher education as an option for them.

Feedback suggests this is driven by the manner in which the university and staff involve school students and plan activities tailored to their needs. As a result, students are more positive about higher education. Schools said that Meet the Professor gives "*the school something positive to talk about*" and that it was "*a catalyst*." As a result of greater awareness of university, students are more likely to increase their motivation to attend university. As students are becoming aware of university from a young age, they are given time to learn about university and are motivated to attend. Feedback from schools after participation in the project there has been a "*greater interest in pursuing university as an option*" from students.

Through participation in the project students have built leadership skills, presentation skills, capacity to work with others, relationship building and content specific skills (e.g. exercise science, science). A part of the day generally involves student presentations, leadership skill

development opportunities, and experiential activities whereby students gain content specific skills.

### **Key achievements**

Meet the Professor has been embedded in four participating schools. These schools have found the program to be so valuable that they approached ACU Equity Pathways to run the program again during 2014. This demonstrates the importance that teachers place on the program and the benefits that students take from participation.

One of the critical aspects of this program, and that which appeals to schools and students alike, is the ability to adapt the project to meet the needs of a class or school. For example, to cater for Aboriginal and Torres Strait students, the program has incorporated cultural activities such as traditional dancing and tool making through collaboration with Yalbalinga, the ACU Indigenous Learning Centre.

Being able to continue working with classroom teachers to offer interactive activities linked to learning and teaching, as well as the NSW and National curriculum, has also added value to the program. Strong relationships between schools and the project have been formed as a result.

The involvement of a broad section of ACU faculties, such as science, school of education, health science, business, exercise science, nursing and ACU services has been important in allowing flexibility in the academic focus of the events to ensure linkage with the learning and teaching taking part in the schools. This has also been important as it exposes students to a broad cross-section of what university offers and the relationships between that learnt at school and the courses available at university. For example, one of the Meet the Professor Days had a numeracy focus which involved the School of Education, Exercise Science and Nursing Faculties to demonstrate the numeracy focus in courses delivered by each of the faculties through the use of hands on activities.

During 2014, the program was able to successfully partner with other ACU Equity Pathways program to further embed and develop relationships with schools. During this time, the program also recruited and trained ACU students to facilitate group classroom and campus day activities. Many of the students employed also came from lower socio-economic schools and have had to overcome barriers in entering higher education by utilising alternative pathways. This has enabled students to share their stories with school students, as well as providing inspiration and positive role modelling.

### **Critical challenges**

Given the breadth of Bridges projects that ACU is implementing, one minor challenge involved the limited availability of academic staff in having capacity to deliver Meet the Professor. ACU currently have three equity pathway officers to deliver the projects, meaning that there is a limit to the number of Meet the Professor days that can be held in conjunction with other projects.

Operational aspects of organising the days are also a challenge given that the university is still operating and students and staff are using the facilities as usual. This means that booking appropriate rooms/laboratories to hold activities is difficult, as is organising academic staff to hold interactive activities around their teaching times. This can create a limit to the activities that are held on a particular visit.



#### **Critical features that have influenced outcomes**

A key feature of Meet the Professor is that the campus experience is personalised and tailored to fit the needs and wants of the school, teacher and students. This is achieved through regular contact and consultations with Principals and classroom teachers, ensuring that a trusted and deep partnership is built between ACU and the school from the onset. Prior to the on-campus experience discussions are held with the principal and teachers to understand what would be most beneficial for their students. For example, there might be a need for greater focus on leadership skills or science skills.

The link to classroom programs and the curriculum is also discussed to ensure that the day is consistent with what is happening in the school. This adaptation of the project means that students can receive maximum benefits of participation.

Building strong relationships with schools has also been important in achieving good outcomes. Programs have been better designed to suit the school and students. It has also allowed for ongoing activities to occur with students, to reinforce and build upon the knowledge gained through the on-campus experience, further embedding the aims of the program. Students will, therefore, continue to experience outcomes after their initial participation.

Throughout 2014, the program also worked together with schools to build relationships with parents and carers and encourage their involvement in campus visits and classroom activities. This is important as it enables the child to have a shared experience and start a dialogue about higher education with a key influencer in their life.

#### **Future directions**

Given the importance of parent awareness of higher education in influencing student decisions to attend university, the project could look at ways to further developing parent engagement activities to involve more parents in the program.

Source: Information provided by Bridges

### 15.3 Compass – Preparation for Senior Study Program

#### **Case Study: Compass Preparation for Senior Study Program**

The University of Sydney's *Compass - Preparation for Senior Study Program* aims to support Year 10 students to develop their skills and motivation to succeed in their senior years of high school and university. The program emphasises the importance of self-directed study and seeks to inform students about their higher education pathways. Originally, comprising a one-off visit to the university campus, the program now also involves two follow up sessions conducted in the school.

As part of the program, the Faculty of Education and Social Work developed a unit for their third year education students that saw these students creating study skills materials to deliver to school participants attending the on campus workshops. This has offered the dual benefit of contributing to the sustainability of the program (by ensuring there is a committed cohort of tutors who are able to run the workshops), and in turn has provided pre-service teachers an opportunity to directly experience the school environment prior to their first placement.

#### **Impacts**

##### *Students*

Evaluation data indicates that the program is having a positive impact on improving students' academic preparedness, motivation and awareness of the value of higher education. This is reflected in anecdotal feedback provided by teachers and students. Of the teachers surveyed, 96 per cent of teachers strongly agreed or agreed that the Mathematics Preparation session informed their students about how to improve their performance in mathematics exams and 93 per cent of teachers strongly agreed or agreed that the English Exam Preparation session informed their students about how to improve their performance in English exams. These findings were consistent with feedback from students where 91 per cent either strongly agreed or agreed that they learnt how to develop good study habits and 90 per cent strongly agreed or agreed that they learnt more about university entry and pathways.

Teachers also continue to reiterate the importance of reinforcing good habits to their students to maximize their exposure to time management, organizational and planning skills.

As one teacher commented, *"It was great to see how engaged the students were. The group of students can be difficult to engage so it was great to see them interacting with the mentors and genuinely enjoying the experience."*

##### *Teachers*

The program provides pre-service teachers with the benefits of face-to-face independent teaching experiences in the school and the opportunity to visit areas and communities in Sydney with which many have previously had no connection. As one of the lecturers described, *"It opens their eyes to different possibilities and ultimately to become better teachers... Teaching in small groups gave them the chance to scaffold their teaching skills, to try out strategies for the first time."*

#### **Key achievements**

The critical achievement of the program reflects its growing reach. In 2012, the delivery of the program was restricted to one campus visit per school; with nine metropolitan schools participating and one regional school participating. In 2013, 11 metropolitan schools attended the on-campus visit and six participated in the extended model; three regional schools participated through an outreach program, resulting in 966 metro engagements and 294 regional participants. The program was further extended in 2014, with 12 metropolitan and regional schools participating in the program, involving 50 teachers and 1492 students. Further, the integration of this program into the wider university community is a critical achievement not only of this project, but also of embedding widening participation work within the university.

#### **Critical features that have influenced outcomes**

There are various elements of the Preparation for Senior Study Program that have had direct and indirect impact on students and teachers. The involvement of the pre-service teachers has served to provide positive role model figures to the students.

Due to the nature of the smaller sized workshops, school students were not only involved to support their learning; they were also able to have personal discussions with pre-service teachers around ATAR, university courses and university life. Students' comments suggest that the pre-service teachers offered "*a bright insight into the HSC and Uni*", and the aspect they enjoyed most about the day was "talking and discussing things with the presenter". In fact, 96 per cent of students strongly agreed or agreed talking to the university students was helpful. The impact of the positive role modelling continues to be one of the most valued aspects of the program.

Another critical feature is the schools chosen to participate in the program. For the pre-service teachers, this was the first time they had the opportunity to work with school students, in particular with students that come from a very different socio-economic background to themselves. The schools chosen are a critical aspect as the Faculty is placing an emphasis on social justice within their teaching practice.

Further, as a result of the workshop, 100 per cent of the pre-service teachers strongly agree or agree that developing their activity was beneficial for their own teaching practice.

Source: Information provided by Bridges

## 15.4 GWS Giants AFL Partnership

### **Case study: Greater Western Sydney (GWS) Giants AFL Partnership**

The *GWS Giants AFL Partnership project* is a project partnership between the University of Western Sydney and the Greater Western Sydney Giants AFL team. The GWS Giants organise and deliver activities that aim to engage and raise the aspirations of, students from low socio-economic backgrounds. Activities are focused not only on students, but also aim to engage teachers, parents, and the wider community. This recognises the importance of consistent messaging about the benefits of academic achievement and higher education throughout multiple facets of a young person's life.

Activities have evolved over time to be highly interactive in nature. They include:

- Excursions to Sydney Olympic Park where students participate in various practical activities related to higher education.
- Save the Children Mobile Youth Van where students use Ipads and apps to create posters of their future achievements.
- Goal setting and dedication to success workshops where students participate in interactive workshops that explore the importance of goal setting and the steps to success.
- Fizzics education – leadership: it's not rocket science, where multiple schools are linked via video conferencing to focus on leadership.
- Festival and community awareness days where the GWS Giants worker attends and promotes the project and Bridges more generally to the community.
- A nutrition program where students are provided with information on various occupations and pathways involving food and nutrition.

The GWS Giants players are directly involved in the delivery of activities, coming along to activities and telling the students their stories.

While UWS manage the financial management of the program and provide advice, the GWS Giants run the project and support the project through additional sponsorship.

### **Impacts**

#### *Students*

Role modelling by GWS Giants is a central component of the project and a key engagement strategy. For students, the high profile sports people involved are engaging and relatable; they share their stories with students and in so doing, encourage students to think about their education. Some of the messages inherent in their personal stories relate to the role that education has played in their lives, and that 'there must be life after sport'. The reality is pointed out: that not all sportspeople make it to elite level sports, and that injuries and other circumstances can mean that individuals will need to support themselves in some other way. Tertiary education is drawn in to their stories with respect to the role that education can play, and has played, in supporting sports people in their lives. Some players for example are still studying and, therefore, role model this directly to students.

### Key achievements

Activities run through this partnership have significant reach into the community. Participants in the program have included Aboriginal and Torres Strait Islander students, rural and regional students, students from metropolitan schools, and students from refugee communities. The reach of the program is significant, and attests to the scale and volume of activities that are undertaken. Of note is that 15 community influencers were also involved in delivering activities under this partnership, reflecting the importance of messaging throughout multiple levels of a student's environmental context.

### Critical features that have influenced outcomes

GWS Giants players are from the same areas as the students; they have often grown up in suburbs familiar to the students and are able to engage with players as successful sports people, and as people, who were in the same circumstances as themselves. The players for example will talk about their own personal histories drawing on phrases such as "I was like you", or "I came from (suburb) and made good".

The project has benefited significantly from the high profile and credibility of the GWS Giants themselves. UWS for example has not had to market the project to students and the community, as attachment to the GWS Giants has achieved this intent. The sporting team and its players have more immediate credibility with young people and so they are more likely to engage with the activities and take notice of the role modelling of the AFL players.

The credibility of the sporting team is not limited to young people. The team and its workers run activities where whole families and communities are welcome to be involved, with the aim of providing consistent advice around the importance of education and healthy lifestyles. In this way, it is more likely that there will be consistent messages at multiple levels of a young person's social and community networks regarding higher education as an achievable, and viable pathway for them. As many families from low socio-economic backgrounds do not have a history of accessing higher education, convincing parents of the benefits of higher education is seen to be as necessary as convincing young people due to their important role in supporting the achievement of these goals.

Tailoring the information so it is presented in the different languages spoken by parents has also been crucial in engaging parents and students in the program.

Source: Information provided by Bridges

## 15.5 LEAP - Macquarie Mentoring (Refugee Mentoring)

### **Case Study: LEAP - Macquarie Mentoring (Refugee Mentoring)**

The *LEAP - Macquarie Mentoring (Refugee Mentoring)* project supports students from refugee backgrounds to explore higher education options and career pathways. Students are matched with a volunteer Macquarie University student to act as a mentor, who works with students to build confidence, skills and knowledge about higher education to enable students to make informed and empowered decisions about their future education and career pathways. The program is structured in three blocks: rapport building and goals setting, skill building and higher education pathway investigation. In 2014, nine high schools across West and South Western Sydney participated in the project, involving 227 students, 5 parents, 13 teachers and 108 volunteering mentors, 21 paid mentors and 10 community members

Each mentor is given online and face-to-face training by LEAP staff. Previously in-person training was for a half day, however, in response to feedback this was changed to a full day in Semester 2 2013.

### **Impacts**

#### *Students*

Students reflected on the many ways in which participation in this project has increased their awareness of higher education and career pathways, including thinking about new career options as result of meeting new people through their mentor. In 2014, 95 per cent of students surveyed strongly agreed that the mentoring program increased their knowledge and 93 per cent of students strongly agreed that the program provided them with information on how to access higher education. Students as a result are more active in exploring these pathways. Teacher feedback also supports student perceptions:

*"Many of the students who have participated in this program, over the years that I have been running it, have been much more actively involved in seeking a variety of pathways for their future". (High school teacher)*

Students noted that the program had positive impacts on developing their academic skills and on their understanding of the purpose of higher education and its importance for some career paths. Of the students surveyed, 95 per cent strongly agreed that the mentoring program had increased their academic skills, while another 82 per cent reported having a sense of direction and purpose about their future. Through targeted activities, students gained an understanding of admission criteria and deadlines, the types of university assessments, and the different courses provided at the university. Students commented that the program *"has really made me research and work way harder to reach my goal"* and *"It gave me insights of career choices and a view of University Life"*.

It is also evident through feedback on the program that students have **increased confidence** and feel **more positive about their futures**. Students and teachers reflected on this change, and the impact that this is having on academic results and engagement, as well as on increasing leadership and interaction skills. When asked about their experience in the program students responded, *"When I was young I was kind of scared to go to university. But when I learnt more about the university I feel excited about going to university and I think it will be really fun"* and, *"I'm now feeling comfortable to enter a Uni and I'm ready for the challenge because I used to think*

*it is impossible to make it because I'm from a different background, but I now know I can fulfil my dreams".*

**Motivation has increased** for students towards both higher education and high school. Many students reported that they are now trying harder at school because they see where it can take them in the future. Students said that they are *"focusing now more on my studying"* and that they *"have to try hard every day to go into uni. It is very good place for my future career."* All students surveyed reported that they were more motivated to go to university.

Feedback suggests that the *LEAP - Macquarie Mentoring (Refugee Mentoring)* program is having direct impacts on academic results. Students' feedback suggests they were doing better at school, *"the program has really helped me a lot in my time management. I have learnt that managing time and studying more is really important to achieve my goals"* and *"The program has helped me study more and to [do] my work to the highest ability."* Students also commented that they were more organised, have improved their time management skills, and are better able to set goals.

*"The program has made me think a lot about what I want to become. It has also taught me all about goal settings and it has helped improve my time management. The program has encouraged me to try hard and be who I want to be". (Student)*

### Key achievements

The overwhelming response from students, teachers and the university is that the *LEAP - Macquarie Mentoring (Refugee Mentoring)* program is incredibly valuable for students. This is further evidenced by 28 of the program participants now being enrolled in universities across Australia after only three years of the program commencing.

### Critical challenges

Running a program of this size and involving as many stakeholders as the *LEAP - Macquarie Mentoring (Refugee Mentoring)* program raises certain challenges. One of these is the difficulties in timetabling the program to meet the needs of participating schools. This has been made more difficult with the number of schools increasing. To overcome this challenge the project has contacted schools early in the year. They have also utilised the staff in the program to run sessions simultaneously.

### Critical features that have influenced outcomes

The use of university student mentors is a key factor that is influencing outcomes for students. Students are able to form a relationship with their mentor who can provide advice based on their own experiences. This helps to change preconceived ideas that students may have about the type of students who go to university. Many of the mentors are from refugee backgrounds and they act as role models so that students can see that university is for people like them and are inspired to go to university themselves. Students reflected on the value of their mentor, *"I liked our perfect mentor and I liked the way I got help and I feel much more confident now"* and *"[I] am looking forward to meeting these two wonderful girls next year if I do this or if it runs."*

The project is also flexible and responsive to student needs. This means that mentors can modify the delivery of the program to maximise outcomes for students. The project is also specifically designed for refugee students and takes into account the cultural background of students to again try to maximise the outcomes that students experience.



Source: Information provided by Bridges

## 15.6 Macquarie LEAP - National Indigenous Science Education Program (NISEP)

### Case Study – LEAP: NISEP

Macquarie University's *LEAP - National Indigenous Science Education Program* (NISEP) was established following the request of Yaegl Elders for assistance in helping their youth. NISEP invites secondary students from low socio-economic areas, particularly Indigenous youth, to participate in a science program aimed at building the motivation, skills and support required for students to succeed in secondary education and higher education. Led by scientists from Macquarie University, the program consists of a consortium of Australian universities, high schools, science organisations and Indigenous outreach organisations.

The core activities of the program centre on providing Indigenous and non-Indigenous secondary students with the confidence, skills and opportunities to present science activities to parents/carers, junior students and wider public. In 2014, participants had the opportunity to attend the Youth Eco Summit, an annual summit focussed on science and sustainability, where they demonstrated activities to over 3,000 attending junior secondary participants. Similarly at the Australian Museum Science Festival, NISEP student demonstrators ran an interactive science show alongside Macquarie University students and Indigenous Cadets. Other core activities undertaken as part of the program during 2014 included:

- National Science Week, which was a four day event run at the Redfern Community Centre by school students in the NISEP partner schools for local primary schools, Aboriginal community members and the general public.
- MQ Science Experience, which is a three day science camp at Macquarie University involving practicals, lectures and demonstrations.
- Chifley College Gifted and Talented Program. This event targets year 9 and 10 students from Chifley College that have an interest in science, technology, engineering and mathematics.

### Impacts

#### Students

Findings from participant questionnaires and focus groups used to evaluate the program demonstrated that the program has positive impacts on improving academic preparedness, knowledge and motivation towards higher education among students. Student demonstrators indicated having an increased intention to continue with their schooling, with 72 per cent of student demonstrators reporting increased intention to continue to year 11 and 12 or into higher education. This is evidenced by the following comments made by students: *"It made me more confident and I acquired skills that will make me more confident in talking to people", "(I have gained an) understanding of how university is, how I can improve to help my HSC and to get the courses I want", "I have gained more knowledge about science and an interest in going to university" and "I learned a lot about different ways of getting in to uni".*

Feedback from teachers involved in the program further reported positive impacts on students' academic interest and motivation towards higher education. Of the teachers that completed

the post evaluation survey, 96 per cent reported that the NISEP activities had influenced their students' enthusiasm for learning and motivation to study. A further 89 per cent of teachers reported that the program had influenced students' general academic skills, completion of class work and motivation to go on to university following school.

Teachers also reported that the program had positive impacts on building school and community capacity, and in developing a more aspirational school culture. Teachers, Aboriginal Education Assistants and local community members also commented on the impact of NISEP more broadly on increasing student engagement of students across schools:

*"I have noticed a dramatic change in perception of the whole school community who now see Indigenous students as academic role models within the school" (former Deputy Principal, Maclean High School).*

### Teachers

Results from the post-evaluation survey also showed improved capacity among teachers, with 98 per cent of participating teachers reporting feeling better supported in engaging students in learning and/or motivating students to learn, and 96 per cent reporting that participation had helped them expand their teaching practices.

### Parents

Evaluation evidence also demonstrated that the program has had positive impacts on parents' academic expectations for their children and knowledge of higher education options. Of the parents that responded to a post-course survey, 100 per cent reported that the NISEP activities influenced their ambitions and academic expectations for their children. Ninety per cent of parents reported that the program also influenced their knowledge of higher education options available to their children and the benefits associated with higher education.

### Key achievements

The program has achieved increased numbers of NISEP students electing to study science and improved participation in schools. Retention and school completion rates have improved markedly among NISEP students from Maclean High School, which is one of the strongest Indigenous partners of the program. Staff from the school acknowledged that the program has contributed significantly to this increase. Chifley College has also seen a three-fold increase in the number of students studying senior science since their involvement in NISEP.

### Critical features that have influenced outcomes

The development of strong and ongoing connections between program participants and program staff is critical to the program achieving high levels of participant engagement among participants. NISEP staff support and mentor students over the course of their high school education to provide them with guidance on their studies and to support and motivate them in accessing tertiary education.

Core to the program's success is its use of a community-inclusive approach involving ongoing partnerships between local Aboriginal Elders, school students, teachers, university staff, science outreach organisations and education organisations. This has enabled the program to reach a large number of students and community members, including Indigenous youth. This also provided participating students with the opportunity showcase the skills learnt through the program, and promote continuing involvement in secondary and tertiary education.

Program participants are role model and mentor figures within their schools and broader communities.

*Source: Information provided by Bridges*

## 15.7 Pathways VET Sector

### Case Study – Pathways VET Sector

The Pathways VET Sector project is aimed at increasing awareness, building aspirations, preparing, and facilitating opportunities for VET students in Greater Western Sydney to succeed at university. The main target group of the program is students from VET/TAFE colleges but the program has also worked with students from Fast Forward schools.

Activities have included presentations and seminars providing tailored information about UWS, as well as links to support services, brochures containing information of pathways to university and information on claiming and applying for advanced standing. Other components of the project include campus tours provided to TAFE class groups at the UWS Sydney campuses, presentations at education expositions, High School Careers advisory forums, University open day events and a range of conferences.

During 2014, the program was also responsible for authoring, maintaining and promoting the University of Western Sydney's Tertiary Education Pathways and Partnership webpage, which received 164,000 views throughout the year. The project also implemented a pilot program, "Diploma Plus" for Western and South Western TAFE students undertaking a Diploma of Community Services work. The program was able to engage 130 students, of which 30 per cent lodged applications to commence university in 2015. The program worked with students to develop the skills required for university study, focussing on the areas of research, reading and writing.

During 2014, 172 students also attended the 'Let's talk Uni' university preparation seminar for VET students at the Parramatta campus. The presentation was designed to engage and prepare students for commencing at university, as well as manage expectations and foster a sense of belonging for students.

The program has also worked to build partnerships between local TAFE Institutes with higher education providers to improve the access and transition of students moving from VET to higher education.

### Impacts

#### Students

Evaluation of the project demonstrated positive impacts on student academic preparedness, confidence, and the sense of belonging at university. This evidenced in feedback provided by students who took part in the 'Let's talk Uni' seminar:

*"I would like to thank everyone involved who organised and ran this event. I am less nervous about uni now and hope I am accepted into UWS more than ever."*

*"Thank you for all the helpful tips I got on the day. And thanks to all the staff that day for being so welcoming and easy to talk to. It made me walk away from this event and think I really would love to come to uni and be a part of the friendly group that I met on the day."*

Evaluation of the 'Diploma Plus Pilot' also demonstrated improved academic preparedness, confidence, feeling of belonging to University of Western Sydney community, and motivation towards higher education. Of the students that participated in a post course questionnaire, 80 per cent either strongly agreed or agreed that attending the master class session/s had

encouraged them to consider university as their next step. This is further reflected in comments from students:

*"Meeting the lecturers and getting a feel of uni life reduced any anxiety I had"*

*"Before this Master class I was anti-university. Now I am seriously considering it."*

TAFE teachers also shared similar views on the value and impact of the project activities on increasing academic preparedness and outcomes:

*"The real strength was the notion of empowerment that students felt after having completed an intense course such as this. The students felt that they had achieved something at the end of the course. After completing the Social Research Report they were able to really understand why social theory and social research were important for community development work. Equally important the rigor and discipline skills that they acquired motivated some to consider enrolling in university next year."*

*"The students really enjoyed the experience and a number have told me that they are now considering uni as an option when they hadn't before yesterday."*

### **Key achievements**

The project has secured 160 formal guaranteed entry pathways for VET students to access university degrees using their VET studies. It has increased access and recognition of prior learning for VET students.

The reach of the project expanded greatly in 2014, due to added program staff capacity, and has had a significant increase in interactions with schools, teachers, careers advisors and targeted VET provider forums and events.

### **Critical features that have influenced outcomes**

Providing students with the opportunity to have face-to-face interactions with program staff and on university campuses has been critical in engaging and encouraging students towards university education. On one occasion at a TAFE event held by the program, a student entered the library and worked with staff to lodge her UAC application on the spot. This demonstrates the positive impacts of the program in providing face-to-face encouragement and practical assistance in applying for university.

Also critical to the successful delivery of the program, was its provision of information that was clear, accurate, consistent and easy to navigate.

Source: Information provided by Bridges

## 15.8 Sydney TAFE – UTS component of the UTS TAFE Pathways Project

### **Case study: Sydney TAFE – UTS component of the UTS TAFE Pathways Project**

The UTS TAFE Pathways Project was designed to create and strengthen existing pathways between TAFE and UTS and provide academic support to students. This case study refers to the Sydney TAFE – UTS component of the program, which is centred on a joint partnership between Sydney TAFE and UTS to build the interest of TAFE students in attending university, and strengthen and expand pathways and support processes to enable their effective transition from TAFE to university. The project was developed and implemented from late 2012 through 2014.

The main component of the program is the provision of outreach activities to TAFE students by UTS staff and students, which involves information and aspiration building presentations at TAFE, as well as visits to the UTS campus by TAFE students. The aim of the TAFE presentations was to stimulate TAFE students' interests in undertaking university study, provide them with a comprehensive overview of available courses, as well as the various pathways, application process and support available to them. In 2014, 302 TAFE students participated in 19 outreach sessions held at Sydney TAFE. The sessions also involved 24 TAFE teaching staff, 19 UTS staff from a range of faculties and units, and eight UTS Student Ambassadors who had entered university via a TAFE pathway. Each outreach session had a specific focus on either engineering, the Tertiary Preparation Certificate, or travel/tourism and hospitality.

Examples of other activities undertaken by the program in 2014 included UTS campus visits for TAFE students, the development of new resources to support the program's initiatives, strengthening of partnerships between Sydney TAFE and UTS staff involved in pathways and transition processes, and improvements to the quality and provision of study pathways data used to inform the program design. Another component of the project involves supporting and coordinating the development of credit recognition arrangements in targeted pathways.

### **Impacts**

#### *Students*

Feedback from students participating in the TAFE outreach activities revealed a high level of engagement, as demonstrated by their interest during discussions, and conversations initiated between peers regarding higher education. As described by one teacher:

*"I observed more discussion amongst students about university in general. The class visits opened conversations about the logistics of going to uni, pathways, support services, flexibility etc." (Tertiary Preparation Certificate teacher)*

Similarly, another teacher commented:

*"Some students have never stepped foot on a uni campus, so the occasions when we had an excursion arranged were invaluable. I would like to see more of this, to help students make the transition and overcome any hesitations or fears they may have about university." (Tertiary Preparation Certificate teacher)*

It was identified early in the development of the project that prospective students had low levels of knowledge about the process of applying to university, and had anxieties about academic requirements and preparedness for study. Of the 302 students who completed an

evaluation of outreach activities, 95 per cent agreed that the outreach activities had given them a greater awareness of what university offers and 97 per cent agreed that the activities had given them a greater awareness of pathways to university.

As in 2013, the TAFE Student Ambassadors continued to be a highlight in engaging students and demonstrating the possibility of them entering and successfully undertake university study:

*"The UTS students' presentations – they were all very engaging and understood the needs of their audience. They presented as positive role-models....our students could relate well to them." (Tertiary Preparation Certificate Head Teacher)*

### **Teachers**

Education professionals at TAFE themselves benefited from the improved information sharing infrastructure that was developed through the project. Teachers received information about university access and support that they were not previously accessing, as such, they were able to better support their students' transition to university. One teacher suggested that *"the information about special consideration bonus points, and comparing TES entry to UAC scores was very useful."* Teachers accessed this information directly through the Pathways Coordinator, and distribution lists, and were active in seeking access to this information.

### **Key achievements**

The project's key achievements have centred on cross-institutional arrangements such as outreach visits, campus visits by TAFE students, and credit recognition arrangements.

Adding to these cross-institutional achievements have been the capacity building between staff at both institutions through networking and collaboration, as well as the facilitation, development, and promotion of the Mathematics Bridging Course to support students transitioning into first year engineering and science courses at university.

### **Critical features that have influenced outcomes**

The success of the TAFE outreach approach has been dependent on the strength of the relationship between key TAFE and university stakeholders. Over the course of 2014, the program further developed positive partnerships between both parties. A Faculty Director at Sydney TAFE commented on the importance of maintaining and continuing this partnership in order to increase student capacity for further study.

*"The pathways project has established a partnership between TAFE Work and Study Pathways and UTS for the articulation of study pathways between Sydney TAFE and UTS. We aim to ensure a strong partnership continues into the future and to expand options for further study. This project has been embraced by students and staff alike." (Faculty Director, Sydney TAFE)*

Critical for both students and teachers involved in the project has been the improved accessibility to information regarding alternative pathways into university as well as information on support options to assist in this transition. The provision of information to TAFE students by UTS students who had entered university via a non-school pathway was particularly effective. UTS students outlined their story of entering university, the benefits, challenges, and other experiences of university life; students and teachers found their stories highly inspiring. Peer education made university more relatable and attainable. One student



for example said that *"bringing a student along was a great addition to the presentation. He made my goals seem more attainable and realistic."*

For teachers, the cross-institutional infrastructure for information sharing built by the project has provided them with networking opportunities and pathways that either weren't available, or weren't utilised prior to the project. This information sharing can be as simple as being forwarded information about cut-off dates and bridging courses.

*Source: Information provided by Bridges*

## 15.9 UTS U@Uni Summer School

### Case Study – U@Uni Summer School

U@Uni Summer School invites students to an initial two week campus Summer School program, a graduation ceremony following completion of the summer school and a series of on-campus follow up activities over a period of two years. Students are given the option of completing the initial summer component in one of six faculties, including design, media, business, science, health, engineering and information technology facilities. The aim of the program is to inform, inspire and motivate students to consider higher education.

The program is provided to students in years 10 to 12 attending metropolitan schools in low socio economic areas, as well as Indigenous year 10 to 12 students attending rural and regional schools. In 2014, a total of 207 students in year 11 from 21 schools, along with 15 teachers were involved in the two week summer school program. On the final day of the two week Summer School, the graduation ceremony was held and attended by 450 parents, 10 teachers and 100 stakeholders.

U@Uni also offers a number of follow up workshops for its Summer School participants. During 2014, the program also implemented a 'HSC and Beyond: Studying for Success' workshop to address skills such as critical thinking, study skills, and employment related skills such as CV writing, application writing, and interview preparation, crucial for success in the HSC and beyond. In 2014, 58 per cent of the two week Summer School cohort participated in this workshop.

### Impacts

A key focus of the U@Uni Summer School program is to improve the academic preparedness and outcomes for participating students. Results from evaluation activities demonstrated that the program positively contributed to students' educational engagement and motivation to study, academic self-confidence and performance, and preparation for university. After completing the two week summer school experience, 92 per cent of students surveyed agreed that the Summer School activities will help them to work harder and focus more on their studies. When questioned whether they would do anything differently at school after participating in the Summer School, 76 per cent reported intentions to improve academic engagement and motivation to perform well. Comments from students demonstrating improved motivation, engagement and confidence in school:

*"I think I will definitely try harder in school with my studies and get the ATAR I want."*

*"Due to my experiences at UTS Summer School I plan to actually try in school and be on time."*

*'It has given me confidence to strive harder at school'*

Teacher feedback provided further evidence of increased academic engagement following the Summer School experience. One teacher noted that *"The teachers who are aware of the program and assist in the selection process would agree with the benefits in the program for our student body in terms of engagement for our mainstream students and the social exposure for our selective students."*

In addition to the provision of the campus based summer school experience, the program also built academic preparedness through workshops focussed on improving study skills, academic writing and providing stress management strategies. Of the year 11 students that participated in the 'HSC and Beyond: Studying for Success' workshop in 2014, 97 percent agreed they had learned strategies that would benefit their HSC. A further 96 per cent of year 12 students found stress management strategies valuable and 89 per cent agreed that they had learned strategies that would benefit their HSC. Comments from students demonstrated that the program had helped with '*learning to be more organised*', and resulted in '*managing [their] time more efficiently*.'

Evidence from the evaluation of the program also demonstrated that the program had contributed to increased awareness, confidence and motivation towards higher education among participants. The majority of students surveyed at the conclusion of the two week Summer School held in 2014 reported that the experience had helped them to understand what university is really like (97 per cent, n=197). Comments from teachers also demonstrated the impact that the Summer School experience on raising awareness and aspiration towards university student. One teacher commented:

*'Every single student said that they learned new things which they could remember and take with them into their subjects at school, they valued every day at Summer School, said that they were so happy to be able to be inside the university buildings, see "real" lecturers, ENJOY learning and have FUN learning.'*

Evaluation results also demonstrated positive impacts on teachers involved in the program. All teachers who responded to the survey in 2014 reported that they felt better able to engage and motivate students to do well in school following their students' participation in the Summer School experience. All teachers also reported feeling more positive that university was a realistic option for their students.

### **Critical challenges**

Ongoing involvement of parents and teachers in the program has been a challenge since its implementation. In 2014 this was addressed by holding a parents information session on Graduation night, holding a Teacher Day during the Summer School experience and inviting teachers to a university orientation day offered to students. Although this has had positive impacts on participation numbers of parents and teachers, the program recognises that it will have to continue to implement measures to improve the engagement of both groups.

### **Critical features that have influenced outcomes**

The intensity of the initial two week summer school experience and follow-up activities extending over a two year period has been critical in developing and maintaining strong connections between students and the university. At the commencement of the program, students are welcomed into a supportive community that both values and celebrates their abilities and successes. This has been important in building confidence and a belief in students that they will be able to fit in at university.

The relationships between UTS and the U@Uni partner schools, as well as students and the UTS faculties, units and support centres are also critical to the success of the program. The positive relationships built between participants and the UTS students' and staff have created a strong sense of belonging between students and the university.

The involvement of UTS students as mentors in the program has also been critical in engaging larger numbers of students and making strong connections with students. On completing the program, participants are invited to apply for positions as *U@Uni Summer School* Ambassadors once they reach higher education at UTS. This further strengthens the connection that students have with the university, and sets university as an achievable goal. In 2014, the program achieved an increase in the number of UTS students becoming ambassadors with the number growing from eight to 13 students.

The face to face method of delivery and use of experiential learning activities is also critical in engaging students with the program. The program uses project based work drawing on real world applications to provide students with a hands on style of learning. The positive impacts of this are reflected in feedback provided by students, consistently describing the program as "fun and engaging".

The project's relationship with Jumbunna Indigenous House of Learning was strengthened in 2014, which enabled more Indigenous students to enter the program, especially from regional areas. Maintaining monthly meetings between the centre and the university has been important in developing this relationship and further supporting Indigenous students.

Source: Information provided by Bridges

## 15.10 Wingara Mura Burrabugu Summer Program

### Case Study – Wingara Mura Burrabugu Summer Program

The *Wingara Mura Burrabugu Summer Program* was launched by the University of Sydney in 2014 and is core to the University of Sydney's strategic plan to promote Aboriginal and Torres Strait Islander participation, engagement, education and research. The program provides Aboriginal and Torres Strait Islander students from across Australia with the opportunity to attend a short on-campus, residential program delivered by ten of the University's faculties. It is run as two concurrent programs, and includes Wingara Mura (WM), a three day program provided to year 9 and 10 students, and Bunga Barrabuga (BB), a five day program offered to year 11 and 12 students.

The focus of the WM program is geared towards exposing students to the courses offered by faculties. The BB in comparison provides a more intensive immersion into the content of the degree, aligns more closely key components of the school curriculum and requires students to apply and extend the knowledge they have acquired in school subjects.

In 2014, the program was provided to 193 of the 365 student applicants. The program quota is limited to 200 students to ensure that all students are offered their preferred subject choice.

### Impacts

#### Students

Participating students reported having a strong motivation to participate in the program as they saw it as providing them with the opportunity to change their circumstances, increase their chances of being one of the first in the families to study at university, and to contribute to their communities. The most appealing aspects of the program included the opportunity to familiarise themselves with a university campus, increase their understanding of potential academic and career opportunities and to learn about financial and support services available to improve access to higher education. For over half the students this was their first time to be on university campus, with the exception of the year 12 students, of whom many had visited a campus prior to the program.

Results from the program evaluation questionnaire demonstrated improvements in confidence, motivation to continue higher school and university study and awareness of higher education pathways among students from both programs. Across both programs, 98 per cent of students reported greater awareness of what courses are offered at university and 82 per cent reported being more motivated to continue studying at university. Survey results from year 9 and 10 students indicated that the program provided them with a greater understanding of the importance of achieving in the final years of high school and had changed their long term academic goals.

This was evidenced by comments from students:

*"I learnt a lot about getting into university and applying for university. I have also learnt that university is the place for me and it will take me where I want to go in life".*

Results from the survey also demonstrated that the program had positive impacts on students' awareness and confidence towards higher education, and knowledge of application procedures. After completing the course, 83 per cent of year 11 and 12 students reported

having greater confidence in their academic abilities, 100 per cent agreed that the program gave them more knowledge about the pathways to university and life at university and 89 per cent indicated that they had increased confidence in applying for university.

#### **Teachers**

#### **Key achievements**

Of the 52 students in year 12 that attended the program, 38 returned to participate in a full week academic intensive winter program designed to support students through their final year 12 exams. The large number of students that returned to participate in the subsequent program is testament to the value students placed on the program.

#### **Critical features that have influenced outcomes**

Building Aboriginal and Torres Strait Islander peer networks to develop higher education as a collective goal is a key feature of the program. The involvement of Aboriginal and Torres Strait Islander student ambassadors was critical to program success as this provided opportunities to develop peer to peer relationships and positive role modelling. It also provided the opportunity for students to engage in personal conversations about the university student's journey to higher education, their experience of university and career aspirations. This worked to motivate participants towards continuing to year 12 and higher education.

Another critical feature of the program is the embedded ongoing academic support provided to students. Both successful and unsuccessful applicants are granted ongoing access to an online tutoring program to receive assistance with exam preparation and to answer any questions they may have on studying or higher education. Feedback from students consistently demonstrated that support provided by tutors through the online program has assisted them with exam preparation and has been a positive and motivating resource.

The partnerships held between the University of Sydney and other organisations have been instrumental to its promotion among the broader community and subsequent large number of applicants. Further through developing partnerships this has created a multi-layered support structure for program participants.

Prior to program commencement, program coordinators developed relationships with Aboriginal Liaison Officers, Aboriginal Education Officers and Indigenous community members both in NSW and interstate to develop interest in the program and to ensure that staff had a vested interest in the success of students going through the program. Staff with two or more students attending the program were invited to join the program, which had dual benefits on increasing the engagement and motivation of students throughout the week and providing staff the opportunity to improve their knowledge of university pathways, scholarships options and applications, study skills and goal setting.

The linkage between the content of the program with key learning, curriculum outcomes and school goals has also been critical to its success.

*Source: Information provided by Bridges*

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