NCSEHE
National Centre for Student Equity in Higher Education

Curtin University

AN EVALUATION OF WIDENING TERTIARY PARTICIPATION QUEENSLAND

Final Report

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- Australian Catholic University (Banyo) (ACU);
- Central Queensland University (CQU);
- Griffith University (GU);
- James Cook University (JCU);
- Queensland University of Technology (QUT);
- The University of Queensland (UQ);
- University of Southern Queensland (USQ);
- University of the Sunshine Coast (USC).

Abbreviations

ABS	Australian Bureau of Statistics
ACU	Australian Catholic University (Banyo)
ASGS	Australian Statistical Geography Standard
CQU	Central Queensland University
DDS	Demand Driven System for Higher Education Funding
GU	Griffith University
HEF	Higher Education Forum
HEPPP	Higher Education Participation and Partnerships Program
IRSED	Index of Relative Socioeconomic Disadvantage
JCU	James Cook University
LSESNP	(Smarter Schools) Low Socio-economic Status National Partnership (*Smarter Schools National Partnership for Low Socio-economic Status School Communities)*
OP	Overall Position
QTAC	Queensland Tertiary Admission Centre
QUT	Queensland University of Technology
SEIFA	Socio-Economic Indexes for Areas
SEP	Senior Education Profile
SES	Socio-economic Status
UQ	The University of Queensland
USQ	University of Southern Queensland
USC	University of the Sunshine Coast
WP	Widening Tertiary Participation Queensland

Glossary

ASGS	Australian Statistical Geography Standard. A measure of remoteness structure (2011): Major Cities of Australia; Inner Regional Australia; Outer Regional Australia; Remote Australia; Very Remote Australia.
HEF	Higher Education Forum. Comprises vice-chancellors of all Queensland universities, chaired by the State Minister for Education, Training and Employment.
HEPPP/HEPP	Higher Education Participation and Partnerships Program. A Commonwealth program to fund initiatives within the tertiary education sector to encourage participation among students from low SES backgrounds. From 2015, the HEPPP is slated to be replaced by the HEPP (Higher Education Participation Program).
IRSED	Index of Relative Socioeconomic Disadvantage. An 'area measure' (postcode; SA1 area) sourced from the Socio-Economic Indexes for Areas (SEIFA) cluster of area measures, developed by the ABS. State Schools in Queensland are allocated an IRSED score on the basis of the average IRSED score across all their students, based on the SEIFA IRSED for area of the student's home address. Schools are ranked on the basis of their IRSED scores, divided into quartiles, with quartile "1" being the lowest (most disadvantaged) and 4 the highest. Non-State schools are not allocated an IRSED score and have a 0 score in the WP database.
OP Eligible	(Overall Position) Eligible. The traditional academic pathway taken by students to gain university admission. OPs are similar to ATARs, but on a 25-point scale.
School Outreach (Project 1)	The key Widening Participation (WP) project under investigation in this document, where the WP Consortium provides a range of activities and engagements to low socioeconomic status schools in Queensland. The other project is Indigenous Engagement (Project 2), which is also delivered through the WP program.
SEP	Senior Education Profile. A transcript of results and qualifications issued to all students completing Year 12 in Queensland. Prior to 2010, this information was contained in a *Senior Statement.*
Widening Participation Working Group	The Widening Participation Working Group was established in 2009 to examine and consider collaborative approaches to increasing tertiary participation among low socio-economic and Indigenous people.
WP Consortium	The WP Consortium is comprised of the eight Queensland 'Table A' universities cooperating on the delivery of the Widening Participation (WP) programs.

1. Introduction

In 2009, the Higher Education Forum (HEF), a group comprised of Vice Chancellors of all Queensland universities, chaired by the State Minister for Education, Training and Employment, established the *Widening Participation Working Group* to examine collaborative approaches to increase the participation of people from Indigenous and low socio-economic (low SES) backgrounds in tertiary education.

The *Working Group* developed a program for State-wide outreach designed to stimulate interest in tertiary study which was encoded in a formal MOU involving 8 universities and the Queensland Department of Education Training and Employment (DETE). Two proposals to the Commonwealth's Higher Education Participation and Partnerships Program (HEPPP): *School Outreach* (Project 1) and *Indigenous Engagement* (Project 2) attracted $21.15 million in funding, to be spent over a three year period between 2012 and 2014.

The delivery of the *Widening Tertiary Participation Queensland* Program (WP program) has occurred through the creation of the Widening Participation Consortium ("the Consortium"), consisting of:

- Australian Catholic University (Banyo) (ACU);
- Central Queensland University (CQU);
- Griffith University (GU);
- James Cook University (JCU);
- Queensland University of Technology (QUT);
- The University of Queensland (UQ);
- University of Southern Queensland (USQ); and
- University of the Sunshine Coast (USC).

The Consortium has been responsible for the delivery of outreach programs to low SES schools across Queensland, with each university member having responsibility for a cluster of local primary and secondary schools. In 2013, around 450 schools engaged in activities managed by Consortium members, with 54,420 students participating in activities (Queensland University of Technology 2014). Examples of activities under the WP program include: school visits by program staff; on-campus days arranged for students from target schools; residential camps; workshops and curriculum enhancement; career development activities; and specific Indigenous programs. As one measure of interest, the applications to tertiary study by school-leavers from 111 secondary schools have been tracked and are the main focus of analysis in this paper.

This report summarises work on four principal tasks:

i. To analyse school-level data on school-to-tertiary transitions in Queensland.
ii. Conduct an assessment of this data to determine the extent to which the WP Program has affected student transitions to university in participating schools in comparison with non-participating schools, given the recent history and contextual factors such as the socioeconomic and demographic characteristics in both groups of schools;
iii. Summarise evidence on the basis of (ii) and reach a determination as to whether the impact (if any) of the WP program is significant; and
iv. Make recommendations in regard to future performance monitoring of the program.

The report does not include:

i. Analysis of individual student data; or
ii. Qualitative analysis of program, level of school participation or student assessment of program.

The remainder of the report is structured as follows:

- **Section 2:** Trends in the School to Tertiary Transition in Queensland;
- **Section 3:** An Evaluation of Widening Participation: Methodology and Data;
- **Section 4:** An Evaluation of Widening Participation: Analysis and Findings; and
- **Section 5:** Summary and Recommendations.

2. Trends in the School to Tertiary Transition in Queensland

Introduction

The last five years between 2008 and 2013 has seen a major change in Australian tertiary education, especially at the undergraduate level. This period saw a major series of reforms, including:

- The release of the Bradley Report on higher education (Bradley 2008);
- The Rudd-Gillard initiatives on higher education funding (Commonwealth of Australia 2009) including targets that 40% of 25-34 year olds hold a bachelor qualification or above by 2025 and that by 2020 people from low SES backgrounds make up 20% of domestic undergraduate enrolments;
- The introduction of the demand driven system (DDS) for higher education funding; and
- An expansion in the Commonwealth's commitment to equity in higher education through the introduction of the Higher Education Participation and Partnerships Program (HEPPP) supporting low SES access to and participation in higher education.

During this period, domestic enrolments in undergraduate programs across Australia, including Queensland, increased markedly. As Table 2.1 shows, domestic undergraduate tertiary enrolments in Queensland increased by one-quarter (25.1%) during the five years to 2013.

Table 2.1 Queensland Tertiary Institutions, Domestic Undergraduate Enrolments, 2008 to 2013, (Headcount data)

Tertiary Institution	2008	2009	2010	2011	2012	2013	Growth: 2008-13
Central Queensland University (CQU)	7,937	7,856	8,033	8,654	9,554	10,470	31.9%
Griffith University (GU)	22,152	23,271	24,473	24,496	25,501	26,982	21.8%
James Cook University (JCU)	9,368	9,853	10,595	10,986	11,527	11,978	27.9%
Queensland University of Technology	26,284	26,709	27,313	27,811	29,319	29,872	13.7%
The University of Queensland (UQ)	23,294	24,362	25,541	26,440	27,406	29,011	24.5%
University of Southern Queensland	11,478	12,150	12,796	13,410	14,428	14,734	28.4%
University of the Sunshine Coast	4,453	5,214	5,851	6,421	6,884	7,539	69.3%
Table A Providers (Queensland)	**104,966**	**109,415**	**114,602**	**118,218**	**124,619**	**130,586**	**24.4%**
Bond University	2,163	2,557	2,762	2,916	2,798	2,573	19.0%
Non-University Higher Education	4,452	5,190	4,973	5,030	5,478	6,434	44.5%
All Providers (Queensland)	**111,581**	**117,162**	**122,337**	**126,164**	**132,895**	**139,593**	**25.1%**
Table A Providers (Australia)	**532,527**	**553,374**	**580,372**	**600,412**	**634,434**	**668,665**	**25.6%**
All Providers (Australia)	**561,886**	**588,016**	**619,625**	**643,066**	**679,595**	**717,683**	**27.7%**

Source: Australian Department of Education (2014). Based on Koshy and Seymour (2014).

The seven Table A providers in Queensland[1] have seen enrolment increases approaching this figure, with 24.4% growth – ranging from a 13.7% expansion at the Queensland University of Technology (QUT) to a 69.3% expansion at the University of the Sunshine Coast (USC). Outside the Table A providers and Bond University, the expansion was particularly marked, with non-university higher education providers seeing enrolments rise from 4,452 to 6,434 students or a 44.5% increase. The expansion in national undergraduate enrolments has slightly exceeded that seen in Queensland (national enrolments grew by 25.6% for Table A providers and 27.7% for All Providers).

Table 2.2 reports on trends in the enrolment of low SES students in Queensland-based institutions.

Table 2.2 Queensland Tertiary Institutions, Domestic Undergraduate Enrolment of Low SES Students, 2008 to 2013, Percentage of Enrolment (2006 ABS Census postcode measure)

Tertiary Institution	2008	2009	2010	2011	2012	2013
Central Queensland University (CQU)	46.7%	47.0%	47.1%	46.0%	43.8%	42.2%
Griffith University (GU)	14.9%	14.4%	14.7%	14.9%	15.1%	15.8%
James Cook University (JCU)	20.7%	20.7%	20.8%	20.6%	21.1%	21.2%
Queensland University of Technology	13.8%	13.8%	14.5%	14.0%	14.2%	14.5%
The University of Queensland (UQ)	15.0%	14.8%	15.1%	15.3%	15.0%	14.9%
University of Southern Queensland	32.4%	33.4%	33.9%	34.3%	35.2%	35.2%
University of the Sunshine Coast	13.5%	12.3%	12.8%	13.9%	13.6%	14.3%
Table A Providers (Queensland)	**19.4%**	**19.3%**	**19.6%**	**19.7%**	**19.9%**	**20.0%**
Bond University	6.4%	6.8%	7.8%	8.1%	8.0%	7.8%
Non-University Higher Education	14.3%	14.4%	15.5%	15.4%	14.7%	14.6%
All Providers (Queensland)	**18.9%**	**18.8%**	**19.2%**	**19.3%**	**19.4%**	**19.5%**
Table A Providers (Australia)	**16.3%**	**16.3%**	**16.7%**	**17.0%**	**17.3%**	**17.6%**
All Providers (Australia)	**16.1%**	**16.2%**	**16.5%**	**16.8%**	**17.1%**	**17.4%**

Source: Australian Department of Education (2014). Based on Koshy and Seymour (2014).

A central target of the reforms was to lift the low SES enrolment share of domestic undergraduate places to 20% of the total by 2020. As Phillimore and Koshy (2010) point out, Queensland was ideally placed to meet this target given the relatively large percentage of its population who were classified as low SES on the basis of a national ranking of postcodes using the Australian Bureau of Statistics (ABS) 2006

[1] The Australian Catholic University (ACU) is not explicitly included in this analysis of enrolments as it is an 'inter-state institution' and its enrolments In Queensland (5,200 students at McAuley at Banyo) are reported under that jurisdiction. For a discussion of trends in inter-state institution enrolments (the ACU only) please see Koshy and Seymour (2014).

Census Socio-Economic Indexes for Areas (SEIFA) measure as an indicator of socioeconomic status.

In 2008, Queensland institutions already had an 18.9% low SES enrolment share, with Table A providers having a 19.4% share, compared to an Australia-wide share of 16.3% for Table A providers. By 2013, the Table A providers were collectively meeting the 20.0% target, with the overall higher education sector in Queensland seeing a substantial movement towards it – evidenced by a 19.5% low SES share of enrolment in that year.

Trends in the Widening Participation Program Schools

Over 130 secondary schools with a Year 12 cohort were targeted by the Widening Participation (WP) Program (*WP-targeted* Schools), and of these, 111 schools have been selected as *WP-tracked* schools. WP-tracked schools exclude WP schools where applications were below 5 in any one year or where data was incomplete. School level data has been obtained from the Queensland Tertiary Admissions Centre (QTAC) for WP-tracked schools. This data includes the number of first semester applications, offers, and enrolments emanating from Year 12 students enrolled in these schools. A very small proportion of Year 12 students who gain admission to university via direct entry rather than through the QTAC process are not captured in this data.

In Queensland, Year 12 students receive a Senior Education Profile (SEP), which is a transcript of qualifications and results issued to all students completing Year 12 in Queensland. The SEP measure is the best general measure of the school-leaver numbers and represents the base from which tertiary applications are generated.

As shown in Table 2.3, in 2013 there were 47,912 Year 12 completions across Queensland. Students in schools targeted by the WP program (WP-targeted schools) accounted for 14,514, or 30.3%, of completions, while those in WP-tracked schools, numbered 13,448 or 28.8% of the relevant population. This reflects the refined focus of the WP program on schools with low SES profiles – by definition, schools with a large segment of their student population from areas scoring in the bottom quartile in a ranking of the Australian Bureau of Statistics' (ABS) *Index of Relative Socioeconomic Disadvantage* (IRSED), a measure derived from ABS census data. Queensland has a significantly higher percentage of its population residing in nationally-ranked low SES quartiles, with around 32% of all 15 to 64 year olds residing in these areas on the basis of 2011 Census data.

Table 2.3 Year 12 Completers (SEP) from WP-Tracked Schools, WP-Targeted and Other Schools, 2008 to 2014.

School Group	2008	2009	2010	2011	2012	2013	2008-13 %
Year 12 (WP-		12,728	13,062	13,232	13,448	13,784	15.1%
Year 12 (WP-	12,435	13,358	13,708	13,875	14,178	14,514	16.7%
Year 12 (Other	29,077	30,187	31,290	32,442	33,005	33,398	14.9%
All Schools	**41,512**	**43,545**	**44,998**	**46,317**	**47,183**	**47,912**	15.4%

Note: All Schools = WP-Targeted Schools + Other Schools.
Source: WP Consortium data.

The growth in student completions in schools in the program has been slightly more muted than that for the whole of the state, with SEP numbers in WP-tracked schools increasing by 15.1% since 2008, compared to a 15.4% expansion in the sector as a whole over that period.

Applications are the key measure of the Program's school outreach strategies, reflecting the overall objective of 'stimulating interest in tertiary study'. Table 2.4 below outlines trends in First Semester applications to WP Consortium universities from students in WP-tracked schools and from all other (not WP-targeted) schools in Queensland between 2008 and 2013. In 2013, WP-tracked schools had a total of 13,784 students completing Year 12, of whom, 31.5% registered an application with a first preference for a course provided by a Consortium institution.

The growth in applications to Consortium institutions from WP-tracked schools has outpaced that of Year 12 completions since 2008 (22.6% to 18.7%), noticeably increasing the proportion of Year 12 students making applications ('% of SEP' increased from 29.6% in 2008 to 31.5% to 2013). However, applications to 'Other' (non-consortium) tertiary institutions from WP-tracked schools increased by just 13.3% over this time from 549 to 622 applications in 2013, resulting in total Tertiary Applications rising by 21.3% to 4,963 in 2013. This corresponds to an increase in the share of students registering an application from 34.2% in 2008 to 36% in 2013.

In WP-tracked schools, female students dominate applications to Consortium institutions, accounting for 62.2% of all applications in 2013. This is slightly higher than for all Queensland schools where female applicants represent 57.8% of applications. The vast majority of applying students follow an OP pathway (Overall Position pathway) – the traditional academic pathway in Queensland – with 89.9% of all applicants being OP-eligible in 2013, down from 95% in 2008. Indigenous students have witnessed generally higher levels of applications in recent years, accounting for 3.2% of applicants in 2013, up from 2.7% in 2008.

By way of comparison, Table 2.4 also reports applications to Consortium institutions from all schools in Queensland. This shows that around 52.5% of Year 12 completers applied to a Consortium institution in 2013, compared with just 31.5% from WP-tracked schools in that year. This reflects an historic trend of significantly

higher levels of application to tertiary institutions from medium to high SES schools not targeted by the WP program.

Table 2.4 Year 12 Applications: WP-Tracked and All Schools to Consortium Institutions, 2008 to 2013.

	2008	2009	2010	2011	2012	2013	2008-13 %/PPC*
WP-Tracked Schools							
SEP	11,975	12,728	13,062	13,232	13,448	13,784	15.1%
Consortium	3,542	3,977	4,013	4,089	4,311	4,341	22.6%
% of SEP applying	**29.6%**	**31.2%**	**30.7%**	**30.9%**	**32.1%**	**31.5%**	**1.9**
% Female applicants	63.1%	64.3%	64.5%	63.8%	62.8%	62.2%	-0.9
% OP Eligible	95.0%	93.6%	93.4%	92.7%	90.1%	89.9%	-5.2
% Indigenous	2.7%	2.9%	2.3%	3.5%	3.7%	3.2%	0.4
Other Applications	549	619	588	693	589	622	13.3%
Total Tertiary	4,091	4,596	4,601	4,782	4,900	4,963	21.3%
% of SEP applying	**34.2%**	**36.1%**	**35.2%**	**36.1%**	**36.4%**	**36.0%**	**1.8**
All Schools							
SEP	41,512	43,545	44,998	46,317	47,183	47,912	15.4%
Consortium	21,201	22,737	23,279	24,265	25,019	25,171	18.7%
% of SEP applying	**51.1%**	**52.2%**	**51.7%**	**52.4%**	**53.0%**	**52.5%**	**1.5**

Note: * PPC: Percentage Point Change represents the percentage point change in share since 2008.
Source: WP Consortium data.

The general level of under-representation in tertiary education among students in WP-tracked schools extends to trends in offers and enrolments. Table 2.5 presents data on applications, offers and enrolments at Consortium institutions among students from WP-tracked schools and for all schools in Queensland. The recent increase in offer and enrolment rates has been particularly noticeable since 2010 for all types of schools.

In 2013, 90.4% of all applications to Consortium institutions from students in WP-tracked schools resulted in an offer, with 64.5% of all applications leading to an enrolment (Bachelor's or Sub-Bachelor's) at a Consortium institution. In 2013, 20.3% of all completing Year 12 students in WP-Tracked schools enrolled in a Consortium institution.

By contrast, among all schools in Queensland (including WP-tracked schools), the rate of offers to those applying to Consortium institutions was higher in 2013, at 94.8%, as was the enrolment rate of 70.9%. Consequently, 37.7% of completing Year 12 students in all schools in Queensland enrolled in a Consortium institution.

Despite the discrepancy in performance, it is clear that students at WP-tracked schools have made progress in converting applications into offers, with them seeing a favourable 5 percentage point change (PPC) since 2008 in their Offer/Application percentage – 85.4% to 90.4%, compared to that seen for students across all schools (a PPC of 3.0) over this period.

Table 2.5 Consortium Applications, Offers, and Enrolments: WP-Tracked and All Schools, 2008 to 2013.

	2008	2009	2010	2011	2012	2013	2008-13 %/PPC*
WP-Tracked Schools							
SEP	11,975	12,728	13,062	13,232	13,448	13,784	15.1%
Consortium Offers	3,025	3,294	3,326	3,571	3,861	3,924	29.7%
Offer/Application %	**85.4%**	**82.8%**	**82.9%**	**87.3%**	**89.6%**	**90.4%**	**5.0**
Consortium	2,122	2,372	2,428	2,573	2,839	2,800	32.0%
Enrol/Application %	**59.9%**	**59.6%**	**60.5%**	**62.9%**	**65.9%**	**64.5%**	**4.6**
Enrol/SEP %	**17.7%**	**18.6%**	**18.6%**	**19.4%**	**21.1%**	**20.3%**	**2.6**
All Schools							
SEP	41,512	43,545	44,998	46,317	47,183	47,912	15.4%
Consortium Offers	19,472	20,635	21,085	22,665	23,649	23,870	22.6%
Offer/Application %	**91.8%**	**90.8%**	**90.6%**	**93.4%**	**94.5%**	**94.8%**	**3.0**
Consortium	14,369	15,192	15,719	17,047	17,828	17,857	24.3%
Enrol/Application %	**67.8%**	**66.8%**	**67.5%**	**70.3%**	**71.3%**	**70.9%**	**3.2**
Enrol/SEP %	**34.6%**	**34.9%**	**34.9%**	**36.8%**	**37.8%**	**37.3%**	**2.7**

Note: * PPC: Percentage Point Change represents the percentage point change in share since 2008.
Source: WP Consortium data.

Enrolment rates (Enrol/Application for those applying in a given year) have increased by 4.6 percentage points since 2008 for WP-tracked schools, compared to all schools who saw a 3.2 percentage point change. WP-tracked schools experienced this growth off a smaller base – 59.9% in 2008 compared to 67.8% for all schools – so this represents a significant development.

Finally, the proportion of school-leavers who enrol (Enrol/SEP %) for WP-tracked schools has increased from 17.7% in 2008 to 20.3%, a rise of 2.6 percentage points. A similar rise of 2.7% has been seen across all schools, but again, this is from a much larger base of 34.6% in 2008. To a large extent this represents institutional policy changes in view of the impending (2011-12) and eventual (2012) introduction of the DDS in Australian tertiary education. However, the application and enrolment

percentages above indicate the relative success of WP-tracked schools in sending students to WP Consortium universities over this period relative to broader trends across the entire Queensland sector.

Table 2.6 reports data on applications, offers, and enrolments in relation to students from WP-tracked schools to the entire Queensland tertiary sector, including non-Consortium institutions – Bond University, non-university providers and some providers of higher level VET qualifications.

Table 2.6 Tertiary Applications, Offers, and Enrolments: WP-Tracked Schools, 2008 to 2013.

	2008	2009	2010	2011	2012	2013	2008-13 %/PPC *
WP-Tracked Schools							
SEP	11,975	12,728	13,062	13,232	13,448	13,784	15.1%
Consortium	3,542	3,977	4,013	4,089	4,311	4,341	22.6%
Other applications	549	619	588	693	589	622	13.3%
Tertiary	**4,091**	**4,596**	**4,601**	**4,782**	**4,900**	**4,963**	**21.3%**
% of SEP Applying	**34.2%**	**36.1%**	**35.2%**	**36.1%**	**36.4%**	**36.0%**	**1.8**
Consortium	2,122	2,372	2,428	2,573	2,839	2,800	32.0%
Other Enrolment	363	431	465	478	381	412	13.5%
Tertiary Enrolment**	**2,485**	**2,803**	**2,893**	**3,051**	**3,220**	**3,212**	**29.3%**
Enrol/Application %	**64.9%**	**61.0%**	**62.9%**	**63.8%**	**65.7%**	**64.7%**	**-0.2**
Enrol/SEP %	**20.8%**	**22.0%**	**22.1%**	**23.1%**	**23.9%**	**23.3%**	**2.6**

Note: * PPC: Percentage Point Change represents the percentage point change in share since 2008;
**Tertiary = Consortium + Other; Tertiary 'offers' for *WP-Tracked* Schools and 'applications', 'offers', and 'enrolments' for *All* Schools are not available in the WP database.
Source: WP Consortium data.

In 2013, total *Tertiary* applications numbered 4,963, of which 622 went to non-Consortium institutions, around 12.5%, or one in eight applications. The total application rate in WP-tracked schools was 36% in 2013, up from 34.2% in 2008. This application activity resulted in total *Tertiary* enrolments of 3,212 in 2013 (among those applying in that year) with 412 of these occurring outside the Consortium. Around 64.7% of applications resulted in an enrolment in 2013, a slight decline of 0.2 percentage points suggesting a net gain in enrolment to Consortium members who saw an increase in this figure. Overall, the proportion of Year 12 completers enrolling in a tertiary institution increased from 20.8% in 2008 to 23.3% in 2013.

Trends in the Widening Participation Program Clusters

The broad trends in Year 12 completions and applications to tertiary institutions in WP-tracked schools discussed above represent an aggregation of quite divergent inputs and outcomes across individual Consortium member clusters. The cluster approach taken by the Queensland WP Consortium where each university delivers a unique suite of programs to a group or 'cluster' of local schools, has resulted in seven school clusters of differing size, complexity and school composition (QUT and ACU share responsibility for a cluster of schools in the northern Brisbane suburbs). Within agreed parameters, each university has had considerable autonomy in program design and implementation and has been responsible for brokering school partnership arrangements directly with each of its cluster schools. Consequently, both within and between clusters, there is considerable variation in the type of program delivered and the overall level of engagement. In some clusters the greatest focus of engagement has been on Year 6-10 or Year 8-10, while other universities have engaged with all year levels from Year 6 to 12. There is also some variation in length of engagement with some universities already actively engaged with schools in their local cluster prior to 2011, while others did not start significant cluster activity until HEPPP grant funding became available in 2012.

Such variations have had the impact of ensuring differences in the level of 'engagement' with Year 12 students being tracked in this study. Table 2.7 below summarises the level of engagement that had occurred with the 2013 Year 12 class in WP tracked schools. Year 12 class groups were classified as having medium to high levels of engagement if they had participated in multiple WP activities delivered to the whole cohort over the previous 2- 3 years.

Table 2.7 Level of WP Program Engagement by University Cluster, Year 12 Students in 2013

University Cluster	Number of Year 12 WP-Tracked Schools	Schools where Year 12 students had 'medium' or 'high' levels of WP engagement	
		No.	%
CQU	14	3	21%
GU	20	16	80%
JCU	23	3	13%
QUT/ACU	17	11	65%
UQ	14	1	7%
USQ	16	3	19%
USC	7	0	-
Total (WP-	**111**	**37**	**33%**

Source: WP Consortium data.

Overall, 37 of the 111 WP-Tracked schools were assessed by their designated university as having Year 12 classes who had experienced a medium or high level of engagement through their respective WP cluster, equal to 33% of all WP-Tracked schools. Only two clusters recorded level of engagement above this average – the Griffith University cluster had 80% of Year 12 classes with medium to high levels of engagement and the QUT/ACU cluster recorded 65% of Year 12 classes in this range.

Table 2.8 Year 12 Completers (SEP) and Applications by Consortium Cluster (WP-Tracked Schools): 2008 to 2013.

School cluster	2008	2009	2010	2011	2012	2013	2008-13 %/PPC*
SEP							
CQU	1,379	1,401	1,501	1,467	1,460	1,544	12.0%
GU	2,339	2,475	2,516	2,733	2,765	2,758	17.9%
JCU	2,273	2,413	2,362	2,467	2,423	2,486	9.4%
QUT/ACU	2,118	2,234	2,428	2,319	2,347	2,492	17.7%
UQ	1,491	1,645	1,682	1,759	1,888	2,001	34.2%
USC	813	869	873	902	873	882	8.5%
USQ	1,562	1,691	1,700	1,585	1,692	1,621	3.8%
WP-Tracked Schools	**11,975**	**12,728**	**13,062**	**13,232**	**13,448**	**13,784**	**15.1%**
All Schools		43,545	44,998	46,317	47,183	47,912	15.4%
Consortium							
CQU	385	408	400	414	381	392	1.8%
GU	694	726	705	800	844	881	26.9%
JCU	693	743	792	803	779	777	12.1%
QUT/ACU	634	768	761	778	820	902	42.3%
UQ	450	541	548	510	650	636	41.3%
USC	241	248	272	262	292	253	5.0%
USQ	445	543	535	522	545	500	12.4%
WP-Tracked Schools	**3,542**	**3,977**	**4,013**	**4,089**	**4,311**	**4,341**	**22.6%**
All Schools		22,737	23,279	24,265	25,019	25,171	18.7%
% of SEP Applying							
CQU	27.9%	29.1%	26.6%	28.2%	26.1%	25.4%	-2.5
GU	29.7%	29.3%	28.0%	29.3%	30.5%	31.9%	2.3
JCU	30.5%	30.8%	33.5%	32.5%	32.2%	31.3%	0.8
QUT/ACU	29.9%	34.4%	31.3%	33.5%	34.9%	36.2%	6.3
UQ	30.2%	32.9%	32.6%	29.0%	34.4%	31.8%	1.6
USC	29.6%	28.5%	31.2%	29.0%	33.4%	28.7%	-1.0
USQ	28.5%	32.1%	31.5%	32.9%	32.2%	30.8%	2.4
WP-Tracked Schools	**29.6%**	**31.2%**	**30.7%**	**30.9%**	**32.1%**	**31.5%**	**1.9**
All Schools	51.1%	52.2%	51.7%	52.4%	53.0%	52.5%	1.5

Note: * PPC: Percentage Point Change.
Source: WP Consortium data.

Table 2.8 summarises trends in Year 12 completions and applications to Consortium institutions by cluster. Overall growth in Year 12 completions of 15.1% between 2008 and 2013 represents an average outcome of growth rates in individual clusters of schools, ranging from 3.8% for USQ and 8.5% for USC, to 34.2% for the UQ cluster, with other institutional clusters distributed between these figures.

The differences in growth in Consortium applications are starker still. Although applications to Consortium institutions from WP-tracked schools have risen by 22.6% since 2008, the distribution of this change among clusters bears little resemblance to changes in SEP numbers. For instance, the CQU cluster of schools saw SEP numbers increase by 12% between 2008 and 2013, yet Consortium applications in 2013 increased just 1.8% on the 2008 figure. Similarly, the USC cluster of schools saw SEP numbers grow by 8.5% but applications increase by 5.0% since 2008.

Overall, the rate of application (% of SEP applying) saw a slight increase to 2013 (1.9 percentage points), declining for two of the clusters (CQU and USC). Two clusters with substantial growth since 2008 were GU (2.3 PPC), and the QUT/ACU (6.3 PPC) which were also the largest (in terms of SEP) and highest level of program engagement for the 2013 Year 12 cohort. The USQ cluster also saw a 2.4 PPC in application rates over this period.

Table 2.9 reports on trends in offers and enrolments in relation to Consortium institutions from WP-tracked schools, by university cluster and for all schools. Between 2008 and 2013 the number of offers increased in all clusters as did the offer rate (offers/applications). There was a 5 PPC in the offer rate for WP tracked schools compared to a 3 PPC for all schools. The average increase in offers across WP-tracked schools of 29.7% between 2008 and 2013 was largely driven by the three urban clusters (GU, QUT/ACU and UQ) with growth in excess of 40%. However, despite this growth, the offer/application rate for these three clusters remains below the WP tracked school average of 90.4% in 2013.

Enrolments demonstrated a similar dynamic, with schools in the GU, QUT/ACU and UQ clusters showing the highest rate of growth in Consortium enrolments between 2008 and 2013, Except for the CQU cluster where enrolment numbers were relatively stable over the period, growth in enrolments outstripped growth in SEP. Enrolment rates, (enrolments/SEP) increased between 2.1 and 4.5 percentage points in all but the CQU Cluster. There remain significant differences in enrolment rates between the clusters, ranging from 15.5% for CQU to 25.2% for QUT/ACU in 2013. WP-tracked schools saw a 2.6 percentage point increase in their enrolment rate, almost equal to that for the system as a whole (2.7 percentage points), though coming off a lower base. The enrolment rate for WP tracked schools averaged 20.3% in 2013, compared with 37.7% for all schools in Queensland.

Table 2.9 Year 12 Offers and Enrolments by Consortium Cluster, 2008 to 2013.

	2008	2009	2010	2011	2012	2013	2008-13 %/PPC*
Consortium Offers							
CQU	344	361	361	373	343	362	5.2%
GU	547	548	523	664	724	783	43.1%
JCU	614	632	708	749	737	724	17.9%
QUT/ACU	542	646	612	666	738	789	45.6%
UQ	362	424	423	415	558	562	55.2%
USC	218	222	231	235	264	244	11.9%
USQ	398	461	468	469	497	460	15.6%
WP-Tracked Schools	**3,025**	**3,294**	**3,326**	**3,571**	**3,861**	**3,924**	**29.7%**
All Schools		20,635	21,085	22,665	23,649	23,870	22.6%
Offer/Applications %							
CQU	89.4%	88.5%	90.3%	90.1%	90.0%	92.3%	2.9
GU	78.8%	75.5%	74.2%	83.0%	85.8%	88.9%	10.1
JCU	88.6%	85.1%	89.4%	93.3%	94.6%	93.2%	4.6
QUT/ACU	85.5%	84.1%	80.4%	85.6%	90.0%	87.5%	2.0
UQ	80.4%	78.4%	77.2%	81.4%	85.8%	88.4%	8.0
USC	90.5%	89.5%	84.9%	89.7%	90.4%	96.4%	5.9
USQ	89.4%	84.9%	87.5%	89.8%	91.2%	92.0%	2.6
WP-Tracked Schools	**85.4%**	**82.8%**	**82.9%**	**87.3%**	**89.6%**	**90.4%**	**5.0**
All Schools	91.8%	90.8%	90.6%	93.4%	94.5%	94.8%	3.0
Consortium							
CQU	242	256	255	250	248	239	-1.2%
GU	420	423	406	507	568	567	35.0%
JCU	371	402	467	475	476	459	23.7%
QUT/ACU	438	509	492	518	575	627	43.2%
UQ	286	322	338	330	440	442	54.5%
USC	137	146	160	176	197	183	33.6%
USQ	228	314	310	317	335	283	24.1%
WP-Tracked Schools	**2,122**	**2,372**	**2,428**	**2,573**	**2,839**	**2,800**	**32.0%**
All Schools		15,192	15,719	17,047	17,828	17,857	24.3%
Enrol/SEP %							
CQU	17.5%	18.3%	17.0%	17.0%	17.0%	15.5%	-2.1
GU	18.0%	17.1%	16.1%	18.6%	20.5%	20.6%	2.6
JCU	16.3%	16.7%	19.8%	19.3%	19.6%	18.5%	2.1
QUT/ACU	20.7%	22.8%	20.3%	22.3%	24.5%	25.2%	4.5
UQ	19.2%	19.6%	20.1%	18.8%	23.3%	22.1%	2.9
USC	16.9%	16.8%	18.3%	19.5%	22.6%	20.7%	3.9
USQ	14.6%	18.6%	18.2%	20.0%	19.8%	17.5%	2.9
WP-Tracked Schools	**17.7%**	**18.6%**	**18.6%**	**19.4%**	**21.1%**	**20.3%**	**2.6**
All Schools	34.6%	34.9%	34.9%	36.8%	37.8%	37.3%	2.7

Note: * PPC: Percentage Point Change.
Source: WP Consortium data.

Summary

- The last five years has seen a marked expansion in higher education enrolments in Australia, including Queensland. Between 2008 and 2013, domestic undergraduate higher education enrolments in Queensland increased by a quarter (25.1%), rising from 111,581 to 139,593 students.

- Underpinning this growth was a commitment at the national level to increase university participation among Australians, leading to the introduction of the HEPPP for supporting access to and participation in higher education by low SES students.

- In Queensland, the HEPPP has been used to substantially resource the WP Consortium's *School Outreach* program to low SES schools throughout Queensland, with activities designed to stimulate demand for tertiary education.

- WP-Targeted schools have historically seen low rates of application to higher education. For instance, in 2013, 31.5% of Year 12 students in WP-tracked schools applied to a WP Consortium institution, compared with 52.5% of all Year 12 students across Queensland.

- The program commenced in 2011-12 and by 2013, 13,784 of 47,912 Year 12 graduates had come from schools targeted by WP programs.

- A preliminary analysis of trends in application, offer and enrolments by students in WP-tracked schools indicates broadly positive trends during the short duration (thus far) of the *School Outreach* program. The percentage of students applying to university from WP-tracked schools increased by 1.9 percentage points between 2008 and 2013, compared with a 1.5 percentage point increase across Queensland in total (All schools).

- A similar analysis shows that between 2008 and 2013, the rate that Year 12 students from WP-tracked schools enrolled in universities increased from 17.7% to 20.3% of all Year 12 completers.

3. An Evaluation of *Widening Participation*: Methodology and Data

Introduction

The analysis of the impact of the WP program is necessarily circumscribed. Because the WP program includes the majority (if not all) disadvantaged schools in Queensland, there is no opportunity for a controlled study, whereby a subset of schools were provided with exposure to the program and another (the control group) excluded. This is not uncommon in the examination of social program impacts, particularly when the design and rollout of a program occur during the intervention itself. In fact, social, political, and ethical considerations often mandate such as approach.

Despite this, much can be learned from an examination of a program in the context of an analysis which controls for other known factors. That is the approach favoured in this study of the WP program.

The following section provides an overview of the aims, research questions, method and data before discussing the outcomes of the analysis and key findings.

Aims

We examine the behaviour of aggregate 'applications' from schools engaged in the WP program in the context of controlling for various aspects of the program (e.g. university cluster membership) as well as differences across IRSED socioeconomic quartiles, regions, and over time (2007 to 2013). The analysis seeks to provide evidence for the impact of the WP program, holding other factors constant, while also examining differences across WP Consortium members.

The choice of 'Applications', both 'Consortium Applications' and 'Total Tertiary Applications' reflects its usefulness as a measure of school-based outreach programs – effectively, the short- to medium- term measure of attempting to stimulate interest in tertiary study. 'Enrolments' are the better measure of long-term impacts, but this measure, and measures of subsequent progression in tertiary education, are dependent on a host of other factors, such as fees, scholarships, and student income support.

Research Questions

The analysis has two central questions and components:

1) What impact did the program have on applications to tertiary institutions in Queensland?
2) What impact did the WP program have on enrolments in the WP consortium institutions?

Method

We employ a simple education production function, whereby **Applications** from a school **(*AP*)** are explained as a function of a number of factors:

- **Size of the School Class (*SEP*):** SEP (Senior Education Profile) is a measure of all students who complete Year 12 in a school, which is a proxy for potentially eligible to apply to a tertiary institution. This factor controls for 'scale effects', that is, the tendency of larger school classes to see greater numbers of applicants to universities.
- **Cluster membership (*CLUSTER*)**: where each school is grouped in accordance with the university delivering its WP program;
- **Level of Engagement (*ENGAGE*)**: a measure of the level of engagement by a given university in relation to a school in a given year;
- **School Socioeconomic Status (*SES*):** the measure of socioeconomic status for each school, in this case a measure of social disadvantage;
- **Demographic variables (*DEMOGRAPHIC*):** other demographic measures, such as the percentage of a school applying class who are female or Indigenous;
- **Time of Intervention (*YEAR*):** the relevant year in which the intervention took place; and
- **Regional Location (*REGION*):** the region in which the school is located.

The nature of the interactions of these factors is examined using a data set which is both cross-sectional (111 schools) as well as time-series (data from 2007 to 2013). This allows for an examination of the impact of the WP program using data prior to its full rollout and across all regions of Queensland.

The empirical model can be described as such:

$$AP_{it} = f(SEP_{it}, CLUSTER_{it}, ENGAGE_{it}, SES_{it}, DEMOGRAPHIC_{it}, YEAR_{it}, REGION_{it},),$$

where i = 1 to 111 for each school in the study and for each year from 2007 (base year) to 2013.

The model is estimated using various measures of these factors using the ordinary least squares (OLS), with results for the preferred model of applications for the

Consortium and Total being reported. In effect, this approach allows us to determine the contribution of an individual factor in the context of all other factors.

Our *a priori* expectation of the impact of factors is reported in Table 3.1 below.

Table 3.1 Expected Impact of Factor on Tertiary Applications

Factor	Expected Impact on Tertiary Applications (+/-/X)
SEP	+ Increases in SEP numbers will lead to higher levels of applications.
CLUSTER	+ The 'focus' variable. It is expected that the cluster programs on average increase the level of applications to consortium and all tertiary institutions.
ENGAGE	+ Higher levels of engagement result in stronger impacts on applications numbers; both between clusters and over time.
SES (disadvantage)	- Higher levels of social disadvantage result in lower levels of applications to university.
DEMOGRAPHIC	X Mixed impacts – on average, we expect female students to have higher levels of application to tertiary institutions; we expect Indigenous students to have lower rates of application.
YEAR	+ We expect applications to be rising over time, even after controlling for "SEP" – in other words, the impact of the Consortium's activities should strengthen over the period of the program.
REGION	X We expect schools in 'regional' areas of Queensland to have lower rates of applications compared with those in metropolitan areas, although differences between regional, remote and provincial areas are expected to be mixed.

Data

The data set used is sourced from the WP Consortium and includes application and enrolment data from the Queensland Tertiary Applications Centre (QTAC), internal program data on consortium and cluster engagement, and data on regional and socioeconomic characteristics for each school from the Commonwealth and the Queensland Department of Education, Training and Employment.

The data set is comprised of information for all factors for **111** Queensland schools over **seven** years: 2007 and 2013. This implies **777** data records in total or seven data records for each of the 111 schools. Each record contains two outcome indicators, or factors which are to be explained:

- ***Consortium Applications*:** Applications to any of the eight WP Consortium institutions, as measured by first preferences, from WP Schools.

- ***Tertiary Applications*:** All tertiary applications from WP schools including applications to other university and non-university higher education providers and some diploma and above qualifications offered by TAFE Queensland.

Because we expect that the WP program may have different impacts across consortium and all total applications to tertiary institutions, we are estimating two models, one for each indicator measure, using the same set of factors made available to us.

To this end, each record contains information on the factors outlined below:

Table 3.2 Data Used to Quantify Factors

Factor	Data Measure(s)
SEP	**SEP:** Total number of SEP recipients per school for a given year;
CLUSTER	**CLUSTER:** A 'dummy' variable where a school's inclusion in a school outreach cluster is equal to '1'and non-membership is equal to '0'. There are nine reported clusters, one for each Queensland-based universities and two for joint clusters: CQU; GU; JCU; QUT; QUT/ACU; UQ; USC; USQ; USQ/USC (2 schools only).
ENGAGE	**ENGAGE:** A scored level of engagement for each cluster per selected school in selected years.
SES (disadvantage)	**IRSED Quartile (1 to 4):** Students are assigned IRSED quartile scores 1 to 4 depending on their home address. Students residing in the lowest socio economic status (SES) region are assigned a score of 1 while students from the highest socio economic status area get a score of 4. ('O' rated IRSEDs for private schools are not reported here). **LSESNP:** Schools identified as low SES under the national program. '1' equal yes; '0' equals no. In total, 23 schools were coded as LSESNP.
DEMOGRAPHIC	**Female:** Number of female students applying to the tertiary institutions. **Indigenous Students:** Number of students who declare themselves as Aboriginal or Torres Strait Islanders on the QTAC application form.
YEAR	**YR:** Factors for each year: 2007 to 2013
REGION	**DETE:** Queensland Government (DETE) regions: South East (SE); Metropolitan (M); North Coast (NC); Central Queensland (CQ); Darling Downs South West (DDS); North Queensland (NC); and Far North Queensland (FNQ). **EQ Zone:** Metro; Provincial City; Rural; and Remote. **ASGS:** Australian Statistical Geography Standard (ASGS) measure of remoteness structure (2011)**:** Major Cities of Australia; Inner Regional Australia; Outer Regional Australia; Remote Australia; Very Remote Australia.

4. An Evaluation of *Widening Participation*: Analysis and Findings

The evaluation of the impact of the Consortium's WP program on applications to Consortium institutions and tertiary institutions in general proceeded with testing the model outlined in Section 3 using available data.

The factors identified were all included in a version of the model outlined above, in varying combinations. As a consequence of testing for the best explanatory model, various measures were removed from the model as other factors were viewed as capturing or reflecting their impact. Specifically, the ENGAGE factor was eliminated, not because engagement wasn't important, but because the individual CLUSTER factors – which identify each cluster explicitly – were now capturing this effect. Inclusion of both factors added little to the explanatory power of the model, however, this does not preclude the importance of the ENGAGE factor both in the present or future contexts. For this reason, it is important to interpret the findings on CLUSTER with this in mind.

Similarly, the last two measures of the regional factor: 'EQ Zone' and 'ASGS' were also eliminated in favour of the DETE region indicator which captured both differences between regions as well as metropolitan and regional differences.

The new subset of factors was used in a model to explain movements in (a) Consortium applications and (b) tertiary applications.

Consortium Applications

The findings from the regression analysis of Consortium applications are reported in Table 4.1.

While the individual estimates of the impact of each factor indicate its role in influencing Consortium applications from a given school, it is important to remember that this estimate represents the factor's influence in view of other explanatory factors in the model. Seemingly ambiguous results can often be the outcome of a range of interactions which serve to highlight future areas of investigation.

An estimate of the impact of each factor and its statistical significance (as measured by its standard error) is outlined. In the case of SEP, this factor is highly significant (1%) and positive – as expected. The estimate suggests that all other factors being equal, for every increase in the number of Year 12 completions at a school there is an increase in the number of applications from that school to Consortium institutions, bearing in mind that schools also send students to other tertiary institutions and pathways.

Table 4.1 An Analysis of Consortium Applications

Factor	Estimate	Standard Error
(Intercept)	-2.597***	1.234
SEP	0.098***	0.006
IRSED_Q1	Intercept	
IRSED_Q2	-0.834	1.007
IRSED_Q3	0.254	1.094
IRSED_Q4	2.345*	1.313
LSESNP	-1.441	1.062
CLUSTER _CQU	Intercept	
CLUSTER _GU	0.872	2.412
CLUSTER _JCU	-2.149	4.326
CLUSTER _QUT	0.500	0.936
CLUSTER _QUT/ACU	-1.388	1.204
CLUSTER _UQ	-0.384	1.720
CLUSTER _USC	0.631	1.103
CLUSTER _USQ	0.264	1.543
CLUSTER _USQ/USC	-0.897	1.372
YR_2007	Intercept	
YR_2008	-0.134	0.636
YR_2009	-0.589	0.636
YR_2010	-0.100	0.636
YR_2011	-0.273	0.638
YR_2012	0.553	0.640
YR_2013	0.650	0.637
FEMALE	1.135***	0.027
INDIGENOUS	0.272*	0.143
DETE_M	Intercept	
DETE_DDSW	1.987	1.569
DETE_CQ	0.635	3.283
DETE_FNQ	4.027	4.390
DETE_NC	0.477	0.951
DETE_NQ	4.115	4.388
DETE_SE	-0.339	2.446

Note: ***, **, and * indicate that estimates are significant at 1%, 5%, and 10% level.

For all groups of factors (IRSED, CLUSTER, YEAR, and DETE), one factor's results are interpreted as part of the intercept, with all other factors being evaluated in relation to it.

In the case of the four IRSED factors, IRSED_Q1, the lowest quartile of schools in terms of disadvantage, is the base estimate with estimates of the other three factors (Q2, Q3, and Q4) being determined in relation to this factor. For instance, the estimate on IRSED_Q4 (the high SES quartile) is significant at the 10% level and equal to 2.345. This suggests a strong positive correlation between schools in this group and their capacity to send students to Consortium institutions, with IRSED_Q3 having a similarly positive, yet not statistically significant, effect. The estimate for

IRSED_Q2 is negative, a finding which was consistent across all variations of this model of Consortium Applications as well as for Tertiary Applications. The interpretation of this factor is that schools with student populations in the second quartile see fewer applications to Consortium institutions than is the case from the lowest quartile, holding other factors constant.

This raises the question of what may be driving this result – is it due to regional effects or job and training search characteristics of students in the second quartile? Coelli (2010) observes that a policy focus on students in the lowest (low SES) quartile risks ignoring students in the second quartile who have similar difficulties in transitioning to tertiary education. Alternatively, it could be a function of the impact of intervention programs, including the WP program in increasing participation or at least application activity from students in the lowest quartile in recent years.

The overall impact suggests that schools in the two bottom quartiles of the IRSED ranking see fewer applications to Consortium institutions, an estimate confirmed by the negative sign on the LSESNP factor (-1.441, but not significant).

Indicators representing other socioeconomic factors provide confirmation that female students (FEMALE) are more greatly represented than males. The estimated effect for INDIGENOUS status is both positive and significant. This appears to be at odds with the vast bulk of evidence on participation which suggests Indigenous students are disadvantaged. However, this outcome controls for other socioeconomic factors and regional impacts which also contain information on Indigenous disadvantage (students from low SES households; regional and remote areas), which suggest that programs act to alleviate some of this burden, although of course, in comparison with the general Queensland population, Indigenous people are highly disadvantaged. In addition, the growing Indigenous population has naturally increased the pool of potential Indigenous students in comparison to non-Indigenous students.

The CLUSTER factors capture movements in application numbers among schools in each institutional cluster of the WP program. CQU is the intercept in this instance, against which other clusters are evaluated. Once again, while the estimates of these effects are instructive, they have to be read in the context of other factors and their statistical validity. However, with that caveat in mind, the first observation which can be made about the cluster outcomes is that GU (Griffith) reports the highest measured impact relative to CQU at 0.872, followed by USC (0.631) and QUT (0.500). JCU and the two joint programs both have lower impacts than CQU, but these are not statistically significant. JCU's results in particular should be treated with caution as it manages the WP program across North Queensland, with estimates for the DETE regions (below) showing that both North Queensland and Far North Queensland have seen increases in Consortium Applications relative to Brisbane (DETE_M - Metro).

Generally, the findings on CLUSTER imply that there are limited differences between the clusters. What does this imply about the relative performance of various clusters in the WP program to date? In the absence of non-control schools, this is a difficult question to answer definitively.

However, the results for GU are strongly suggestive of a positive impact from these programs, particularly in view of the exclusion of factors measuring intensity of engagement (ENGAGE) and GU's very strong assessment of the level of engagement across its schools – as reported in Table 1.3 – which indicates that around 80% of schools in the GU cluster experienced medium to high levels of engagement with the GU program among their Year 12 class, compared with just 33% of WP-Tracked schools overall.

Further evidence for the above observation is that GU also has the strongest (and highly significant) impact among CLUSTERs for Tertiary Applications (see Table 3.4). In this context, the strong results for GU indicate that as the WP program becomes more entrenched, the results from the program become more apparent.

Further quantitative work with student records, perhaps looking at individual application data in the context of this data on schools, could shed further light on this effect.

The estimates on the YEAR factors indicate that in the last two years, relevant to the base year of 2007, there has been a rising trend in applications, other factors being equal, with more recent years seeing an increase in Consortium Applications. The YEAR factor captures effects which may be due to other interventions in recent years, including changes at the Commonwealth level such as the deregulation of higher education places.

Finally, the DETE regional factors provide some perspective on how regional trends influenced Applications to Consortium universities, in view of other factors in the model. Compared to the Metropolitan region of Brisbane (DETE_M), most regions saw higher levels of Consortium Applications, with the exception of the SE region. This is at odds with any standalone analysis of regional application trends - for instance, the positive trends in the regions in the JCU cluster (NQ and FNQ) with an overall negative finding for that cluster. However, it is important to bear in mind that this finding represents a simplification of a quite complex process and needs to be interpreted in view of everything else being captured in the model. Also, none of these factors is particularly noteworthy or statistically significant, so it is difficult to identify any strong difference among the regions in and of themselves.

Tertiary Applications

The findings from the analysis of Tertiary Applications which included a small number of non-Consortium applications, are broadly similar to those for Consortium Applications.

The impact of SEP is positive – a higher SEP number leads to a higher number of applications, with an overall estimated effect which is similar for applications to Consortium members.

Table 4.2 An Analysis of Tertiary Applications

Factor	Estimate	Standard Error
(Intercept)	-4.031**	1.792
SEP	0.121***	0.009
IRSED_Q1	Intercept	
IRSED_Q2	-1.253	1.463
IRSED_Q3	1.259	1.590
IRSED_Q4	3.158*	1.907
LSESNP	0.380	1.543
CLUSTER _CQU	Intercept	
CLUSTER _GU	9.146***	3.504
CLUSTER _JCU	0.394	6.284
CLUSTER _QUT	6.636***	1.360
CLUSTER _QUT/ACU	7.255***	1.749
CLUSTER _UQ	0.887	2.498
CLUSTER _USC	1.074	1.603
CLUSTER _USQ	1.865	2.241
CLUSTER _USQ/USC	0.117	1.993
YR_2007	Intercept	
YR_2008	-1.593	0.925
YR_2009	-0.312	0.923
YR_2010	-0.147	0.924
YR_2011	0.520	0.927
YR_2012	0.636	0.929
YR_2013	0.256	0.926
FEMALE	1.202***	0.039
INDIGENOUS	-0.109	0.208
DETE_M	Intercept	
DETE_DDSW	0.600	2.278
DETE_CQ	1.015	2.858
DETE_FNQ	0.403	6.377
DETE_NC	-1.915	1.382
DETE_NQ	1.389	6.374
DETE_SE	1.796	3.552

Note: ***, **, and * indicate that estimates are significant at 1%, 5%, and 10% level.
These results include non-Consortium applications, which initially included data for 2009, which has since been revised. Earlier sensitivity analysis indicates that this revision will not materially affect results.

The findings for the IRSED group of factors shows a similar trend again, with a strong, significant trend among higher socioeconomic schools (IRSED_Q4) relative to the lowest IRSED rung (IRSED_Q1), and again, an indication that other factors being controlled for, schools in the IRSED_Q2 group have fewer applications to Queensland tertiary institutions than is the case for IRSED_Q1. It is difficult to attribute this to existing or WP program-related factors without non-program schools in this sample, but it does suggest a future research question. The LSESNP variable is positive (but insignificant) in this model.

The CLUSTER results tend to mirror those seen in the Consortium Applications model, with GU and QUT seeing strong and significant results, relative to the CQU baseline factor, but with other institutions also being positive, including the QUT/ACU collaboration.

The strength of the GU effect does tend to confirm the view expressed above that the early commencement and greater level of engagement of GU's programs in the lead up to and duration of the WP program has had an impact – a finding which augurs well for the program in general.

The YEAR factors show a general upward trend in Tertiary Applications, particularly in recent years. Once again, FEMALE is positive and significant indicating higher levels of female applications in the overall tertiary sector, while INDIGENOUS is now negative (though insignificant), suggesting that the Consortium's program has had a stronger influence in attracting Indigenous students to apply to Consortium members than the broader tertiary sector. Again, that is a question that is best addressed in a separate study of Indigenous students and the Consortium's programs in that area.

As noted above, the regional impacts (DETE region factors) tend to be insignificant, with the North Coast (NC) alone having a negative factor relative to the metropolitan region (M).

Key Findings

The findings from this analysis are summarised in Table 4.3 below.

Table 4.3 Findings on the Impact of Factors on Tertiary Applications

Factor	Expected Impact on Tertiary Applications (+/-/X)
SEP	+ As expected, increases in SEP numbers will lead to higher levels of applications.
CLUSTER	+ The 'focus' variable of this study. The estimates for the impact on CLUSTER factors indicated positive impacts, particularly for larger, well established Consortium clusters such as GU. Cluster programs on average increased the number of applications to consortium and all tertiary institutions.
ENGAGE*	+ This variable was omitted from the final model for both Consortium and Tertiary applications, in large part because most of its effects were proxied by CLUSTER. The higher effects measured for CLUSTERs with higher engagement scores suggests that the level, and perhaps also, the length of engagement plays a strong part in measured CLUSTER effects.
SES (disadvantage)	- Higher levels of social disadvantage resulted in lower levels of applications to university. Surprising finding that schools ranked in the second IRSED quartile were disadvantaged compared to those in the lowest, after controlling for other effects.
DEMOGRAPHIC	X Mixed impacts – As expected, FEMALES (+) tended to have higher levels of application to tertiary institutions. The result for INDIGENOUS (*) was more ambiguous in this context. A (+) sign for Consortium applications indicates that WP program activities may be having a positive impact on applications to Consortium institutions. The negative sign in the Tertiary model indicates that this success may be drawing Indigenous students from the non-Consortium Tertiary sector, which may explain the negative sign in the Tertiary model.
YEAR	+ As expected, with applications rising over time, this group of factors was increasingly positive in recent years.
REGION	*Ambiguous result, with some evidence of disadvantage in the South East (Consortium Applications model) and North Coast (Tertiary Model).

Note: * Factor not included in final model.

In general, three key findings emerged from the analysis:

- **The WP Consortium is making an impact:** The WP Consortium has made a good start in the rollout and monitoring of its engagement and intervention programs in Queensland schools. This study has confirmed that there is some evidence that these programs are already having an impact on application rates by students in WP-tracked schools.

- **The importance of socioeconomic factors:** As measured by the IRSED factor, socioeconomic impacts exhibit a stronger gradient in its impact on school applications at higher socioeconomic levels (or lower levels of disadvantage in this case). This is as is expected and reinforces the case for school outreach work. Importantly, in both the models for Consortium and Tertiary Applications, the second quartile (IRSED_Q2) exhibited a reduced tendency to see applications increase relative to the bottom quartile. This could be explained in terms of a differential in the impact of the WP program in recent years. However, this requires further analysis.

- **The Impact of the WP Program by Cluster:** The findings on the impact of the WP program by cluster support the idea that GU has done particularly well – a result which is not surprising given GU's early start in this work and the assessed level of engagement of its schools, with a high percentage of its schools assessed as 'highly engaged'. To some extent this finding confirms that as the *Schools Outreach* program is allowed to progress, and as more Year 12 cohorts move into the 'high engagement' category, the impact on applications will increase.

5. Summary and Recommendations

The WP Program

- The Higher Education Forum (HEF) established the *Widening Participation Working Group* in 2009 to examine collaborative approaches to increase the participation of people from Indigenous and low socio-economic (low SES) backgrounds in tertiary education in Queensland.

- An MOU between 8 universities and DETE encoded the partners' program designed to stimulate interest in tertiary study, resulting in the submission of two proposals to the Commonwealth's Higher Education Participation and Partnerships Program (HEPPP): *School Outreach* (Project 1) and Indigenous Engagement (Project 2). These proposals attracted $21.15 million in funding, to be spent over a four year period between 2011 and 2014.

- The overall *Widening Participation* (WP) initiative and key programs are managed by the WP Consortium of Queensland Table A providers through 'university clusters' whereby a university is responsible for a group of schools. Under the WP Program, 111'WP-tracked' schools have been monitored to determine if any impact on Year 12 students' tertiary application and enrolment behaviour is evident since the commencement of the program in 2011. Data on these schools form the basis of this study.

- The level of program engagement differs within and across clusters quite markedly. For instance, WP Consortium reporting shows that 33% of all WP-Tracked schools experiencing 'medium' or 'high' levels of engagement among Year 12 students in 2013, with Griffith University having 80% of all schools at this level in its cluster.

Tertiary Performance in Queensland

- Queensland has responded to the challenges in Australian higher education over the past 5 years (2008 to 2013), with a 25.1% expansion in domestic undergraduate tertiary enrolments. In 2013, the higher education sector enrolled 139,593 undergraduate students, of whom 130,586 were enrolled in Table A providers – the membership of the WP Consortium.

- One particularly noteworthy achievement of the WP Consortium institutions has been the collective attainment in 2013, of the Rudd-Gillard government's target that low SES students make up 20% of undergraduate enrolments by 2020 (on the basis of the 2006 postcode measure of low SES status).

Performance of WP-Tracked Schools

- Table 5.1 summarises and compares key descriptive statistics for WP-tracked schools and all schools in Queensland.

Table 5.1 Consortium Applications, Offers, and Enrolments: WP-Tracked and All Schools, 2013 data and % Change between 2008 and 2013

	WP-Tracked Schools		All Schools	
	2013	2008-13 %/PPC*	2013	2008-13 %/PPC*
SEP	13,784	15.1%	47,912	15.4%
Consortium	4,341	22.6%	25,171	18.7%
% of SEP	31.5%	1.9	52.5%	1.5
Consortium Offers	3,924	29.7%	23,870	22.6%
Offer/Application %	90.4%	5.0	94.8%	3.0
Consortium Enrolments	2,800	32.0%	17,857	24.3%
Enrol/Application %	64.5%	4.6	70.9%	3.2

Note: * PPC: Percentage Point Change.
Source: Based on Tables 1.5 and 1.6.

- Growth in Year 12 completions was reasonably consistent across WP and all Queensland schools.

- The proportion of Year 12 students at WP schools with tertiary applications rose slightly faster in the 5 years to 2013 compared to all schools, however this application rate for WP schools still trails well behind that of all schools.

- WP-tracked schools have seen an increase in applications to Consortium institutions of 22.6% since 2008, compared to 18.7% growth for all schools.

- Around 2,800 students from WP-tracked schools were enrolled in Consortium institutions in 2014, representing 64.5% of applications, with 2008 to 2013 growth in numbers of 32.0%. In comparison, all school enrolments amounted to 17,857 students or 70.9% of applications, representing 24.3% growth since 2008.

- Overall WP tracked schools have experienced improvements in Consortium applications, offers and enrolments at a higher rate than all Queensland schools, though a significant gap between these low SES schools and other schools remains.

Analysis of the WP Program

A regression analysis of **Applications** from WP-tracked schools has been carried out, with a focus on both Consortium and Tertiary (Consortium and other institution) applications.

Key findings from the analysis

Three key findings emerged from the analysis:

- **The WP Consortium is making an impact:** This study has confirmed that there is some evidence that widening participation programs are already having an impact on application rates by students in WP-tracked schools.

- **The importance of socioeconomic factors:** As expected, higher levels of disadvantage resulted in lower levels of tertiary applications. Importantly the second lowest quartile exhibited a reduced tendency to see applications increase relative to the bottom quartile.

- **The Impact of the WP Program by Cluster:** The findings on the impact of the WP program by cluster support the idea that clusters with a greater length and intensity of engagement have significant impacts on tertiary applications. This is particularly the case in the Griffith University cluster which has built on pre-existing programs to report a high level of engagement with its cluster schools in 2012 and 2013. This finding confirms that as the *Schools Outreach* program is allowed to progress, and as more Year 12 cohorts move into the 'high engagement' category, the impact on applications will increase.

Recommendations

In view of the findings above, three recommendations can be made for future analysis of the program:

1) **Existing monitoring and data collection from schools should be extended:** The WP Consortium has done a good job of collecting school-based statistics from QTAC on applications, offers, and enrolments. This provides a base for future data collections. This data set could easily be extended in three ways:

    a. *Continue to collect and report more data on program type and level of engagement:* The more detailed the data on program type and the

overall level of engagement for each cluster becomes, the greater is the opportunity for research into program- and cluster- specific effects. Such data would include a count of participants for each program, sub-program and activity type and aggregation of such data to the school level.

b. *Collect more disaggregated data:* The current collection of data on student applications could be extended to include additional measures, including:

    i. Student application by academic ranking – OP Score (1 to 25); and
    ii. Applications data by broad field of study.

    Further investigation may identify other subsets which are of interest.

c. *Include similar for ALL high schools in Queensland:* This will provide data for a potential 'control sample', albeit one where most disadvantaged schools are included in the WP-tracked or WP-targeted group.

d. *Extend measures for a school's overall performance:* including the addition of school-specific data from the Australian Curriculum, Assessment and Reporting Authority (ACARA), including details on school NAPLAN averages. This data was sought from ACARA for this project but was not provided in time for inclusion. The WP Consortium should seek to access ACARA data separately for this purpose.

2) **Additional collections at the regional level:** Schools are easily characterised by region. Additional information on socioeconomic data from each region may be useful to determine regional factors which affect application rates. These include:

    a. ABS census data on socio-economic measures on a regional basis;
    b. ABS and Commonwealth data on small area labour market trends;
    c. Other regional data sources.

    This may prove to be very useful given Queensland's relatively (by Australian standards) dispersed population.

3) **Studies of student performance:** These can take the form of quantitative or qualitative studies which assess student reaction to engagement programs, as well as retrospective studies which examine student tertiary performance with school factors as explanatory variables.

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