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Aspire UWA: A case study of widening access in Higher Education

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Abstract*

Widening university access to students from low socio-economic status (LSES) and non-traditional backgrounds has been a key equity objective for Australian universities, particularly since the 2008 Review into Australian Higher Education (Bradley, Noonan, Nugent & Scales, 2008). Aspire UWA is an equity pathway that aims to inform aspirations and build academic attainment through direct involvement with students who are the “most able least likely” to access the benefits of higher education (Harris, 2010, p. 7). Through forming long-term partnerships with 63 secondary schools across Western Australia (WA), Aspire UWA has grown since 2009 to engage over 10,000 students annually. Its learning framework is designed to deliver age-appropriate activities to inspire and inform students from Years 7-12 to achieve their educational goals. This paper adopts a case study methodology to explore the Aspire UWA approach, the specific operation of Aspire UWA and the efficacy of the program.

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Introduction

The benefits of higher education at both a personal and national level are well recognised and make a significant difference to an individual's life chances. Higher education qualifications boost one's employment prospects, earnings, status and personal development (Australian Institute of Health and Welfare, 2014). At the national level, higher education benefits nations by providing a highly skilled labour force that contributes socially and economically by facilitating cohesion and economic integration (Chesters & Watson, 2013; Vinson & Rawsthorne, 2015). Since 2008, the higher education sector in Australia has expanded its focus on developing outreach programs that widen participation and support progression (Devlin, Kift, Nelson, Smith, & McKay, 2012). Aspire UWA, an equity pathway at the University of Western Australia (UWA), is one such example. Although students from high and medium SES backgrounds continue to be over-represented in universities in Western nations (OECD, 2014), Australia has made some gains in the percentage of LSES students enrolling in Australian universities (Ross, 2016).

Aspire UWA's objective is to encourage and support students from LSES backgrounds to continue to higher education, so that they gain the lifelong benefits of a university education. In their recent research study, Gore et al. (2015, p. 5) indicate that students need a "navigational capacity" to identify and decide how they move from their school situation to the higher education sector. Aspire UWA is designed to provide this capacity for students in participating schools.

Aspire UWA has formal partnerships with 63 secondary schools in Western Australia (WA), a vast, sparsely populated state. There are 22 in Perth, the capital, and 41 in regional WA. These

regional partnerships include many with a low Index of Community Socio-Educational Advantage (ICSEA)¹ and are in communities with high numbers of Indigenous Australians. Aspire UWA partner schools are located in regions that have low transfer rates to higher education in comparison to urban centres (Department of Education Services, 2013).

The Aspire UWA program has three components: (i) a core learning framework for students in Years 7-12 in all partner schools delivered by the Student Life division; (ii) an outreach program specifically for Indigenous students delivered by the UWA School of Indigenous Studies; and (iii) a pathway program to the professional degrees of medicine and dentistry for LSES and rural students delivered by the UWA Faculty of Medicine, Dentistry and Health Sciences. This coordinated outreach model under the Aspire UWA umbrella works collaboratively to ensure cohesive delivery and maximises opportunities for engagement.

Aspire UWA team members deliver the academic enrichment activities developed through its learning framework in partner school classrooms, at residential camps and during university campus visits. They are supported by current university students, who act as student ambassadors. For detailed information see www.aspire.uwa.edu.au. The model of sustained, whole-of-school engagement encourages a school culture where high academic achievement is an expectation rather than the exception. Assisting teachers with professional development opportunities has helped to support this aim, particularly in regional schools with high staff turnover (Australian Human Rights Commission, 2001).

Naylor, Baik and James (2013) highlight the importance of embedding evaluation in university outreach programs, whilst noting

¹ ICSEA is calculated on parental socio-educational advantage, based on school population, and is available for each school on the Australian government's [My School](http://www.my-school.gov.au) website

that it takes time to demonstrate outcomes when working with young students who will only make decisions about university enrolment some years in the future. In the absence of longitudinal data, evaluation has focused on qualitative research methods and teacher perceptions of program quality and impact.

Method

This article adopts case study methodology to report on the outcomes of the first seven years of Aspire UWA. Such a methodology is often applied in the social sciences—which includes educational evaluation, the focus of the study being reported here—as it allows a detailed contextual analysis of a real world context (Yin, 1984). This particular example is an illustrative case study, and makes use of qualitative data to complement the quantitative data available. Like most case studies, this one is exploratory in its intention to learn from evidence collected.

This case study investigates the research question that long-term partnerships with schools are necessary to affect the cultural change required to address the multiple factors that act as barriers to LSES students accessing higher education. It is grounded in an extensive literature of widening participation (e.g. Gale Tranter, Bills, Hattam, & Comber, 2010; Kuh, Kinzie, Buckley, Bridges & Hayek, 2006). Again, like most case studies, it has limited usefulness as a “stand-alone” example, but as is argued here, it is important to record successes that contribute to the national agenda of widening participation in Australian higher education and share lessons learnt.

Data for this study were collected from multiple sources—secondary school students, teachers/principals and university student ambassadors who volunteer to support the program—at different time points from 2009 to 2015. Feedback and demographic data were collected through baseline surveys from students and ambassadors while engaged in

activities. Data from baseline surveys were entered into a Microsoft Excel spreadsheet which was used for data management and analysis. Data from teachers and principals were collected through online Qualtrics surveys in 2011 and 2013. The survey forms have been kept consistent over the years, with little or no changes to items in order to maintain consistency of responses. Feedback was also received through email correspondence and teacher reference groups.

What follows is firstly, a brief overview of how higher education equity policy in Australia has influenced the development of Aspire UWA; secondly, the analysis of administrative data, survey results and qualitative data focussing on the identification of evidence of program outcomes; and finally, a review of the efficacy of Aspire UWA through the lens of factors identified by Gale et al. (2010) in their research on effective outreach initiatives.

Context for the development of Aspire UWA

In Australia, the 2008 Review of Higher Education highlighted the need to widen access to university and to improve student support programs for students from LSES and non-traditional backgrounds (Bradley et al., 2008). In response, in 2009 the Group of Eight (Go8) research-intensive universities developed the Go8 Equity Strategy (Montesin, Caruana, Ashley, & Mackay, 2009). While target groups differed according to the local community of each university, the Go8 universities agreed to focus their outreach and research activities on severely disadvantaged and under-represented communities. In particular, they agreed to focus resources on developing long-term relationships with schools and the broader community to raise aspirations and readiness to participate in higher education.

The University of Western Australia, as a Go8² university, embraced the implementation strategy through the design of Aspire UWA, which was initially funded with a competitive grant from the Australian government’s Diversity and Structural Adjustment fund. Commencing in 2009, the program was based on a community partnership model with 19 low ICSEA secondary schools in Perth that had large populations of LSES, Indigenous and refugee students and six secondary schools in the Pilbara region³, all more than 1,000kms from Perth. The focus for the program was to deliver intensive on-campus and in-school activities that targeted the students “most able least likely” (Harris, 2010, p.7) so that they developed the confidence, academic attainment and aspiration to study at university.

Years 7-8. A further expansion of another 11 schools in the Peel region⁴ has occurred in 2016. The success of the program in attracting competitive funding is an endorsement by the Commonwealth of the robustness of the model. The number of students associated with the increase in the engagement with partner schools is shown in Table 1.

School surveys

A particular focus of the program is the responsiveness to school partners and their individual needs, whilst ensuring program delivery is equitable across all schools. Two surveys of staff in partner schools have been undertaken, the first in 2011 and the second in 2013. In the 2011 survey, of a possible 60 staff, 47 (78% response rate) responded and the

Table 1: Students associated with the increased engagement with partner schools 2009 – 2015

Student engagement*	2009	2010	2011	2012	2013	2014	2015
Total**	609	2769	2534	5241	9552	8250	10302

* 2009 program commences with Year 9 only in 25 schools; 2010 program expands to Year 9-10 and community events; 2011 program expands to Years 9-11; 2012 program expands to Years 8-12 at original 25 schools and Years 9-10 at 31 new schools; 2013 expands to Years 8-12 at all 52 schools; 2015 program expands to Year 7 at all schools as Year 7 becomes part of secondary education system in Western Australia. ** Figures also include additional Indigenous outreach programs and engagement with schools through the ‘choose medicine...choose dentistry Rural Pathway’ program and students at community events.

Results

Aspire UWA has expanded the scope of its engagement with partner schools significantly since 2009. From 25 schools in 2009 - 2011, working primarily with students in Years 9-12, Aspire expanded to 52 schools in 2012 with the award of a second competitive grant (2012-2014) from the Commonwealth’s Higher Education Participation and Partnerships Program and in 2015 extended the program to

summary of the quantitative results indicated that more than 80% of respondents agreed that Aspire UWA enhanced the motivation of their students, and increased their (i.e., students) awareness of higher education as well as their interest in specific areas of study. Of the educators, 77% reported they had become more proactive in encouraging students to consider university education since attending Aspire UWA.

² The Group of Eight (Go8) is a coalition of leading Australian universities, intensive in research and comprehensive in general and professional education <https://go8.edu.au/>

³ The Pilbara region is a large, sparsely populated region in the north of Western Australia with vast mineral deposits, particularly iron ore.

⁴ The Peel region is an agricultural region just south of Perth, Western Australia’s capital.

In 2013, 112 of a possible 160 (70% response rate) secondary school teachers and principals completed a survey and provided further strong endorsement of the program:

- 99% agreed that it was valued by their school;
- 97% indicated that they were satisfied with its quality and range of activities; and
- 96% agreed that it is a very effective program.

Respondents were asked to comment through a free text response on the most important triggers for the students in their school to consider university. Figure 1 indicates the five most commonly mentioned triggers: all five triggers are importantly Aspire UWA driven factors.

Widening access literature identifies that achieving cultural change in schools to raise expectations of high academic performance is critical to long-term successful outcomes (Gore et al., 2015; Harris, 2010). In the 2013 survey, as noted in Table 2, respondents identified marked improvements in interest in higher education that they attributed to Aspire UWA’s influence. This finding is possibly the most important indication of a highly effective program, working with school communities to embed sustainable, positive outcomes.

Educators were also asked to comment on what they saw as the main strengths of the program. The comments were coded as to the frequency of the three most often mentioned strengths. Figure 2 provides the information on the ten most often mentioned strengths.

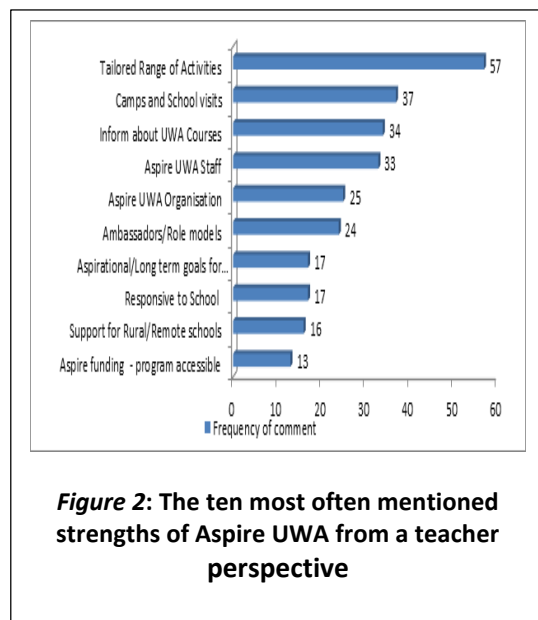
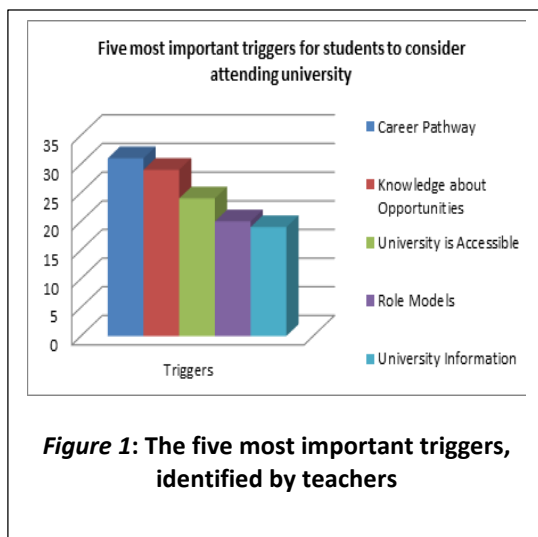


Table 2: Responses from the 2013 School Partner Survey

Survey item	% agree
Visits to the UWA Campus enhanced students’ familiarity with university life	94
Students are now aware of the long-term benefits of higher education	80
Aspire UWA has increased the motivation of students to go on to higher education	88
Aspire UWA has influenced some positive changes in the school	81
Aspire UWA working with the teachers has strengthened the academic focus of the school	70

Student feedback through baseline surveys

These brief surveys underpin processes of continuous review and improvement of program activities and help monitor that the students participating in the activities are from the intended target group, which is students who are unsure about their post-school options. Surveys are anonymous, approved by schools and tailored to the age of participants. They provide longitudinal data on demographics; university aspirations; highlight common queries students have; and provide immediate feedback on activities completed. For example, 3,750 students completed baseline surveys in 2014 and in the responses, 25% of students identified as being first in family to consider university and 71% indicated that they had aspirations to attend university.

Teacher reference groups/ interviews/email feedback

Feedback is sought at reference groups meetings arranged at each residential camp (Metro: Year 11; Regional Years 9 and 11). Teachers provide input into activities, scheduling of future events and any issues noted. Individual interviews are also held to refine aspects of program delivery. The regular dialogue ensures that the program is responsive to each school's context, from large metropolitan ethnically diverse schools to small, very remote schools with high Indigenous populations. The continuing high level of school

satisfaction with the partnership evident in survey results is an important measure of engagement.

Principals of regional and remote partner schools are particularly appreciative of the support: *The increased engagement and enthusiasm amongst students for learning and the hope that an awareness of possibilities has created is invaluable and for this I am incredibly thankful for the Aspire program.* (Email feedback, Principal, remote District High School [DHS])

Administrative data

Quantitative data on enrolments at WA universities are being monitored longitudinally and Table 3 demonstrates an upward trend from Aspire UWA schools in university enrolments.

It should be noted that some long-term positive effects of Aspire UWA - such as students enrolling at Notre Dame, Fremantle, other Australian universities or entering university later in life or via Vocational Education - cannot be measured due to the lack of sector-wide data.

Retention data

Success in access can truly be measured only against successful participation (Devlin et al., 2012; Gore et al., 2015). Once students from Aspire UWA partner schools enrol at UWA, they are supported in transition and connected with support services, so that they know where to go

Table 3: Enrolments from Aspire UWA schools in WA public universities

Enrol	2009	2010	2011	2012	2013	2014	2015*	2016
UWA	117	125	156	173	209	174	101*	Not yet available
All WA public universities**	567	647	664	727	815	733	501	

* 2015 data reflects the smaller cohort of school leavers in WA, termed the "half cohort" due to changes in primary school entry age twelve years previously.

** Includes UWA, but not Notre Dame (Fremantle) as students do not apply through the Tertiary Institutions Service Centre.

if they need assistance. As reported in UWA's Mission-Based Compact for 2014-2016, Aspire UWA students at UWA are enjoying levels of success that are comparable to or better than the University average:

The University's investment in the Aspire program is reflected in the good performance of students from Aspire schools, which has been at least comparable with the students from other schools, even though students from Aspire schools have lower median ATARs than students from other schools. For example, Aspire students have **had first-year retention rates equivalent or higher than other students [emphasis added]**; 92% versus 88% for the students commencing in 2010, 88% for both groups for the 2011 cohort and 90% versus 86% for the 2012 cohort. (The University of Western Australia, 2013, pp. 30-31)

Feedback from schools, student participants, parents and Aspire Ambassadors

Qualitative feedback is received regularly from school staff and examples include *Aspire UWA has helped many of our students to open up to the possibilities of university studies*. (Email feedback, Deputy Principal, Perth partner school); and

There are few programs that offer the vision of future excellence to students in such remote locations as ours. Student feel locked into a future that is decided for them by their circumstances and your program is one that dares to break that perception. (Email feedback, Principal, remote DHS)

Engaging parents has been a challenge for Aspire UWA. Project funding from the National Priorities Pool in 2014 supported a project "Influencing the key influencers" to trial targeted engagement strategies with parents in the Mid-West and Gascoyne. When parents of students living in regional communities see the

impact of students' engagement, they appreciate the opportunity their children have, especially those attending Aspire's 3-day residential camps in Perth, which provide an introduction to university life: *He found the whole experience inspiring and achievable. He set his sights on achieving his study potential and felt sure he would achieve university levels from that point on* (parent, Kalbarri DHS).

Student feedback includes: *I am considering going to uni now because this experience has opened my eyes, it has given me ideas and inspiration for future studies* (student, Carnamah DHS). Aspire UWA's student ambassadors' feedback is also captured, to ensure their contribution is valued and of value to them: *Having acted in an ambassador role with Aspire UWA, I believe I have significantly developed my leadership, communication and teamwork skills* (Aspire ambassador). The ambassadors are one of the program's greatest assets: 117 current UWA students, the majority of whom graduated from partner schools, have been selected and trained to mentor younger students, help deliver activities on-campus and on visits to partner schools and lead small groups of students during residential camps. In 2015, ambassadors contributed 1,472 hours volunteering at Aspire UWA events.

Discussion

Aspire UWA is designed to respond to UWA's unique context, as its location shapes its equity and access strategies. In WA the percentage of the population identified as LSES by Census Collection District is 19%. Approximately 50% of these districts are in regional, remote or very remote WA; 42% of WA's Indigenous population live in remote or very remote locations. With a school population sparsely distributed across a third of the Australian continent's land mass to support, WA universities face particular challenges in trying to form productive and sustainable partnerships with schools. If regional engagement is not a key component of widening

participation in WA, then half the target population of low SES students is missing out.

Data presented from this study indicates positive trends in university enrolments and progression for the target groups identified by Aspire UWA, and the high level of regard in which the program is held by its partners. These results, however, do not convey the scope and complexity of the program. The furthest partner school, Wyndham District High School, is 3,229kms from UWA's campus. The following statistics highlight the challenges faced in program delivery: In 2015, Aspire staff members involved in delivering school activities drove more than 17,000kms, flew more than 49,000km through 18 airports in WA, and delivered 215 school and campus visits and 15 residential camps across a geographical area the equivalent of Europe. Evaluating the efficacy of such a complex program is challenging.

Geographical location also influences the structure of Aspire UWA's metropolitan program, which is as equally important as the regional engagement strategy in addressing the inequalities evident in Australia's highly stratified school system and the socio-educational advantages that accrue from attendance at highly resourced and supported schools. The University is located in a high SES suburb close to central Perth and traditionally has drawn students from schools in close proximity. Aspire UWA's 22 Perth partner schools are mainly located in outer-metropolitan Perth, at significant distances from UWA.

Research into the design of outreach program by Gale et al. (2010) identified characteristics of effective equity programs through the Design and Evaluation Matrix for Outreach (DEMO). In developing the DEMO, the researchers found that incorporating a combination of four strategies that shared up to 10 characteristics into program design were most likely to deliver an effective program (Table 4).

Furthermore, the research highlighted the importance of:

A common equity orientation informed by three equity perspectives: unsettling deficit views; researching "local knowledge" and negotiating local interventions; and building capacity in communities, schools and universities. (Gale et al., 2010, p.11)

The DEMO offers a useful tool to ensure that all the key elements are incorporated to some degree within the multi-layered approach Aspire UWA has adopted. The program has a strong equity orientation, which draws on the specialist knowledge of staff with long experience in delivering outreach to Indigenous students and rural pathways into the professional degrees of medicine and dentistry. The leadership of the School of Indigenous Studies has been critical to ensuring that deficit views are challenged. Given the wide variety of partner schools, from large, multicultural metropolitan schools to very small, very remote schools with large Indigenous populations, it has been vital that "local knowledge" is tapped into and that the program is responsive to local

Table 4: Four strategies and 10 characteristics of effective outreach programs

Assembling resources	Engaging learners	Working together	Building confidence
People-rich	Recognition of difference	Collaboration	Communication and information
Financial support and/or incentives	Enhanced academic curriculum	Cohort-based	Familiarisation/site experiences
Early, long-term, sustained	Research-driven		

contexts. The third perspective, building capacity, is addressed by offering teacher professional development and building academic attainment through the learning framework that guides development of activities delivered to each Year group.

In Table 5, the ten characteristics from the DEMO are linked to aspects of Aspire UWA's delivery. Aspire UWA's strategy is to deliver a multi-faceted, complex, but cohesive program that demonstrates all 10 characteristics identified in the DEMO, aligned with the four strategies listed in Table 4. Continuous review and improvement is built in through program evaluation: "Aspire UWA is a strong outreach program that is well placed to bring positive outcomes in terms of access to higher education for the students." (External evaluation report, Dr Ann Jardine, University of New South Wales). The quality of the program has been acknowledged through success in competitive funding grants and three national awards: from the Office for Learning and Teaching, the

Australian Financial Review Equality Award and the Society for the Provision of Education in Rural Australia INC (SPERA).

Conclusion

Data and examples provided in this case study confirm the research question that long-term school partnerships underpin the success of the approach taken by Aspire UWA in delivering its innovative and comprehensive program. Aspire UWA demonstrates the attributes of a highly effective widening participation program as identified in the Design and Evaluation Matrix for Outreach (DEMO), through its early, long-term and sustained engagement, with a focus on academic attainment, and its underpinning in research and evaluation. Together with its partner schools, Aspire UWA is inspiring and motivating more than 10,000 students every year to pursue their goal of higher education and their dreams for a brighter future.

Table 5: *Aspire UWA's alignment with the DEMO*

Equity attribute	Aspire UWA activity to demonstrate equity attribute
People-rich	Activities are people-rich, connecting students with program staff, academics, student ambassadors and role models
Provide financial support	Students are sponsored to extension programs; UMAT (rural students); Leadership/Science camp (Indigenous students); & exam revision tutoring. All costs are paid, including travel.
Early, long-term, sustained	From Year 7-12; in District High Schools often from Year 3.
Recognition of difference	Program staff work in culturally appropriate ways and value Indigenous leadership in activity design and delivery
Enhance academic curriculum	Professional Development activities for teachers support enhanced curriculum development.
Research-driven	A comprehensive evaluation strategy is in place, informed by extant literature on widening participation
Demonstrate collaboration	Partners include schools, university partners, current students, corporate and charitable organisations
Cohort-based	Working with Years 7-12 with whole-class activities wherever possible, offering multiple points of engagement
Information about HE	Communication to students, parents and communities, with quality information and inspiring community events such as Aspire to Astronomy evenings in regional communities
University on-site experiences	On-campus experiences and residential camps build confidence and demystify the university experience.

References

- Australian Human Rights Commission. (2001). *Rural and remote education briefing paper*. Retrieved from <http://www.humanrights.gov.au/publications/rural-and-remote-education-inquiry-briefing-paper-13>
- Australian Institute of Health and Welfare. (2014). *Towards a performance measurement framework for equity in higher education, Cat no. IHW129*. Retrieved from <http://www.aihw.gov.au/publication-detail/?id=60129547958>
- Bradley, D., Noonan, P., Nugent, H., & Scales, B. (2008). *Review of Australian higher education: Final Report*. Retrieved from http://apo.org.au/files/Resource/higher_education_review_one_document_02.pdf
- Chesters, J., & Watson, L. (2013). Understanding the persistence of inequality in higher education: Evidence from Australia. *Journal of Education, 28*(2), 198–215. doi: 10.1080/02680939.2012.694481
- Department of Education Services. (2013). *Future Directions for the role of the state in Higher Education*. Retrieved from http://www.des.wa.gov.au/highereducation/Documents/FINAL_REPORT_Future_Directions_for_the_role_of_the_State_in_Higher_Education_February_2013.pdf
- Devlin, M., Kift, S., Nelson, K., Smith, L., & McKay, J. (2012). *Effective teaching and support of students from low socioeconomic status backgrounds: Resources for Australian higher education*. Retrieved from <http://www.lowses.edu.au/>
- Gale, T., Tranter, D., Bills, D., Hattam, R., & Comber, B. (2010). *Interventions early in school as a means to improve higher education outcomes for disadvantaged (particularly low SES) students*. Canberra: Department of Education, Employment & Workplace Relations.
- Gore, J., Holmes, K., Smith, M., Lyell, A., Hywel, E., & Fray, L. (2015). *Choosing university: The impact of schools and schooling*, Final Report to the National Centre for Student Equity in Higher Education, The University of Newcastle. Retrieved from <https://www.ncsehe.edu.au/publications/choosing-university-the-impact-of-schools-and-schooling/>
- Harris, M. (2010). What can be done to widen access to highly selective universities? Retrieved from <https://www.offa.org.uk/wp-content/uploads/2010/05/Sir-Martin-Harris-Fair-Access-report-web-version.pdf>
- Jardine, A. (2011) *Evaluation of the Aspire UWA program*. Internal UWA document available from authors.
- Kuh, G., Kinzie, J., Buckley, J., Bridges, B., & Hayek, J. (2006). *What matters to student success: A review of the literature*. Kentucky: National Postsecondary Education Cooperative. Retrieved from http://nces.ed.gov/npece/pdf/kuh_team_report.pdf
- Montesin, H., Caruana, B., Ashley, J., & Mackay, A. (2009). *Measuring and improving participation and success of students in equity groups at Group of Eight universities*. The Australian Association for Institutional Research (AAIR). Retrieved from: http://www.aair.org.au/app/webroot/media/pdf/AIR%20Fora/Forum2009/Papers/2-2_Montesin.pdf
- Naylor, R., Baik, C., & James, R. (2013). *Developing a critical interventions framework for advancing equity in Australian higher education*. Melbourne: Centre for the Study of Higher Education.
- Organisation for Economic Co-operation and Development. (2014). *Education at a glance 2014: OECD Indicators*. OECD Publishing. Retrieved from www.oecd.org/edu/Education-at-a-Glance-2014.pdf
- Ross, J. (2016, February 3). Equity drive failing to close gap. *The Australian*, p. 31.
- The University of Western Australia. (2013). *Mission-based compact 2014-2016*. Retrieved from: <https://docs.education.gov.au/documents/2014-16-mission-based-compact-university-western-australia>
- Vinson, T., & Rawsthorne, M. (2015). *Dropping off the edge 2015 (DOTE2015): Persistent communal disadvantage in Australia*. Jesuit Social Services and Catholic Social Services Australia. Retrieved from: <http://www.dote.org.au/>
- Yin, R. (1984). *Case study research: Design and method*. Thousand Oaks, CA: Sage Publications.