

Numbers don't tell the whole story

A case study of an alternative pathway to tertiary studies

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Abstract

This case study responds to the debate over 'toxic teachers', tertiary entry ranking and access to university. Implications for federal and state policy are proposed. For 22 years Avondale College of Higher Education has been operating a tertiary pathway course designed to widen access to higher education for non-traditional applicants. The course, now known as the Diploma of General Studies [DGS], has been accredited as a 2-year higher education sector diploma since 1995. Thus far, just over 1000 students have spent at least one semester in the diploma. Not one has opted to complete the diploma; instead students use it as a pathway to a higher award, mostly Avondale bachelor degrees in education, nursing, arts, theology, business and occasionally science. To date, 300 former pathway students have completed an Avondale degree, and a further 250 are currently enrolled. DGS students commence with Year 12 ranks (UAI, ENTER, TER, now ATAR) ranging from 30 or less to around 60; however, many have no rank. For those who complete an Avondale degree, there is no correlation between rank and average college grade. Those who engage with the academic program do well, regardless of their entry rank; and those who fail to engage do poorly, regardless of their entry rank. A low Year 12 rank does not tell an applicant's whole story. A semester in the DGS pathway course can open a new world of academic opportunity. Some DGS students have gone on to complete post-graduate study. Teachers can confidently advise Year 12 students with potential, but low tertiary ranking, to consider the option of alternative pathways to tertiary studies as these can provide a positive opportunity to achieve their aspirations.

Background and context

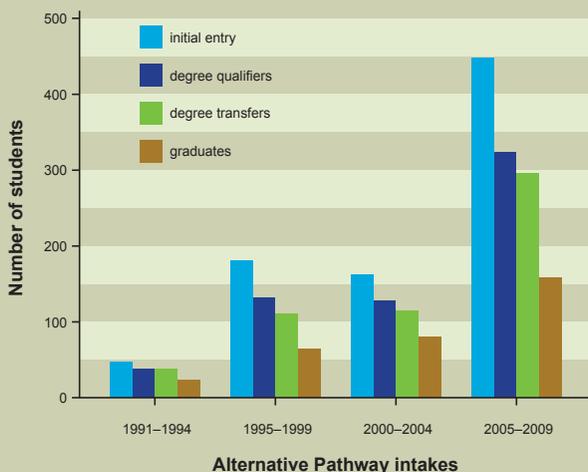
The DGS has been offered on the Lake Macquarie Campus since the course was first accredited in 1995. Before that it operated for 4 years as a

non-accredited course, inaptly called Foundation Studies. The name was inspired by the University of Newcastle Open Foundation Program (OFP), which commenced in 1974. The purpose of the OFP was to broaden access to higher education for mature age students (May, 2005, p. 57). In 1990 the University of Newcastle added an enabling course to increase opportunity for selected school leavers, Newstep, (Whitson, 1995). It was against this background of the need to widen access to university study in Australia and facilitate lifelong learning (May, 2005, p. 61) that Avondale introduced its pathway course.

Despite its initial title, the Avondale pathway was never a foundation course; from the beginning it was a tertiary pathway, with all entrants taking at least two units from their desired degree. The DGS is a course that students choose not to complete. Several hundred have qualified to receive a Dip Gen Studs; instead all choose to articulate into bachelor degree courses, without completing the diploma. Entrants commence the DGS on one of five paths. The entry level path focuses on generic skills such as college writing, critical and ethical thinking, and managing a study program. Students on this path take only generic units: Effective Tertiary Writing, Christian Studies I, Principles of Tertiary Learning, and Academic English. The most advanced path enables entrants to take the first four units of the degree they wish to take, while enrolled in the DGS. They sit in class alongside normal entry students, receiving no special consideration. Free tutoring is available to all students, including DGS students; however, DGS students in degree classes are treated the same as degree students. An attempt is made to notify lecturers if they have DGS students in their classes, but in some cases lecturers may not be aware of their presence. Regardless of the path they take, if they pass their four units, DGS students qualify to articulate to an Avondale bachelor degree in their second semester. Thus, the course is used as a pathway. Around three quarters of DGS students qualify to articulate to degree courses. In most cases they achieve this after one or two semesters in the DGS.

“This case study responds to the debate over 'toxic teachers', tertiary entry ranking and access to university”

Figure 1: Outcomes by number for 4–5 year Alternative Pathway intakes



Phase 1: Pre-accreditation, 1991–1994

The initial intake of pathway students occurred in first semester 1991, with 15 students completing the semester. A similar number enrolled in 1992. These two promising years were followed by two declining years in which the intake dropped by half. In this initial 4-year phase, 47 students (25 male, 22 female) spent at least a semester in the course. Thirty-eight of these qualified to transfer to a degree course. Most (36) of these made the transfer and 23 went on to graduate with an Avondale degree, giving a completion rate of 64 per cent, being about half of the initial intake. The gender balance favoured males slightly (53:47). Most of the entrants were recent school leavers, with just 11 (23%) mature age entrants in this 4-year period.

Phase 2: Accredited diploma

1995–1999: Accreditation for a 2-year Associate Diploma of General Studies was achieved in late 1994. An immediate effect of accreditation was an increase in student numbers. From the 8 in 1994, enrolment rose to 23 in 1995 and 43 in 1999. The intake for the 5 years was 181, including 87 males and 94 females, with 45 (25%) of the total being mature age students. Of the 181, 132 qualified to transfer to a degree, 111 actually started a degree, and 67 went on to graduate. The completion rate (60%) was lower compared with the previous 4 years as was the proportion of graduates from the initial intake (37%).

2000–2004: From 2000, the course had a shortened name, Diploma of General Studies. Numbers dipped about 10% in the period, to 162. There were 77 males and 85 females, with 38 (23%) being mature age students. However, student completions were up significantly. Of the 162, 127 qualified, 115 started a degree and 80 continued on to graduation, for a completion rate of 70 per cent for the degree entrants. This was close to 50 per cent of the initial intake.

2005–2009: This was a period of dramatic growth, with the intake exceeding the combined intake of the previous 14 years. A couple of factors drove the growth: the arrival in 2004 of a new Vice President (Academic) and the installation of a new Registrar in 2005. The new administration instituted new processes that opened up the DGS to more students. It empowered applicants to demonstrate why they should be allowed to start. The effect on numbers was immediate. The 2004 intake had been 35; the 2005 intake more than doubled, to 77. And in 2006 it exceeded 100 for the first time. In the 5 years (2005–2009), 448 students completed at least one semester of the course, 324 qualified and 296 of these commenced a degree. By 2011, 130 of these had completed their degree. In 2012, a further 81 are still enrolled; 28 of these expect to graduate this year. It is too early to report a completion rate for the period; however, it appears likely to be around 50 per cent. Given the more open entry policy and the larger numbers, it is not surprising that this is down on the completion rates for the first 14 years of the course.

One interesting development in this period was a shift in the gender balance, which for years had favoured females by a small margin. The 2007 class of 90 included 58 females and 32 males. Then in 2009 there were 59 females and 38 males. The balance favoured females by 56:44. Several cohorts have seen around twice as many females as males enrolled.

Loss of accreditation

At the end of 2009 the DGS lost its accreditation. The panel set up by the NSW Department of Education and Training (DET) to review Avondale's accreditation application had recommended that accreditation be granted for a further 5 years without conditions, but the department rejected this advice and chose not to renew the course's accreditation. As a concession, the 2005–2009 accreditation was extended by one semester to allow Avondale to proceed with the 2010 class (of 76) that had already been accepted. In the meantime, Avondale prepared an appeal against the loss of accreditation. The

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appeal was handled by a special panel, which, in the second half of the year, decided in Avondale's favour and accreditation was restored. The only visible effect of the loss of accreditation was that there was no second semester intake of new students, as the restoration of accreditation came after the commencement of Avondale's second semester.

2010–2012: After the interruption of 2010, caused by the temporary loss of accreditation, student uptake of the program rebounded strongly in 2011, with a near record intake of 102 completing at least one semester of the course. The course continues to attract students. Most (76%) are recent school leavers who finish Year 12 without achieving university entrance. If they do have a Year 12 rank (ATAR, OP in Qld), it is below the level required for normal entry to Australian universities and tertiary providers.

Tertiary ranking

Current debate about the importance of tertiary ranking has been triggered by a discussion paper produced at the request of the NSW Education Minister, Adrian Piccoli. The paper makes a linkage between the quality of teacher graduates and the Year 12 ranks of students applying to start education degrees, noting that applicants need to be in the top 30 per cent in literacy and numeracy to meet new national standards (Bruniges, Lee, & Alegounarias, 2012). But the paper concedes that some 20 per cent of education students (2012) have an ATAR below 60. Armitage and Browne (2012) cite the executive director of the Group of Eight research-focused universities, Michael Gallagher, as claiming that Australia was “at risk of producing a cohort of toxic teachers” as students who did not do well in Year 12 go on to become teachers. The Australian Catholic University vice chancellor Greg Craven countered the claims of Piccoli and Gallagher, pointing out that low SES students are disadvantaged by ATAR scores. He said, “What really matters is the quality of a student once they have completed their university degree, not when they enter it.” This discussion and case study examines this proposition.

This debate is significant for Avondale in that a steady stream of DGS students with Year 12 ranks below 60 articulate into education degrees. The question to be answered is what this could be doing to Avondale's academic standards and perhaps more importantly whether there is evidence that professional careers are compromised? These questions can be addressed by looking at what is known about tertiary ranking in Australia and also looking at how DGS students perform at Avondale.

In most Australian states and territories, the tertiary rank is a percentile ranking of a student's senior high school performance. Queensland does not use percentile ranking (Queensland Tertiary Admissions Centre, 2012); instead, it uses the OP (Overall Position), expressed as a number between 1 (highest) and 25 (lowest). A tertiary rank of 70, which is equivalent to an OP of 14 (QTAC, 2012), shows that a student is ahead of 70 per cent of students and behind about the top 30 per cent. In NSW, the ATAR replaced the UAI (University Admission Index). Because it is thought to have strong predictive value, tertiary ranking is used by Australian universities as the main selection criterion for entry to tertiary courses (Edwards, 2008, p. 289).

What tertiary ranking represents

The power of the Year 12 ranking to predict future academic success has been challenged. While there is evidence of a correlation between tertiary ranking and academic success at university, the relationship remains unclear (Magennis & Mitchell, 1998; Murphy, Papanicolaou & McDowell, 2001; Dobson & Skuja, 2005; Levy & Murray, 2005; James, Bexley & Shearer, 2009) and does not provide an absolute indication of the likely success of individual students. A report prepared by the Centre for the Study of Higher Education (2010) at the University of Melbourne posits that “Some students may not demonstrate their true potential in their ATAR due to prior educational disadvantage or other factors” (p. 15). This echoed the earlier claims of Duke (2000), who sought to move beyond “the tyranny” of tertiary entrance ranking, which has as much to do with exclusion as with opportunity. Data from Victorian universities shows that many students are disadvantaged by Year 12 rank, especially those from non-selective government high schools. Government school students with a rank below 80 perform as well at university as those from private and selective schools with ranks five to ten points higher (Edwards, 2008, p. 295). There is a considerable body of literature devoted to the problems of disadvantage and the under representation of disadvantaged groups in higher education (Clarke, Zimmer & Main, 1999; James, 2000; McKenzie & Schweitzer, 2001; West & Gibbs, 2004; Ferrier, 2006; Wheelahan, 2007; Grebennikov & Skaines, 2009; Phillimore & Koshy, 2010). It seems the playing field is not level.

Predictive value of tertiary ranking

According to Baker (2007), the Year 12 rank serves as a good indicator of success in higher education. He reports that for ranks above 80, the

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relationship with first-year grades is “essentially linear.” Subsequently, in a study of the performance of first-year psychology students, Roodenrys (2008) found that the Year 12 rank was “the best predictor of performance” (p. 143). Previously, Urban et al. (1999) found a clear correlation between rank and university completion rates: the higher the rank, the greater the likelihood of completion. They divided university students with a tertiary rank (less than half of all university students at the time) into 10 groups (or deciles), the top group representing the top 10 per cent and the bottom group representing the bottom 10 per cent. They found that for every decile, the Year 12 rank was a significant predictor of success or completion. The completion rate for the top decile was over 78 per cent, compared with 55 per cent for the bottom decile (ch. 3, p. 8).

Dobson and Skuja (2005) examined the literature on the Year 12 rank as a predictor of success at university, citing a 1991 study by Dobson and Sharma (1991) that found “high scores in Year 12 were a prima facie predictor of university performance” (p. 54). They cite also Evans and Farley (1998), who reported that students’ ranks “appeared significant in explaining the variation in their university marks in all cases when it was the sole explanatory variable” (p. 55). McKenzie and Schweitzer (2001) found that previous academic performance was “the most significant predictor of university performance” (p. 21). Additionally, Murphy, Papanicolaou and McDowell (2001) found a strong correlation for scores above 80. Their findings were based on a longitudinal study of the performance of 6,442 students in all faculties at RMIT, 1995–1997. These findings suggest that there is little doubt tertiary ranks have predictive value.

Limitations of tertiary ranking

However, while there is research to show that Year 12 ranking has predictive value, other research shows that the predictive value is limited. As the title of a paper by Levy and Murray (2005) suggests, “Tertiary entrance scores need not determine academic success” (p. 129). McKenzie and Schweitzer (2001) claim that university entry scores “explain less than half of the variance in GPA” (p. 29) at university. Magennis and Mitchell (1998) found that Year 12 rank was a poor predictor of performance in first-year students: “Low TER [Yr 12 rank] was not associated with low GPA” (abstract). Murphy, Papanicolaou, & McDowell. (2001) reached three main conclusions about the usefulness of tertiary ranking: for students with tertiary ranks above 80 there was a correlation

between rank and university performance; for those with scores between 40 and 80 there was no correlation; a variable correlation existed for those below 40. Further, the predictive power of the tertiary rank varied between courses: it was strongest for Engineering, Physical Sciences, Nursing and Humanities, but was weaker for Education and Health. A gender effect was also noted, where the performance of males and females was similar for those with rankings above 80, but below 80 females outperformed males. Dancer and Kamvounias (n.d.) also found evidence of a gender effect.

Coombes (n.d.) argued that while the Year 12 rank is a “probabilistic” indicator of likely success at university, it is not a guarantee. Many students with high ranks fail to complete their courses, whereas many with low ranks do well and graduate. Hence, caution is needed when using tertiary rankings to predict likely academic outcomes. Urban, Jones, Smith, Evans, Maclachlan, & Karmel (1999) qualified their finding about the correlation between Year 12 rank and university success by noting that while the rank has predictive value between high and low scores, it has less predictive value within high or low scores. Completers and non-completers are found at all levels. Thus, the predictive value of ranks is relative, not absolute. It is findings like this that prompted James, Bexley and Shearer (2009) to conclude: “ENTER [Yr 12 rank] is attributed a precision that is not deserved” (p. 1). They note that ranking is highly correlated with socio-economic status, that it is not wholly successful in predicting university performance, and that it does not measure aptitude or motivation for particular fields of study (p. 2).

Temmerman (2008) reported that the Commonwealth House of Representatives Standing Committee on Education and Vocational Training, in its 2007 Top of the Class Report, questioned the adequacy of academic performance (as indicated by tertiary ranking) as the only selection criterion for entry to teacher education courses. It argued for a broader approach that would recognise other qualities, including “a committed enthusiasm for teaching, a mindset to encourage children, a capacity for reflective and critical thinking, and broad knowledge” (p. 11). After analysing a cohort of education students studying at USQ, Temmerman (2008) found that there is a poor relationship between OP [Qld Yr 12 score] and GPA. Some with an OP of 16 outperform others with an OP of 2 (remembering that in Qld a low score is good). Temmerman (2008) insists, “This highlights the importance of personal variables such as motivation

“*Selection to teacher education should recognise other qualities including ‘a committed enthusiasm for teaching, a mindset to encourage children, a capacity for reflective and critical thinking, and broad knowledge’*”

Table 1: Comparison of Year 12 ranks (UAI) and college grades (WAM) for 251 DGS students, 2005–2011

Year 12 rank	Number of students	Average rank	Average college grade (WAM)	Rank/WAM correlation
50-60	108	54	60	0.116
40-49	65	44	55	0.067
30-39	43	35	55	0.0076
<30	35	<30	46	

Table 2: DGS students with Year 12 rank completing an Avondale degree, 2005–2011

Year 12 rank	Number of students	Average rank	Average college grade (WAM)	Completion percentage (to 2011)	Projected completion percentage
50-60	21	54	68	19.4	56
40-49	18	44	66	27.7	50
30-39	11	35	66	25.6	50
<30	5	<30	66	14.3	34

and commitment to teaching, alongside academic competence” (p. 12). Some universities are now gathering data other than tertiary ranking to help select students for courses like medicine. For example, at the University of Newcastle (2011) applicants are interviewed to assess their aptitude and personal characteristics, including their ability to handle ambiguity.

Year 12 ranking and Avondale’s DGS students

An analysis of Year 12 ranking and the academic performance of DGS students after they articulate into their degree courses bears out many of the findings discussed in this paper. Of the 626 DGS students in the course in the years 2005–2011, 251 (40%) reported a Year 12 rank, mostly a UAI (OPs have been converted to UAIs in this analysis). These ranks ranged from 30 or less to 60. The results are shown in Table 1, which summarises the performance based on Year 12 ranks. The four rows show the performance for students with four levels of ranking: 30 or less, 30–39, 40–49 and 50–60. From the table it can be seen that there is a positive relationship for Year 12 rank and average college grade (WAM, weighted average mark)

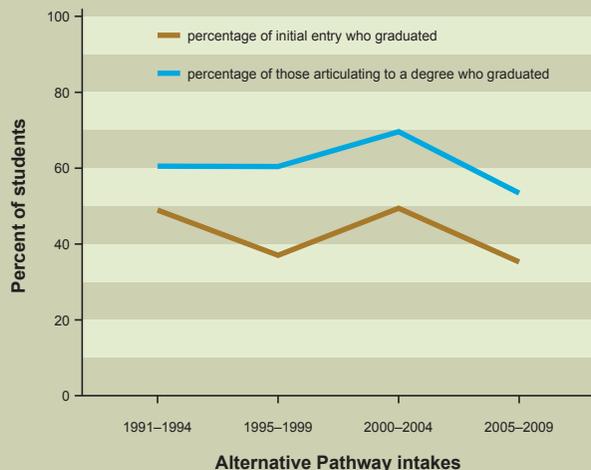
between the levels; however, there is no correlation for ranks and college grades within the levels.

The positive correlations shown in the right-hand column of the table range from very low (0.116) to negligible (0.0076). Under the current academic rules, normal entry to the DGS requires an ATAR of 45, which is equivalent to a UAI of 40. Hence, the top two categories here represent normal entrants and the bottom two represent special entrants. The correlations in Table 1 indicate no strong relationship between tertiary ranking and college grade achieved by DGS students.

The following discussion reviews the students from each of these categories who went on to complete an Avondale bachelor degree and graduate (see Table 2). For the 55 who have already graduated, there is little variation in average college grade across the four ranking levels. The group with the highest Year 12 ranks (50–60) had an average college grade of 68 per cent, giving them a premium of just 2 per cent over the three lower groups, which all averaged 66 per cent. Even students with a Year 12 rank of 30 or less completed their college degrees with an average grade of 66 per cent, the same percentage earned by those with ranks of

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Figure 2: Percent graduating: Initial intake and degree



40–49. This shows that for DGS students who complete degrees, Year 12 rank is not the determining factor. Their success must depend on other factors, such as motivation, interest and willingness to engage with their course of study [my current research is looking into this]. Nevertheless, Year 12 rank does correlate with completion rates as the projected completion rates show in Table 2. Final completion rates for these students are not yet available as 105 of the 251 students are still enrolled and have yet to complete their degrees. The second-last column shows the percentage that had completed degrees to 2011. The last column shows projected completion rates after the remaining 105 students have had time to complete. The rates range from 34 per cent for students with a Year 12 rank of 30 or less to 56 per cent for those with ranks of 50–60. Given the small numbers in the bottom group (<30), the typical completion rate for the entire cohort is likely to be around 50 per cent. This is below the completion rates recorded by students in the years 1991–2004; however, it is encouraging given the low Year 12 ranks achieved by most of these students.

As these findings show, Year 12 ranks do not tell the whole story about student potential. The Avondale experience with DGS students shows that most have experienced some kind of disadvantage that has negatively impacted their Year 12 performance and may continue to challenge them right through college. Some have learning difficulties, which in some cases were not detected

at school. A former DGS student who completed his PhD this year managed to get all the way through school without being diagnosed with ADD. On a recommendation, he consulted a psychologist, learned what his problem was, and developed strategies that made his learning more effective and turned him into a high academic achiever. The success of former DGS students completing Avondale degree courses shows that they are “up to the task”. The performance of 46 former DGS students completing their bachelor degrees in the 2009 graduating class supports this claim. The average UAI for the 254 students completing undergraduate degrees in the class of 2009 was 67, and their average college grade was 70 per cent. For the 46 former DGS students in this graduating class, their average UAI was 17 points lower (50) but their average college grade was just 5 per cent lower (65%). Ranked by average college grade, the best placed DGS student achieved position 37 in the graduating class. Three DGS students had average college grades that ranked them in the top one third of the graduating class, and one third of the DGS students placed in the top two thirds of the graduating class. It follows that two thirds of the DGS students placed in the bottom one third of the graduating class. However, they were not clustered at the bottom; rather, they were spread evenly across the range, with a final group taking six of the bottom 10 places. This is evidence that DGS students are not lowering standards; on the contrary, they are being raised to the level of normal entrants with significantly higher Year 12 ranking.

It can be seen that the DGS is widening access to higher education by extending opportunity to non-traditional entrants whose Year 12 ranking does not meet the entry requirements for most higher education courses in Australia. This is contributing to the Federal Government’s objective of increasing participation in higher education by young Australians (Bradley, Noonan, Nugent & Scales, 2008). The fact that no DGS entrant has opted to graduate with a Diploma of General Studies is not evidence that the course is failing. The success of the course must be judged by its effectiveness as a pathway that enables the majority of those that take it to qualify to commence an Avondale degree course. It could be noted that some DGS students choose to complete their degree at a university instead of at Avondale. After success in the DGS and perhaps after a year or two of degree study in an Avondale degree course, they find places in universities that are closer to their homes or that offer courses not available at Avondale and finish their degrees there.

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This case study informs tertiary education providers and their administrators as well as other stakeholders in education, including government, parents, teachers and potential students. It is of particular interest to high school teachers who have observed the unfulfilled potential of students who, due to some disadvantage, have not been as successful at Year 12 in the tertiary ranking as they need to be. This information about opportunities can be used to maintain hope for these students, providing encouragement to consider entry through alternative pathways to fulfil their tertiary education ambitions and career aspirations. It supports those university educators asserting that the current linking of 'toxic' teachers or teaching to entry tertiary ranking scores is too simplistic and misrepresents the researched position. **TEACH**

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