AARE 2021—Radford Lecture (R)e-imagining Indigenous education research

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Introduction

If there is a research field that could benefit from some re-imagining, then it is Indigenous education.

We only have to look at Indigenous schooling and higher education statistics over time to know that progress is slow, and in places stationary or going backwards on some measures. While the foundations for Indigenous student success in higher education should be laid during the schooling years, continuing rates of failure in that sector mean the large majority of Indigenous students still arrive at university underprepared for academic learning demands and therefore require support to succeed.

In both sectors Indigenous educational research needs a greater focus on evaluating over the long-term, the effectiveness of strategies for improving Indigenous students' learning outcomes, as well as a greater willingness to interrogate some of the assumptions on which our strategies and programmes are based.

This paper was first presented as the 2021 Radford Lecture and focuses on the way student support is provided to Indigenous students during their pathway and undergraduate years. It describes a journey I have been on over the last decade and a half with Indigenous student support staff, research colleagues, and other significant players in two universities where I have initiated a reform process.

Re-imagining change

The reform process has involved challenging the established thinking and practices of Indigenous support staff and others within the universities I have worked in. Successful implementation of changes to practice has in turn involved presenting

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persuasive arguments that are built on the basis of sound data and relevant research. It has also involved assisting staff to expand their knowledge, skills and perspectives, to enable them to appreciate the value of reflecting on their practice, systematically review and evaluate their support strategies, and have ownership of any changes.

Most importantly, it involves patience and time as well as recognising that Indigenous support staff have the capacity to extend their knowledge and skills and develop as the professionals they are or should be, if given some professional development and support through the change process. The professional development of Indigenous staff working in the student support area has been neglected over the decades.

It is not my intent in this paper to revisit the research on Indigenous higher education student support in detail, except to say it is still a relatively small literature, with empirical research constituting even a smaller portion of the whole. A sizeable portion of the Indigenous higher education literature over the decades has been in the form of advocacy and opinion pieces by Indigenous academics and mostly without any serious analysis. This literature, along with reviews, surveys, and studies of Indigenous student experience has enabled Indigenous academics to exert political, moral, and educational influence on Indigenous education policy and discourse.

The work to accommodate Indigenous students' different circumstances and needs in higher education has had the goal of improving Indigenous students' access, participation, and outcomes. Developments over the decades have included the establishment of Indigenous support centres in universities, identified funding arrangements with the Commonwealth, special entry programs, tertiary preparation activities and programs, academic support and supplementary tutoring, individual personal, social, and cultural support, cultural and social activities, peer-mentoring programs, the embedding of Indigenous knowledge and content into curricula for Indigenous and non-Indigenous students entering the professions, Indigenous scholarship and student financial assistance programs, and elders in residence programs.
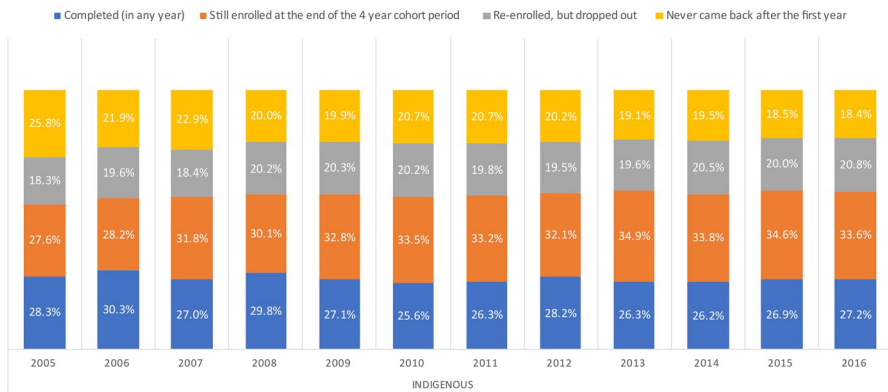
For staff, and the university as a whole, other developments include cultural awareness and cultural competence programs, the development of whole-of-university Indigenous strategies in universities and by Universities Australia, reconciliation strategies and plans, the appointment of Indigenous people and academics in senior or executive positions, and the recruitment of Indigenous academic and professional staff within faculties and service areas of universities.

One of the great successes of the effort to improve Indigenous access and participation in higher education is the growth in Indigenous student numbers over time. There are now over 20,000 Indigenous students in the higher education sector. Nationally, the number of Indigenous graduates has been steadily growing at about 1000 students each year.

The other encouraging news in the national statistics is that between 2005 and 2016, the percentage of Indigenous students who had dropped out by the end of first year and never returned had steadily decreased from 25.8 to 18.4%, though there are significant variations between different universities.

But if we consider access, progress, success and completion outcomes, the national picture is not as encouraging. For example, nationally between 2005 and

COHORT ANALYSIS OF INDIGENOUS STUDENTS IN BACHELOR COURSES OVER A 4 -YEAR PERIOD

■ Completed (in any year) ■ Still enrolled at the end of the 4 year cohort period ■ Re-enrolled, but dropped out ■ Never came back after the first year

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Never came back after the first year	25.8%	21.9%	22.9%	20.0%	19.9%	20.7%	20.7%	20.2%	19.1%	19.5%	18.5%	18.4%
Re-enrolled, but dropped out	18.3%	19.6%	18.4%	20.2%	20.3%	20.2%	19.8%	19.5%	19.6%	20.5%	20.0%	20.8%
Still enrolled at the end of the 4 year cohort period	27.6%	28.2%	31.8%	30.1%	32.8%	33.5%	33.2%	32.1%	34.9%	33.8%	34.6%	33.6%
Completed (in any year)	28.3%	30.3%	27.0%	29.8%	27.1%	25.6%	26.3%	28.2%	26.3%	26.2%	26.9%	27.2%

INDIGENOUS

Source Completion Rates of Students—A Cohort Analysis, 2005–2020.xlsx—Accessed report 2/11/2021 at http://www.dese.gov.au

2016, key indicators of Indigenous student progress have stayed more or less the same, with some small movements up and down over the years. Completion rates over a 4-year period hovered around 30%; and of the students who dropped out and then re-enrolled 18–20% dropped out again.

This trend in the sector suggests that after 4 years of study 70% of Indigenous students do not complete their courses.

There are considerable variations between outcomes for Indigenous students in higher education studies, with the 2012 Review reporting that universities with lower numbers of students produced better outcomes than universities with large numbers of Indigenous students, likely influenced by the level of under-preparedness of different cohorts of students and different student selection standards.

However, the statistics cannot be discounted, especially when we think of the accumulated debts of individuals who repeat or change courses in their efforts to complete, and so take many years to complete what end up being very expensive degrees. In my view it is immoral to let students in without putting in place sufficient support for them to succeed.

Much of the empirical research that has been done in Indigenous higher education has been useful for building a foundation of knowledge to understand the experiences of Indigenous higher education students, as well as the various enablers and barriers to their success. This part of the research literature goes back three decades, with later studies generally, but not always in some instances, confirming earlier ones. Following the 2012 Review, there was a spurt of projects focussing on improving access and participation. As well, descriptions of innovations to support practice have been and continue to be useful to some but are scattered across time and specific disciplines or contexts and with limited evaluation of the early promises of their benefits for students' academic outcomes.

In general terms, approaches to Indigenous higher education and schooling research and practical innovations have been framed by a very distinct cultural agenda and the social justice, inclusion, and equity agendas. These frames secure a focus on the historical legacies of colonial policies—cultural erosion, disadvantage in education, the impact on Indigenous knowledge, cultures, languages, socio-economic status, and the ignorance of other Australians about the treatment of Indigenous people. These frames draw our minds to the cultural and historical differences between Indigenous and non-Indigenous students and the search for appropriate solutions to remedy Indigenous students' challenges in education to improve their access, participation, and completion rates to those of other students.

These frames also guide the approaches to research in Indigenous education and shape the ways we view and understand Indigenous students and what they need to become engaged and successful learners in the Australian education system. But no matter how justified or logical, or relevant to particular aims, the dominance of these frames for researchers and practitioners can also limit the sorts of investigations undertaken by researchers, their approaches, and the conclusions that are able to be reached.

In the face of continuing lower outcomes of Indigenous students, when re-imagining Indigenous education research, we need to remain open to challenging the accumulated understandings of Indigenous students and how we view and position them as learners and subjects of Western education, in the research that we do. After observing the way that student support services operated in a number of universities that I either worked in or conducted reviews for, I realised how little attention was given to the role that student support played in the mix of the whole raft of reforms that had been going on. Indigenous student support services was rightly given credit for students' successes but rarely scrutinised for its weaknesses or of persistent student failures.

My view is that it has been too easy to convince ourselves that the changes in higher education institutions which have been introduced to reduce institutional barriers, including more inclusive curriculum changes to academic programs, will logically lead to improved Indigenous academic outcomes and to closing the gap between Indigenous and non-Indigenous students' academic outcomes.

The Indigenous student success statistics are a constant reminder that this has been somewhat over-optimistic. What has tended to be overlooked in the mix of the many changes and improvements is not so much the value of the role that Indigenous support services play in lifting students' chances of success in study, because we know these services have benefits for the students who use them.

What has received less scrutiny, on a national scale at least, is the effectiveness of these services to support the needs of all the Indigenous students who need assistance to succeed and not just those who ask for help. In relation to academic learning, in particular, we have relied on curriculum changes and supplementary tutors and largely relegated Indigenous support staff to critical but non-academic areas of support.

The initial question I asked myself, was if student support does make a difference for some students, then what could be achieved if it made a difference for all students and not just those who feel secure and confident enough to ask for help. Another question concerned the extent of academic learning support provisions and how to provide support interventions before students failed or went into crisis. From my observations, both academic and pastoral support activities were generally well structured by the academic calendar but from day-to-day they were largely focused on the management of student crises. That left staff little time to develop systematic approaches that could provide pro-active and preventative assistance to students before they reached crisis points. And to do that, the progress and needs of all students need to be monitored so early interventions can occur and then be tracked to ensure that these interventions have positive impacts and students continue to make progress.

The language of monitoring and tracking student progress has entered the Indigenous support discourse in the last decade or so but how to scale this up to track and monitor hundreds of students across different disciplines in any one university was not being discussed in a major way. Having had little success at reform in one university, as part of a small research team, we commenced an investigation into the academic persistence of Indigenous student across four universities.[1] We were interested in what students did to persist and overcome their challenges in learning.

Out of interest in differences between Indigenous and non-Indigenous students, we initially surveyed both using a broad range of self-reporting scales. These included: the motivation and engagement scale (MES) which assesses motivation and engagement, using three adapted cognition subscales for measuring such things as self-efficacy, valuing of education, mastery and orientation, and three adapted behaviour subscales to gain some insight into students' experiences in planning, study management and persistence, a set of maladaptive cognition subscales for anxiety, failure avoidance, uncertain control, and two maladaptive behaviour subscales to do with self-handicapping and engagement. We also used the Goals inventory tools that looked at learning orientation in relation to performance, with 25 statements about attitudes and behaviours. We also recruited a work styles and habits scale to gain insights into students' thoughts about future work.

The Learning and Study Strategies Inventory (LASSI) scale was also recruited to assess students' awareness about and use of learning and study strategies related to skill, will and self-regulation. The skill component was measured by three subscales that looked at information processing, selecting main ideas. The will component went to things like anxiety, attitude, and motivation. And the self-regulation component went to concentration, self-testing, study aids and time management. We also recruited the school wellbeing profile for measures on the conditions of the environment, social relationships, self-fulfilment, and health status. Interestingly, we found no significant differences between Indigenous and non- Indigenous students in these measures.

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[1] ARC 120100021, Indigenous Academic Persistence Study, Nakata, M., Day, A., Martin, G & Nakata, V.

Following this survey, we interviewed Indigenous and non-Indigenous students in three universities (a Go8, two non-Go8 metropolitan university and a regional university), some twice a year over 3 years, some over 2 years, and some older students, retrospectively. Students were asked to think of a challenge or challenges they had experienced or were experiencing and, importantly for our purposes, to talk about what they did to overcome those challenges. Although the focus was on academic learning challenges, students were encouraged to talk about any factors that impacted on their academic learning, thus confirming the wide range of intersecting issues and challenges that they confront when studying, which include academic, personal, institutional, and external factors.

We also explored Indigenous knowledge and perspectives issues and transformation of students' sense of their themselves and their identities, over time. Much of what we learnt from these interviews extended the understandings identified in the Indigenous student experience literature and the many factors that impacted on student outcomes. In broad terms in relation to academic learning, however, the study revealed the enormous efforts students made to persist and the variety of strategies individual students used to work out what they had to do and how to do it to improve their academic results.

In the push for institutional changes to improve Indigenous students' chances, there has arguably been less attention placed on the role of Indigenous students' own efforts to overcome challenges, and how this contributes to their success. Students were working hard to overcome gaps in the knowledge assumed in their courses, as well as the skills and knowledge associated with working out 'how to learn' efficiently and successfully. The length of time it took individual students to work out what they needed to do and how to do it varied greatly and whether they sought timely assistance, or not, seemed to be implicated in their attempts to improve incrementally over time.

There were also individual differences in students' levels of self-awareness of themselves as learners and in their feelings of control and purposefulness when faced with a learning challenge or a challenge that affected their learning. That is, some students were aware of their strengths and weaknesses and active in improving the knowledge and skills they needed to overcome perceived weaknesses. However, some students accepted their weaknesses in learning as part of who they were, for example, 'I'm just a stress head' or 'I just can't do exams'. These students were more likely to have ineffective or no strategies for overcoming what they accepted as their weaknesses and were less agentive in seeking help for them. Some students we interviewed commented in subsequent interviews how talking about their learning in interviews had led them to reflect more on how they were going about their learning and what they could do to improve their approaches, including asking for help.

What came out of this study was the need to rethink how we support Indigenous students as individuals who are all different in terms of their readiness for higher education study, in terms of the specific gaps in academic knowledge and skills assumed by the many different courses and disciplines in which they study, in terms of other knowledge and skills they need to learn effectively and efficiently, in terms of their personal circumstances, in terms of their personal attributes such as levels of persistence, determination, and ability to remain motivated and engaged, in terms of

their health and wellbeing status, their external obligations and demands, their mode of study, and their finance and study conditions.

The individual differences between students in their approaches to their academic learning, and the individual differences in the sort of issues that arose in their lives and threatened to derail their efforts, led us to think about, firstly, the capabilities all students need to have control over their learning and be effective and eventually independent learners and, secondly, the forms of support that could address the wide variety of often intersecting academic, personal, institutional, and external stressors and emotions, which interfered with their ability to persist, engage academically, and progress through their courses in good time.

To gain a better understanding of the capabilities that Indigenous students need to develop to be effective and efficient learners, we turned to the broader general higher education student success literature. The goal was to establish some sort of conceptual foundation for academic learning and pastoral support, and the implications of this and our research of student challenges and persistence behaviours, for the way Indigenous support was organised and delivered to students.

We focused first on understandings of higher education academic readiness and under-preparedness, distilling out basic information for staff. As well we looked at independent learning, so staff could build a better understanding about the demands and expectations related to academic learning, as well as the characteristics of independent learners. We then assembled basic information on student agency, academic self-efficacy, and self-regulation skills to highlight the learning capabilities students needed to become independent, purposeful, and efficient learners. From there, we proceeded to gather basic information on a range of concepts associated with student effort and success, such as student persistence, motivation, engagement, and study behaviours.

Other concepts or issues relevant to Indigenous students included transition, belonging, resilience, Indigenous knowledge and perspective issues in learning, health and socio-emotional wellbeing, finance and accommodation. Statements from Indigenous student interviews were included in simple explanations of these concepts to connect with the existing knowledge and experience of Indigenous staff. The complex inter-relations between many of these concepts confirmed for us that Indigenous students' academic learning issues challenged the simple understandings of academic support as assistance with academic skills and pastoral support as assistance with personal, social, and cultural issues.

This led us to a greater appreciation that supporting Indigenous students' academic success would require a better understanding of the role that psychosocial and emotional issues played in Indigenous students' abilities to become self-regulated and independent learners. The task then became how to draw together conceptual knowledge, as well as student and staff knowledge and experience to build a more effective approach to student support.

Our research and collective experience confirmed that students needed in-time individual support to be delivered before they were in crisis or failing. Many students who needed assistance were not on staff radar because they did not come and ask for help. To support all students who needed assistance, staff needed sufficient information about all Indigenous students in the university and their courses, as well

as regular contact with students to gauge their needs and how they were progressing through the semester, rather than waiting till students were in distress or headed for a subject failure. This also implied better staff-student-tutor communications about students' progress and bottlenecks in learning. It became clearer that students needed to experience success at the academic task level to maintain motivation and engagement and incrementally improve their results, and that this had implications for the monitoring and tracking process.

What emerged as well was that to assist students to develop the full range of capabilities for independent learning, students would need assistance to build a repertoire of cognitive skills for doing academic tasks, metacognitive skills to manage their role and effort in the learning process, and affective skills related to the management of their emotional responses to a range of academic learning, personal, institutional, and external issues. Because many inter-related factors can affect student engagement or success in learning, this further implied that academic and pastoral support staff would need to work together as teams to help students to resolve issues and extend their academic and personal/life skills, so they moved towards more independent management of the impact of different stressors. This essentially meant efficient systems and processes to contact students individually and monitor and track their progress through the duration of a semester.

However, to implement changes to roles, organisation, strategies and systems and processes, staff required not just the knowledge, language, and skills to have more educationally informed conversations with students, in order to understand their specific challenges and needs. They also needed more useful strategies, systems, and processes to support new ways of doing things. Importantly, as part of an ongoing research and innovation process and in light of a weakness in Indigenous educational reporting of innovations in practice, support staff required the means to continually review and evaluate the effectiveness of their strategies so that they could continually adjust and improve them. That is, we needed to focus on local Indigenous student statistics and staff interventions and learn to analyse their implications for adjustments to support strategies.

Although it has taken 5 years of work at James Cook University and building on previous experiences of reform at my previous university, we have completely transformed our Indigenous student support services. It was not just a matter of re-thinking the organisation and roles of support staff but how to build their knowledge and understanding so they understood the purposes of changes to their approach.

Both big picture and micro issues had to be thought about: resourcing; professional development; how to track students efficiently; what to do about increased staff workload issues; the need for more appropriate staff workspace layouts and student study space layouts; what sort of information would need to be collected and recorded, both to maintain a student's history of challenges and support and for data analysis purposes; how to manage students privacy and confidentiality; developing approaches to interact with students regularly, as well as language staff might use to get students talking about their challenges; how to assist students to develop the help-seeking behaviours, learning strategies, and study behaviours they needed to become efficient self-regulated and eventually independent learners; how to know when student results reflected individuals' specific challenges or if they represented

a cohort or discipline issue related to particular subjects and how to design interventions for these; and, importantly, how to evaluate the effectiveness of staff strategies on a regular basis so continual adjustments and refinements to practice could occur.

Staff were involved in this process, bringing their own knowledge and experience of students to the fore, and providing insights into what they would need and be able to do, to support students more effectively. The model we developed is a capability development approach with emphasis on the movement of under-prepared students towards independence in their learning. It aims to monitor all students and support all those who need assistance.

At my current university we have over 800 Indigenous students and the implications of this model for staff workload looked daunting. There were already distinct academic and pastoral support roles, so these staff were re-organised into teams consisting of one academic and one pastoral support staff who were to work closely to support an allocated cohort. This enables staff to concentrate on and get to understand a limited number of disciplines and the challenges of the students in their cohorts. Each team was given approximately 100–130 students to keep track of. More efficient systems and processes for helping to manage the load therefore became critical.

To address this, an individual case-management system platform has been developed in conjunction with staff and a commercial software provider, WillowSoft,[2] to allow the efficient monitoring and tracking of students' progress. Our colleagues there who developed the platform for the Indigenous student success also continually improve it in response to staff feedback. Their dashboard gives staff one click-access to everything they need in relation to the student cohort they support. This includes access to student profile information, so they have a broad understanding of students' educational and personal circumstances, access to student results, tools for recording notes about individual student's needs and staff interventions and follow-ups, that result from their contact with students at 3-week intervals during the semester.

These engagements are all recorded in chronological order and construct a history of the students' issues and progress, meaning memory about students is preserved amidst staff changes or absences and from year to year. Pastoral and academic support staff can then see each other's notes and carve up their responsive interventions according to the nature of the challenge. Staff are also able to advance schedule any sort of tasks associated with their work, so reminders appear automatically and keep their work on track from day to day and over the year.

They also have access to a series of measures on 1–5 scales that help track students' movement from 'struggling and not seeking help' to 'quite independent and rarely needs help.' These measures cover a large number of the concepts known to be implicated in student success. Staff check these for changes after each contact session with students—sessions where they ask questions of students to discern their needs and assist them to resolve them. Tutors and students themselves also assess these measures, providing a triangulation that is able to pick up and investigate discrepancies. These are

but a few of the capabilities of this platform that works to make the task of supporting student more effective, efficient, and timelier.

A key advantage of this platform is that analytical reports can be produced. Staff are able to easily produce reports each semester about the progress of their cohort of students, down to pass/fail rates, withdrawal rates and students' academic standing, tutoring contracts and hours, the number of interventions staff made, etc., and compare results with the previous year and semester so they can speak to those issues. Further, they use their reports in semester-planning sessions to discuss how they will change their priorities or strategies in the future. The WillowSoft team also sits in on these sessions, taking in feedback from staff on how to improve the platform for their needs and to provide broader whole-of-cohort analysis of trends.

WillowSoft also provides analytical reports to staff on a number of measures for the whole cohort. For example, we are able to drill down to see the trends in withdrawals in each year level and throughout the year and compare from year to year to see how we are tracking and what the causes of any changes might be. We have been able to analyse the relations between the hours of tutoring that students have and their pass rates and GPAs, and advise students of the optimal number of hours they need to improve their chances of success and importantly what number of hours has negligible effect on grades. We can also correlate student GPA's with the concepts or factors associated with our research on capabilities for success and the series of 1–5 scales we use to measure students progress towards independence. We can analyse this for students above and below GPA 4.

Awareness of these differences helps staff to think about the areas they work on with students, for example, well-being issues, study conditions and behaviours, help seeking-behaviours or self-regulation skills etc. We can also drill out the services and strategies that target wellbeing, social support, or students finance or accommodation circumstances to see whether what we are doing is contributing to the performance of students or not.

We are also able to identify the most frequently failed subjects, and in which courses they occur. For example, 20% of the recorded fails between the years 2015–2019 were in 11 subjects. Armed with this knowledge, staff were able to take a closer look at those subjects to investigate what was giving our students grief. Their interventions then targeted the capabilities students needed to get on top of those grief subjects so they could pass.

Since our reformed approach commenced in 2017, a source of satisfaction and motivator for staff has been learning of the positive effects of the changes they have made to their practice. One example is Indigenous students' pass rates compared to non-Indigenous students. Between 2016 and 2020, for example, the gap between 1st year Indigenous and non-Indigenous students was reduced from 22 to 14%; for 2nd year students, the gap was reduced from 13 to 2%; for 3rd year students from 15 to 4%; and for 4th year students from 9 to 5%.
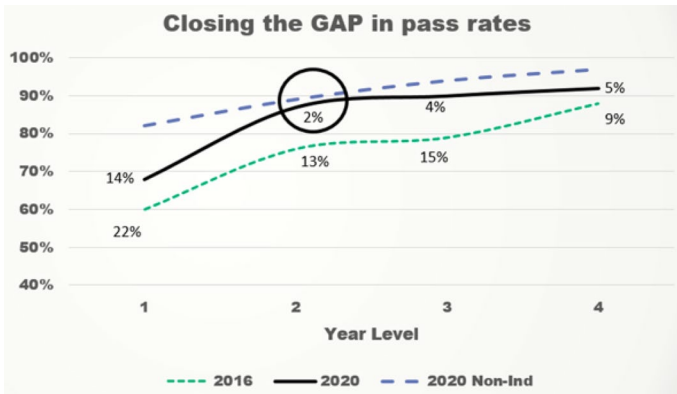
Associated with that success is the fact that the annual Indigenous graduation rates have doubled since 2016.
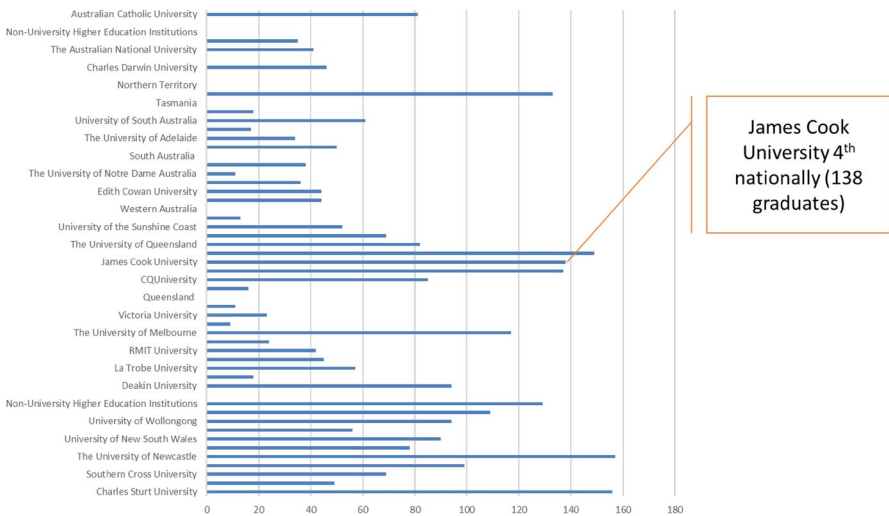
Due to the added capacities from the WillowSoft platform, we can now analyse a whole host of information to investigate where we need to lift our game. The benefit here also is that the empirical data that we are gathering and analysing can now be reflected on by staff and managers to see whether it is actually making a contribution to the improvement of Indigenous academic performance outcomes or not.

What we are progressively learning from all of this re-imagined space is the specific capabilities and levels of support individual Indigenous students need to journey through their courses successfully. We have researched and built educational foundations into our services and developed our services in such a way that we can

now check ourselves to see if our services are having a real effect on the grades of our students or not. And there is much more to be done, with one of the major areas being our access and pathway programs and another being better diagnostic assessments of prospective students to gauge their readiness for university and the level of support they are likely to need.

While access and pathway programs benefit our students, they do not move them along as far as they need to be, to have a good chance of succeeding. These programs need to be much more focussed on the specific needs of our students and the courses in which they want to study.

The ongoing professional development of staff is also a site for further work.

Some closing remarks

Across the country, we need more Indigenous education research that tracks, over time, the effects of any innovations to practice, on Indigenous students' academic outcomes. In education, we need to see Indigenous students as the individuals they are and the many differences between them.

Most importantly, we need our students to enjoy incremental successes at the task level as early as possible so they can feel they are competent learners and have confidence in their ability to improve their outcomes over time. Likewise, we need to believe in the capacity of Indigenous staff to develop their knowledge, skills, and perspectives, in the interest of providing more effective support.

Building strong Indigenous identities is not enough to see our kids through the challenges of learning in higher education.

We need to do all that we can to encourage the development of Indigenous students' learner and student identities, so they see the worth of their own efforts for their future education or employment possibilities and for their understandings of themselves as capable and professional Indigenous Australians, with an important contribution to make to the futures of their own communities and the wider society.

Note: All graphs in this paper have been produced by the author.

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