

The student experiences study: Using research to transform curriculum for Indigenous health sciences students

Whilst the number of Indigenous students in higher education in Australia has improved in recent years, Indigenous attainment and participation remains lower than that of other Australians (Trewin & Madden, 2005). Between 1989 and 2001, the number of Indigenous students entering higher education doubled (Department of Education, Science and Training, 2002). However, Indigenous students remain underrepresented (1.2%) when compared to the Indigenous population as a whole (which is 2.5% when adjusted for age distribution caused by lower life expectancy). In addition, Indigenous students' progression through and completion of their degree programs has been consistently lower than non-Indigenous students. Overall completion rates for Indigenous students are approximately 45% compared with 65% with non-Indigenous students (Department of Education, Science and Training, 2005). However, for those Indigenous students who complete degree programs employment rates are strong and nearly identical to those of non-Indigenous students; underscoring the profound importance of successful educational outcomes for the future of Indigenous Australians (Department of Education, Science and Training, 2002).

This chapter describes the findings of The Student Experiences Study, a sustained program of qualitative research conducted at Yooroang Garang, School of Indigenous Health Studies in the Faculty of Health Sciences at the University of Sydney, over a period of 10 years. The study focused on the experiences of Indigenous students in both block mode and mainstream health science programs. The research was undertaken to elucidate the factors that promote Indigenous students' academic success, in order to refine and develop curriculum and management strategies which promote their attainment and participation in tertiary education. The findings of this study have been translated into curriculum changes which strive to improve educational outcomes for Indigenous students.

Improving educational outcomes for Indigenous students in undergraduate health sciences programs in higher education stands to make a difference to Indigenous health at both an individual and community level. Research suggests that, at an individual level, higher levels of educational attainment are associated with better health outcomes (Ministerial Council on Education, Employment, Training and Youth Affairs, 2001). With the addition of one extra year of parental schooling, infant mortality drops between 7% and 10% (Ewald & Boughton, 2002, cited in Australian Institute of Health and Welfare, 2005). The health status of Indigenous Australians is worse than that of other Australians, as indicated by nearly every possible health measure. For example, compared to the total Australian population, the life expectancy at birth for Indigenous people is approximately 20 years lower and infant mortality rates are three times higher (Anderson, Crengle, Kamaka, Chen, Palafox & Jackson-Pulver, 2006). As Indigenous health professionals fulfill an essential role in the provision of health care to Indigenous Australians, improving academic success and completion rates for Indigenous health science students is critical (Commonwealth of Australia, 2002). It promises not only to

improve the educational status of Indigenous people, but also has the potential to improve service provision and health outcomes in Indigenous communities.

Setting

Yooroang Garang: School of Indigenous Health Studies, conducts undergraduate and postgraduate programs in Aboriginal Health and Community Development, as well as an Aboriginal Health Sciences Preparatory Program. The degree and preparatory programs are offered in block mode whereby students alternate between a total of six, week-long intensive sessions on campus per year, separated by off-campus periods when they study at home and work in their communities. Whilst on block, students are accommodated in shared apartments near the university. Block mode design meets the specific needs of Indigenous people, allowing students to maintain employment responsibilities and family and community obligations.

The majority of students in the block mode programs are mature-aged and have family, work and community responsibilities. While they are skilled members of their communities and workplaces, many of these students have not studied in a formal education system for many years or have not completed high school and thus require time and opportunity to develop the academic skills required for success in tertiary study. Most of the block mode students come from rural and remote areas of Australia, reflecting the profile of Indigenous students in tertiary education (Department of Education, Science and Training, 2005). Indigenous students studying in the semester-based programs are more likely to be recent school leavers who have completed high school.

Block mode delivery places different demands on both students and teachers. Teaching at Yooroang Garang includes not only activities directed at achieving educational outcomes within the classroom, but also managing the student experience outside the classroom, including such issues as travel, accommodation, being away from family and being in an unfamiliar environment with unfamiliar people. When they are in Sydney, the students view the school and its staff as family. Given that Indigenous people suffer high rates of ill-health, it is not unusual for students to be unwell during block or to have to return home for all too frequent funerals.

The school also administers the Cadigal program, a facilitated access program for Indigenous students which provides academic and cultural support for Indigenous students studying in semester-based health science programs, such as physiotherapy, occupational therapy, speech therapy. The Cadigal program allows a lower university entrance score for high school graduates, and considers other attributes like motivation, capacity to succeed, work and life experience for mature-age applicants. Compared to their non-Indigenous peers Cadigal students enter the Faculty with substantially lower entrance scores, less previous educational experience in the basic sciences which underpin the faculty programs as well as less experience with the academic skills required to succeed at tertiary study.

Research literature

There is a large body of international research related to student retention and success in higher education (see for example Tinto, 1993). However, the research into Indigenous Australian student experience is more limited. Common themes within existing literature on Indigenous student retention and success point to the importance of curricula which acknowledge and encourage students' cultures as Indigenous people and which provide a supportive environment within which students can develop the skills necessary for success in tertiary study. In addition, previous research addresses the reality that students' time for study is finite and must compete with financial, family and community challenges that Indigenous students commonly face.

In a survey of Indigenous students at the University of Western Sydney, Cobbin, Barlow and Dennis (1992) found that students cited such factors as the presence of a supportive atmosphere, student motivation, organisation and maturity as factors that enabled them to succeed. Interviews conducted by McIntyre, Ardler, Morley-Warner, Solomon & Spindler (1996) with Indigenous students in vocational colleges revealed that the most important factor identified by Indigenous students as contributing to academic success was the recognition of their aboriginality. These students expressed satisfaction when the programs were designed specifically for Indigenous Australians, the majority of students were Indigenous, the staff were sensitive to the needs of Indigenous students, and when Indigenous support was provided on campus. Similarly, research conducted by Walker (2000) shows a positive link between student retention and success in courses which students identify as culturally appropriate and relevant to their goals. This research also identified that flexibility of study modes and curriculum processes, academic and personal support from Indigenous centres, a welcoming environment and orientation were important for success.

The factors which challenged the success of Indigenous students in higher education were also similar across these research projects. Walker (2000) cites such challenges as personal and family issues, financial difficulties, difficulties with the course material, cultural insensitivity of staff and an unwelcoming atmosphere. According to Bourke, Burden and Moore (1996), isolation, financial difficulties, homesickness and a lack of academic preparation for university study contribute to the attrition of Indigenous Australian students.

Studies of Maori student experience and academic persistence among Native American college students suggest that the factors which influence the academic success of Indigenous students in these contexts are very similar to those for Australian Indigenous students. Persistence for Native American students was facilitated by such factors as family support, structured social support through multicultural offices and clubs, the warmth of faculty staff, and some previous exposure to college through such activities as summer schools (Jackson, Smith & Hill, 2003). Hawke and Tui Ah-Loo (2002) suggest that loneliness and separation from family, lack of tertiary literacy skills, a mismatch between motivation to enroll and the culture of the institution all challenge the success of Maori students.

Our research makes an important contribution to the growing body of research on Indigenous student success and retention by qualitatively examining student experiences in the particular setting of health sciences. Much of the research already conducted had been quantitative research aimed at establishing baseline data and statistics (Bourke, Burden & Moore, 1996, Cobbin, et al. 1992, Lewis, 1994). Our Student Experiences Study was designed as a qualitative study to reveal the reality and

complexity of the Indigenous health science students' experience of tertiary study. As noted,

...much more research is needed on participation, and...it must be qualitative research...capable of identifying what actually fosters continuing engagement in education by Indigenous people. (Department of Education, Science and Training, 1995)

Ethical research with Indigenous peoples

Our research has been guided by a social justice framework which recognises the importance of improving educational outcomes for Indigenous students and is consistent with the principles of Indigenist research articulated by Rigney (1997). Teachers can have profound effects on both the lives and careers of students and, therefore must attend carefully to curriculum. Given past inequalities in health and education, this is especially so for Indigenous students. Thus, our study seeks to inform the development of culturally responsive curriculum which places Indigenous students at the centre of their learning. Social justice principles suggest that individuals should be able to participate meaningfully in activities in which they are engaged (Aboriginal and Torres Strait Islander Social Justice Commissioner, 2005).

Consultation, essential to participation, was at the core of this research.

Aboriginal people ... are the greatest source of knowledge of their own needs, their learning process and the ways in which learning takes place and the most effective ways and environments in which... [they] learn. (Sherwood & McConville, 1994, p. 40)

This research demonstrates important principles of ethical research with Indigenous communities (Aboriginal Health and Medical Research Council of New South Wales, 1999; Rigney, 1997). Firstly, the project arose from a need within the Yooroang Garang community, as Indigenous and non-Indigenous academic staff had concerns about student retention. Secondly, we consulted with the relevant Indigenous communities, including students, staff, and researchers who had experience in tertiary education of health workers or in the research process. Thirdly, Indigenous people assumed essential roles in the research project; for example, a member of the research team is Aboriginal. Finally, an important ethical consideration in research with Indigenous populations is that the research benefits Indigenous people and their communities. The findings of this study have been translated into curriculum changes, which have the potential to improve educational outcomes for Indigenous students.

Methods

The Student Experiences Study, conducted from 1997-2003, explored the experiences of Indigenous health science students to identify the factors which challenged or enhanced academic success, with the broad aim of improving academic outcomes (Daniel DiGregorio, Farrington & Page, 2000; Farrington, Page & Daniel DiGregorio, 2001; Page, Daniel DiGregorio & Farrington, 1997). The research focused firstly on the experiences of the students studying in block mode programs and, secondly, on Indigenous students entering the university through the Cadigal access program and studying in semester-based programs.

The study focused on 12 block mode students and 10 Cadigal students. The participants represented the range of students who enrolled in our programs, including male and female, metropolitan and rural and recent high school graduates and mature aged. Data collection consisted of 20 intensive, semi-structured interviews, collected individually or in small groups, which were tape recorded and transcribed in their entirety with informed consent from participants.

Once the interviews were completed and transcribed, inductive analysis focused on identifying and coding discrete incidents in the interview data. During data analysis, unitising and coding occurred simultaneously and through constant comparison overarching themes began to emerge from the data (Glaser & Strauss, 1967). The themes were debated and cognitive maps developed for understanding the participants' experiences (Miles & Huberman, 1994). This process maximised investigator triangulation (Denzin, cited in Patton, 1990), ensuring the analysis of the data was thorough and rigorously debated. Measures were taken to ensure the trustworthiness, or soundness, of the study. This was done by providing an audit trail of all notes and materials from data collection and analysis, and by including thick description of the findings to facilitate the likelihood that the findings are applicable in another context (Lincoln & Guba, 1985).

Findings

For the purposes of this chapter, we have selected findings which are similar across both block mode and Cadigal students and which led to curriculum development or changes in program management. Whilst our findings reflect the experiences of students in the health sciences, they have relevance for Indigenous students in any program.

Factors that facilitate success and retention

Motivations to enrol. Although our participants also noted individual motivations such as desire for career change, intellectual curiosity and satisfaction in having a degree, their primary reasons converged around the theme of community need. Participants in our study had an acute awareness of a gap in community health services gained from either personal or family experiences of poor health. The awareness of these gaps in community health services led to a real desire to contribute to the improvements of Indigenous community health and a belief that Indigenous people should be more involved in the decisions that affect their communities. Our students reflected,

I realised I wanted to do something, one for myself and especially for my people...I think we need a lot more workers out there for our people. And I think we're the only ones that can help them. (Student 4, 1997)

Matters of culture. Participants in the block mode program identified that being in a program and a school for Indigenous people influenced their learning experiences in several ways. Shared understandings of Indigenous perspectives meant that students did not have to continually explain themselves. Students also noted having greater confidence to speak in classes when they were surrounded by their 'own people', as compared to their experiences in mainstream programs. As one student noted,

Because it's Aboriginal people I'm not scared to talk up. But if it was mixed I would be. (Student 3, 1997)

In general, students appreciated the opportunity to study in a program designed for Indigenous students, addressing Indigenous issues. As one student explained,

It's the loveliest learning experience I think I've had ...It's nice being able to support each other ...Being black is more colourful ...It's just a feeling you get. (Student 5, 1997)

Cadigal participants, who are a minority in their mainstream classes, also noted the value of being with other Indigenous students because of their shared common experiences. The students forge important and valuable friendships with one another and these friendships have direct benefits to academic success. The students are able to provide moral support for one another, swap lecture notes and form study groups. One participant remembered at a particularly low point in his life that,

[A Cadigal student] came around and had a chat to me...and that group of friends that you have plays a big role [in your success] 'cos everyone is there to support you and help you get that goal. (Student 13, 1999)

Participants also saw particular value in being able to observe and learn from more senior Cadigal students who acted as important role models. Seeing other successful Cadigal students in the years ahead was motivating because the participants identified strongly with these senior students and felt that their success enabled them to 'realise that they could do it just the same as everyone else' (Student 16, 1999). The experience of studying with other Indigenous people at Yooroang Garang led to an improvement in self esteem and confidence in their Indigenous identity. One participant explained that being with other Indigenous people provided an opportunity for them to learn more about their culture from others,

I've been given a chance to grow, my cultural awareness has grown and my identity has grown and I'm a lot more at ease with my own Indigenous background now. (Student 17, 1999)

A place like home. Yooroang Garang provides an Indigenous student common room, several tutorial rooms for private study or support tutorials, a computer room, a photocopier for student use and resources such as anatomical models, charts, books and references. The value of having somewhere friendly and supportive like Yooroang Garang featured strongly in participants' comments about factors which facilitated success. Participants in both programs reported that in the supportive environment of the school, they found academic staff approachable and that it 'feels like home.' In addition the students enjoyed being in an environment in which they can identify as Aboriginal, and where there is a real acceptance of them as Indigenous people. A participant discussed how he appreciated,

...being able to come up here and have somewhere to study with minimal disruption and with an understanding from an Indigenous perspective of why I have difficulties in certain areas. (Student 17, 1999)

Orientation programs. Participants commented on the benefit of orientation programs tailored to the needs of Indigenous students offered by Yooroang Garang. Participants noted that the orientation programs were particularly important as they enabled them to meet other students, gain experience in the study of difficult and unfamiliar subjects like anatomy, develop academic learning skills, and familiarise themselves with the

geography and procedures of their new academic environment. The opportunity to develop contextualised learning skills was particularly helpful as illustrated by the following comment, '(the orientation program)... was really good...the teacher was teaching us how to learn.' (Student 20, 1999)

Reduced load enrolment and academic support. Indigenous health sciences students can elect to spread their first year enrolment over two years with concurrent enrolment in non-credit academic support courses. This adds an additional year of study but provides valuable time for learning skills development. Participants reported that having a reduced enrolment load enabled them to study at a slower pace and prevented them from being overwhelmed by the volume of material in their undergraduate subjects. Participants in their second year reflected that they would not have managed first year with a full load.

In first year you're stunned with the amount of work to do. [In reduced load]...you get to spend more time on the subjects, you can sort of learn a subject and know it really well. (Student 16, 1999)

Enrolment in the academic support courses provided students more time to ask questions, enhance their understanding of the subject material, and develop learning skills for each subject. As a participant described,

In the lecture you can get a bit lost but [in the support tutorials]...you can sit down with someone who knows what they are talking about, got a lot of knowledge on their subject, and they can just sit down and talk to you and it just seems to make sense. (Student 15, 1999)

Factors that challenge study

Educational background. In most cases, participants' previous educational experiences influenced both preparation for tertiary study in health sciences and confidence in their ability to succeed. Our students were under-prepared either because they left school prior to completion, had not achieved the necessary university entrance score, or had not studied maths, biology or chemistry which are assumed areas of knowledge for health sciences programs. In addition, students reported having difficulties with academic skills (e.g., reading, comprehension, writing, and spelling). Conversely, many of our participants had completed some form of post-secondary-school education in short courses.

Students who recalled encountering racism in previous educational experiences internalised those messages and reported doubts that they could succeed at university study. In addition, some school teachers were very discouraging of participants' aspirations to study health at university which decreased the students' confidence in their ability. A participant reflected

I had a careers teacher and every time I told him I wanted to do physio' it was like 'You should look for something else.' He never thought I'd ever get into Physiotherapy...so he sort of made me have doubts about going to Uni (Student 15, 1999)

Newness. Many of the challenges identified by participants were accentuated by the students' own newness to study, to each other, to the university environment, and to the city. Participants' newness meant that some of them were learning how to study at the

tertiary level for the first time after having been out of formal education for several years and not having completed high school. The participants also described feeling scared, lost and overwhelmed in the new environment where they did not know anybody and where staff and students were unfamiliar. When difficulties were encountered, not only did the participants have to manage the particular difficulty, but they were further challenged by not knowing where to seek assistance. Newness operated as a constant in the challenges that participants encountered, which negatively influenced their study.

Separation from home and family. Some of the factors that challenged students' study related to the fact that our students were studying away from home and family. Participants in the block mode program reported feeling disconnected and isolated from their families, concerned about childcare arrangements and distracted by what was happening at home while they were away. Shared accommodation also presented challenges because it was sometimes difficult to resolve lifestyle differences between rooming students.

Participants also cited the negative effect of personal and family crises on their success and mentioned these as factors which had led them to contemplate dropping out. Death and illness in the family left participants feeling torn between the desire to be with their family at these times and the need to maintain their focus on study. As one participant noted

When my grandmother died... I just found it very hard to concentrate like my thoughts would be elsewhere (and) cos' I'm here and they're all in the country... I feel a bit helpless.. and I can't go away from Uni, I've got to stay down here and keep up to date... it's hard to get motivated again.
(Student 18, 1999)

Curriculum issues. Various aspects of curriculum were found to challenge student success. Participants studying in applied science programs such as physiotherapy or occupational therapy noted that they struggled with the pace at which the material in the undergraduate subjects was presented and the degree of difficulty of the biological sciences subjects. Participants also commented that they found exam pressure a problem especially if the assessment was not progressive during the semester. Some participants found the format of multiple choice exam questions did not allow them to demonstrate their knowledge as well as written or practical assessments. The need to re-enrol in failed subjects complicated the students' schedules and sometimes led to timetable clashes and missed classes.

Negative learning experiences also influenced student success and had an impact on retention. Our students bring incredible determination to their learning experiences, however, that determination was sometimes short-circuited by frustrating learning experiences which made the students vulnerable to doubts about their own ability to succeed in the program. These negative learning experiences included those which highlighted gaps in their learning competencies or failed to adequately address their individual learning needs. These frustrating experiences had a common effect: students wanted to throw up their hands and walk away. They were not necessarily talking about leaving the program, but they did say that frustrating encounters made them want to walk away from the class, the instructor, the task, or the campus and some of them did.

Using research to transform curriculum

The scholarship of teaching is crucial because of the power it has to transform curriculum and lead to greater success for students. The findings of the Student Experiences Study have been translated into a variety of curriculum changes.

Empowering students in their new environment

It may be tempting for educators to assume that adult students, because of their developed problem-solving skills, need less attention paid to orientation to their new environment. Our research demonstrated that minor challenges have a cumulative effect and can combine to overwhelm students and seriously interfere with their study. To better address students' newness and to enable them to identify possible little problems and develop strategies which may prevent them from becoming big problems, we expanded our three day orientation program to include experiential learning sessions which facilitate interaction between students and academic staff. The case studies are constructed around common issues arising for an Indigenous student in a block mode program. A participant commented, 'the case studies were very valuable because they gave me insight into exactly the problems that I could face during my stay at Yooroang Garang.' (Student 2, 1998)

In addition, it is clear that in order to facilitate students' problem solving on campus, communication channels need to be explicit and effective. We have established designated individuals to whom students can voice concerns, including student-elected representatives, teacher mentors and program coordinators.

Address the influence of students' past educational experience

Strategies aimed at increasing the participation and success of Indigenous students in tertiary institutions must address the influence of students' past educational experiences. A history of colonialism and cultural marginalisation, has led to Aboriginal peoples' exclusion from mainstream education. As a result, many Aboriginal people have not had the standard of secondary level education generally a prerequisite for university entry. This is not to suggest an incapacity to learn, but rather that Indigenous students have not had equal access to education. Therefore, it is crucial to successfully incorporate literacy education at tertiary level so as not to perpetuate the exclusion of Indigenous people from higher education nor to be complicit in maintaining the marginalisation of Indigenous students.

Recently, several academic staff members began to use a literacy technique called Learning to Read: Reading to Learn (Rose, 1999) which is designed to enable learners to read and write at appropriate levels. Preliminary research suggests that when literacy is embedded in the curriculum in this way, students are far more able to engage with the required content (Rose, Rose, Farrington & Page, 2006). This increased engagement with course readings has led to improved student confidence, group cohesion and discussion, and student ability to make meaningful connections across materials in different subjects.

Interestingly, vocational courses formed an important gateway to university study for our students. They provided an opportunity to develop academic learning skills and confidence which was particularly important since many participants had limited or negative formal educational experiences. The findings suggest broadening university

selection criteria beyond the traditional emphasis on entrance scores because successful completion of vocational courses may indicate capacity to succeed.

Provide flexible enrolment and effective academic support

The 1992 Royal Commission into Black Deaths in Custody Report asserted that,

Owing to the substantial historical educational disadvantage which Aboriginal people may have experienced, a course for Aboriginal students may necessarily be longer than might be the case if the course were provided to non-Aboriginal students (p. 97).

Institutions are encouraged to consider developing flexible enrolment patterns and formal, integrated academic support programs which our research indicates is an important retention strategy for Indigenous students. The reduced load option and concurrent enrolment in the non-credit academic support courses provided an opportunity for the students to revise and consolidate the material in their undergraduate subjects and develop learning skills within the context of each subject. The academic support courses were designed to provide 'contextualised and content specific material, a perceived relevance and an acknowledgment of metacognitive aspects of learning.' (McLean, Elphinstone, Devlin & Surtie, 1995, p. 77)

Provide culturally safe places and people

There is an increasing acknowledgment that, for many Indigenous students, university attendance is a cross-cultural experience, (Sherwood & McConville, 1994; McIntyre, Ardler, Morley-Warner, Solomon & Spindler, 1996; Christie, 1988; Harris, 1988). Bourke et al. (1996) also found that 'one of the most potent factors in the decision of Indigenous on-campus students to withdraw from University life was isolation' and that there are benefits that come from having 'the support offered to Indigenous students...organised into one discrete support unit' like Yooroang Garang. The findings of our study suggest that by providing students with a small, culturally safe community within a larger community in which they can meet, feel accepted and supported, mix with other Indigenous students from other courses and use resources especially designated for their use works to prevent a sense of isolation. In addition, the environment within Yooroang Garang had a positive effect on their identities as Indigenous people. As advocated by Tinto (2000), the structures we build are as important as the values we espouse.

Participants reported a strong objection to academic staff who did not have an awareness of Indigenous culture, either as it affected the community as a whole or the participants as learners. In an effort to ensure that academic staff at the University practiced with cultural sensitivity and were better able to achieve successful outcomes for Indigenous students, staff from Yooroang Garang facilitated two workshops for university staff related to teaching and learning issues for Indigenous students. The workshops drew participants from a variety of schools and departments and so had the potential to significantly affect teaching practice for Indigenous students across the University. Evaluations suggested that all participants were likely to change their approach to teaching as a result of the workshop. In an evaluation of the workshops, an academic staff member commented that the best thing about the workshop was 'the application of best practice in teaching, applied in a safe environment - it both

validated our current practice, and inspired us to continue working toward enhanced teaching practice.’

Conclusion

Researching practice is the truest path to improving students' educational experiences and it is imperative that educators are able to demonstrate that education is not unexamined work. Dynamic curriculum informed by research has particular poignancy for Indigenous health education where there is a palpable link between the education and the improvement of the health status of Indigenous people. Our study has underscored the importance of empowering Indigenous students to be successful in the transition to the tertiary environment. Indigenous student success is facilitated when curriculum responds to student need, for example, through tailored orientation programs, explicit channels of communication, designated advocates, flexible enrolment, and structured academic support programs. Above all else, curriculum strategies must be implemented in a way which places Indigenous people, their experiences and perspectives at the center of their learning and in a place in which Indigenous people feel safe.

Our findings suggest that providing students with a small, culturally safe community within the larger community in which they can meet, feel accepted and supported, mix with other Indigenous students from other courses, and access resources especially designated for them works to prevent a sense of isolation.

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