QUT | Indigenous Research and Engagement Unit

REPORT ON INDIGENOUS SUCCESS IN HIGHER DEGREES BY RESEARCH

PREPARED FOR

AUSTRALIAN GOVERNMENT DEPARTMENT OF EDUCATION AND TRAINING

Distinguished Professor Aileen Moreton-Robinson, Professor Peter Anderson, Dr Levon Blue, Dr Lan Nguyen and Dr Thu Pham

Indigenous Research & Engagement Unit, QUT
ireu@qut.edu.au
February 2020

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Introduction: Indigenous HDR students' perceptions and experiences of research supervision

The number of Indigenous Australian Higher Degree by Research (HDR) enrolments has increased over the last decade; however, the completion rates of Indigenous HDRs have remained relatively low. A range of factors continue to affect the retention and completion of Indigenous Australian HDR students, including access to high quality research supervision (Behrendt, Larkin, Griew, & Kelly, 2012; Schofield, O'Brien, & Gilroy, 2013; Trudgett, 2014, 2015).

Quality supervision is key to Indigenous HDR students' success; however, there is still little research exploring Indigenous students' expectations and actual experiences of supervision and supervisory practices. Studies by Laycock, Walker, Harrison, and Brands, (2009), Schofield et al. (2013), and Trudgett (2011, 2014, 2015) acknowledge contributing factors to 'quality' supervision of Indigenous HDR students as supervisors' mentoring expertise, availability and respect for students, and readiness to provide students with culturally specific support, as well as compatibility within the supervisory team. While this research shares some significant parallels with these studies, it adds two additional factors that play a significant role in enabling the development of good supervision practice: supervisors' disciplinary knowledge and students' ability to take ownership of their research. This study reveals disparities between HDR students' expectations (wants) and their actual needs and how these are fulfilled by their supervisory team. We found there was a disconnection between the students' understanding of the supervisory process as opposed to the institutional requirements of supervision. Further capacity building of supervisors of Indigenous HDR students and Indigenous HDR candidates is recommended.

Indigenous Research and Engagement Unit

Background to the study

Australian Indigenous HDR students' rates of participation and completion are much lower than non-Indigenous HDR students (Behrendt et al., 2012; Buckskin et al., 2018; James et al., 2008). Trudgett (2008, 2009, 2010, 2014) identified the trend that the further an Indigenous person pursues HDR studies, the greater the disparity in completions. In 2017 there were 592 Indigenous students enrolled in a HDR program, of which 28% (163 Indigenous students) were commencing their studies that year, and appropriately 10% (60 students) were completing their degree, accounting for only 0.9% of the total population of domestic HDR completions (see Figure 1).
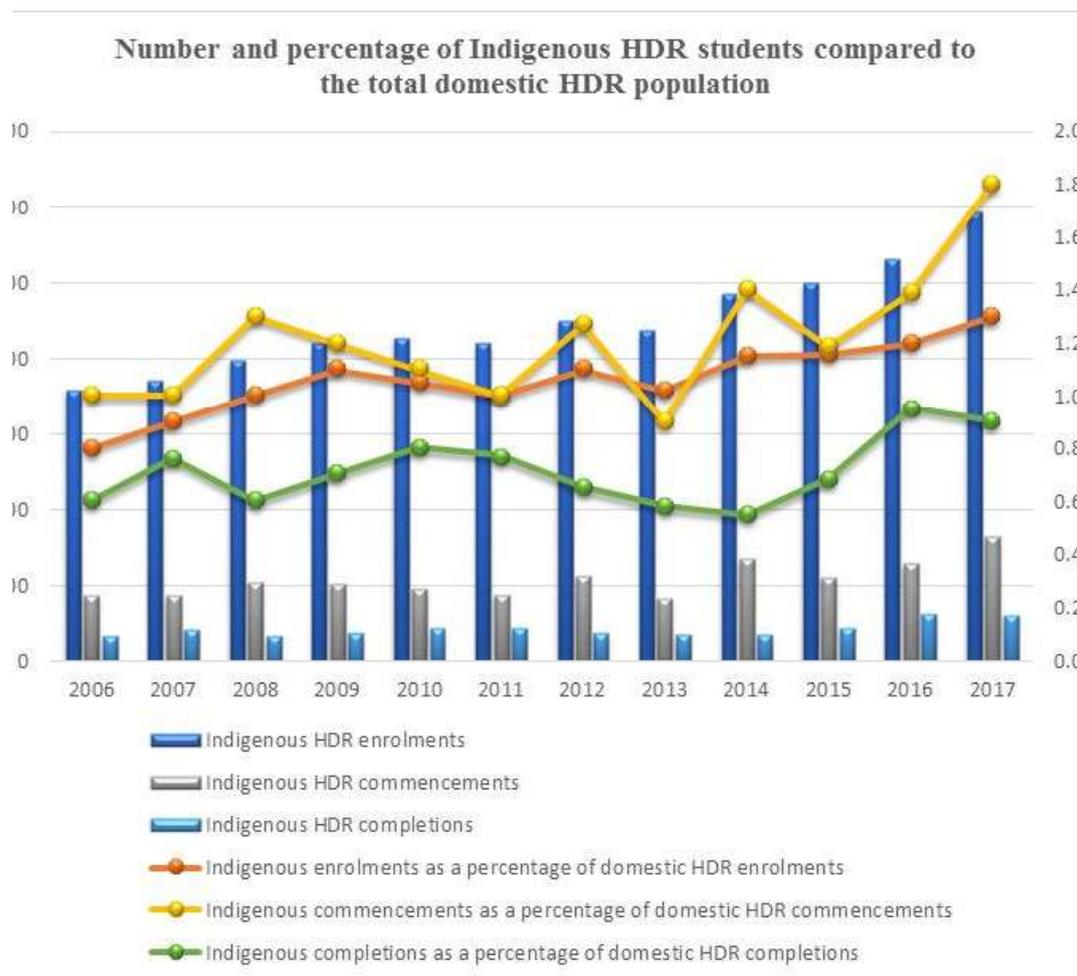
Figure 1: Number and percentage of Indigenous HDR students compared to the total domestic HDR population. Data supplied by the Department of Education and Training.

During the period 2006 to 2017, the number of Indigenous people who successfully completed HDR studies never exceeded 1% of the total Australian HDR completions. Low Indigenous HDR completion rates in higher education have direct implications for employment of Indigenous graduates in academic positions. There is an alarmingly low representation of Indigenous staff across the university sector. The latest statistics provided by the Department of Education and Training revealed that between 2009 and 2018, Indigenous full-time and fractional full-time employees at Australian universities comprised less than 1.2% of the total staff number. Over the period, the year 2018 saw the highest number of Indigenous employees at 1,316 for full-time and 1,461 fractional full-time respectively (see Figure 2). However, the employment of Indigenous academics and professional staff is still alarmingly low, compared to the number of non-Indigenous staff at Australian universities: 107,706 (full-time) and 120,257 (total non-Indigenous staff).
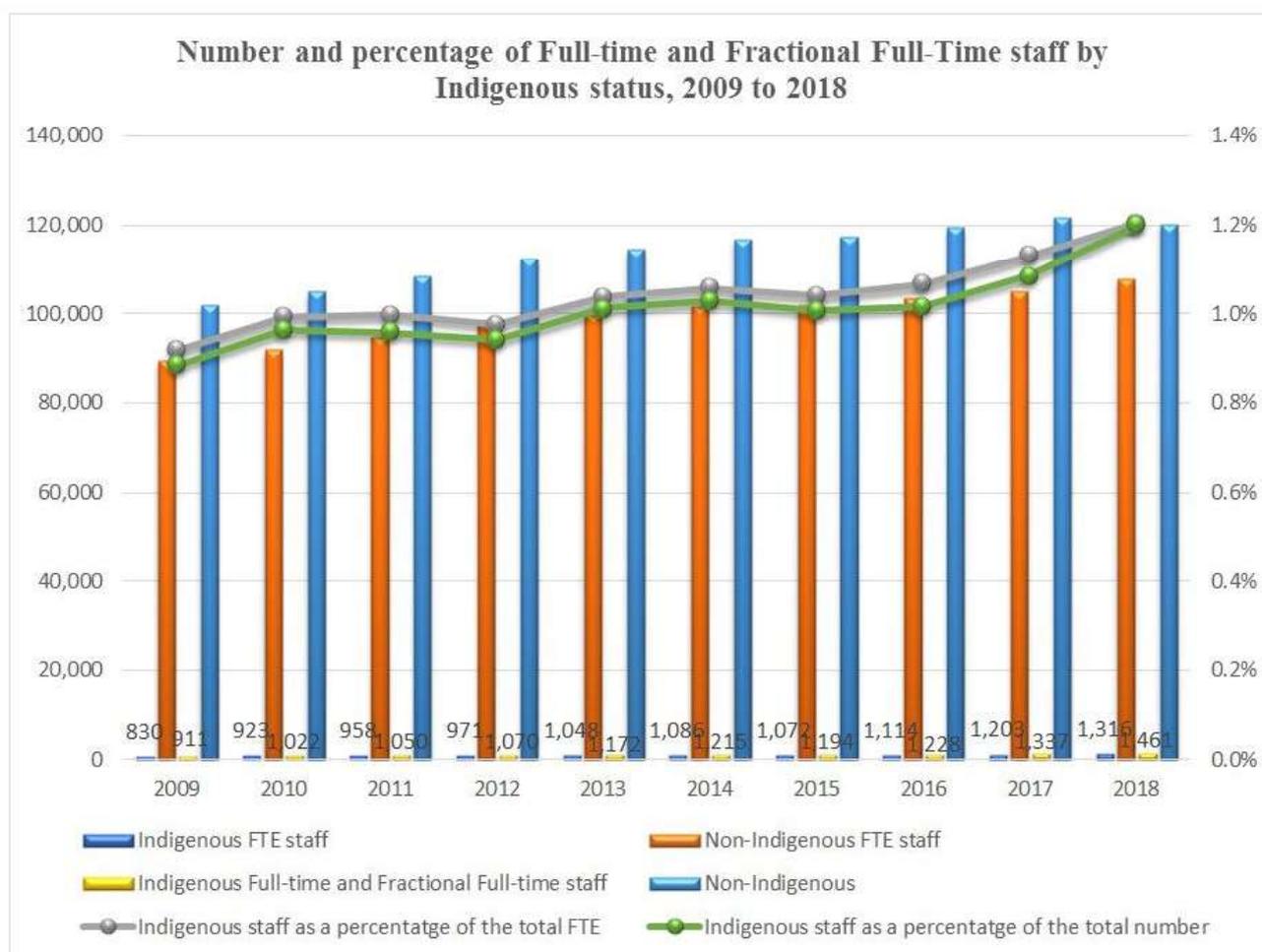
Figure 2: Number and percentage of full-time and fractional full-time staff by Indigenous status, 2009–2018. Data supplied by the Department of Education and Training.

The number of Indigenous people employed in academic positions at Australian academic institutions from 2004 to 2018 is shown in Figure 3. Unfortunately, disaggregation of academic levels of appointment over this 14-year period was not available by the Department of Education and Training, thus it is not possible to gauge where the entry point is for the majority of academic appointments. By implication, this hinders a consideration of how the transition from HDR to employment unfolds and what kind of career trajectory is possible for Indigenous academic staff.
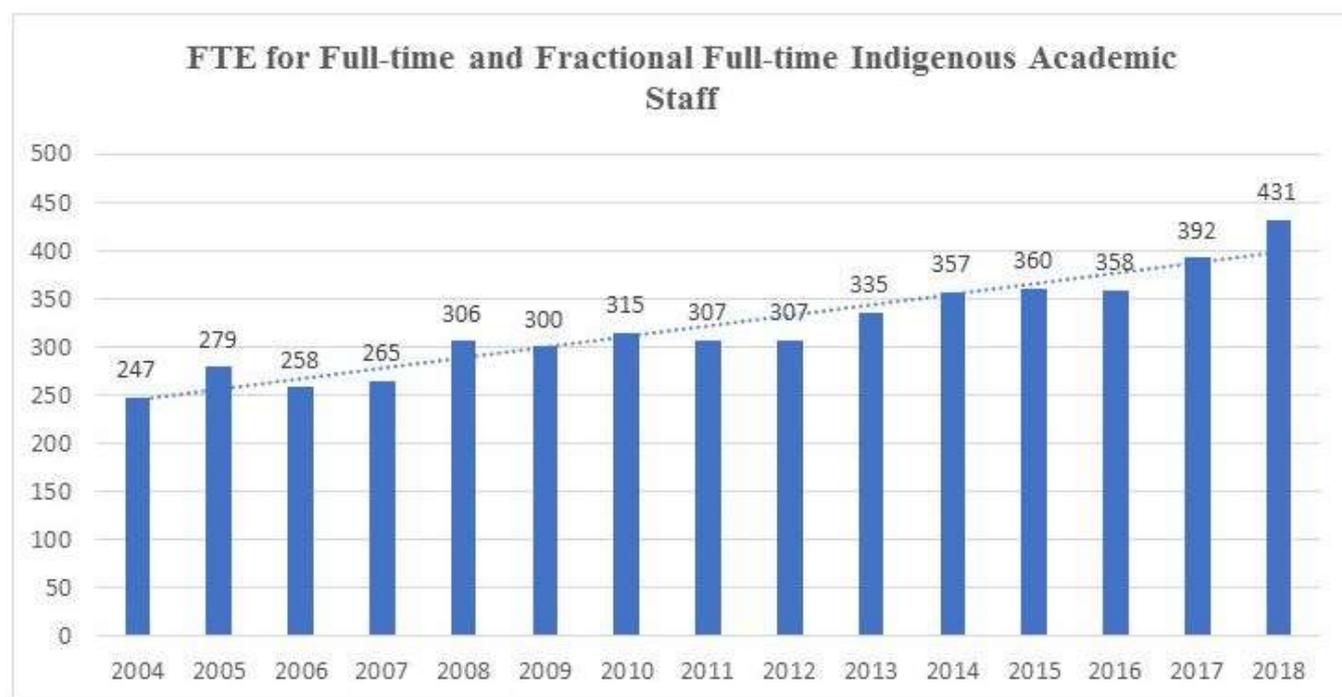
Figure 3: Number of full-time equivalent (FTE) for full-time and fractional full-time Indigenous Academic Staff, 2004–2018. Data supplied by the Department of Education and Training.

As illustrated in Figure 3, there was a general upward trend in the number of Indigenous academic staff employed at Australian universities. While only 247 Indigenous people were employed in academic positions in 2004, the number of Indigenous academic staff increased to 431 in 2018. Although consistent progress was evident in the representation of Indigenous academic staff at Australian universities during the period 2004–2018, the overall picture of Indigenous academic employment is still disappointing – significant disparity remains between Indigenous and non-Indigenous academic employment. Figure 2 shows that in 2018, the

number of non-Indigenous employees at Australian universities was 120,257 full time. In the same year, the number of Indigenous full-time and fractional full-time staff were 1,316 and 1,461 respectively, making a total of 2,777 Indigenous employees. The number of 431 Indigenous academic staff in 2018, as illustrated in Figure 3, accounts for only 6% of Indigenous employment and approximately 0.3% of non-Indigenous employment at Australian universities.

Overall, what is represented by the three figures correlates with Moreton-Robinson, Walter, Singh, and Kimber's (2011) observation that Indigenous staff numbers within Australian universities remain very low and continue to be concentrated in non-academic positions. Increasing the number of Indigenous academic staff in Australian higher education presents a huge challenge due to the small number of Indigenous students undertaking higher research degrees but it is nonetheless important to strive to achieve this aim.

Increasing the number of Indigenous HDR students

Both the review of higher education access and outcomes for Aboriginal and Torres Strait Islander people (Behrendt et al., 2012) and the review of Australia's research training system (McGagh et al., 2016) highlight the need to increase Indigenous HDR participation. Increasing Indigenous HDR participation may be a way to transform the Indigenous professional class and reshape the research practices of tertiary institutions more generally. Barney (2013) posits that increasing Indigenous HDR participation rates will help to achieve key national social-justice goals of reducing Indigenous disadvantage and building a better future for Indigenous Australians.

Universities Australia is the peak body representing Australian Universities. In 2017 Universities Australia announced the Indigenous strategy 2017–2020 to demonstrate its commitment to establishing a baseline for retention and success rates for Aboriginal and Torres Strait Islander students that is equal to those of domestic non-Indigenous students in the same fields of study by 2025. The aim of Universities Australia Indigenous strategy is for retention and success rates for Aboriginal and Torres Strait Islander students equal to those of domestic non-Indigenous students in the same fields of study by 2025.

Importance of quality supervision

Throughout candidature, supervision and the supervisory process is the primary academic support mechanism that is of vital importance to the overall success of all HDR students, particularly. However, as previously mentioned, there are insufficient studies that have focused on the supervision of Indigenous students undertaking research degrees. The unique experiences of Indigenous HDR students as a distinct group has been largely under-researched (Moodie, Ewen, McLeod, & Platania-Phung, 2018).

Brief overview of this research project

This research project sought to identify the enabling factors involved in contributing to successful Indigenous completions. We also explored the ways in which Indigenous students feel academically marginalised. By understanding the needs and experiences of Indigenous HDR students, we are seeking to improve the completion outcomes by providing capacity-building workshops specifically designed for Indigenous HDR students and their supervisors.

In this study, 34 Indigenous HDR students were engaged in three group discussions facilitated by three Indigenous academics. Students were invited to provide individual written responses to a set of eight interview questions focusing on supervision practices. This report provides a detailed account of the students' perceptions of quality research supervision and their actual experiences of supervision practices. The report concludes with a set of recommendations for Indigenous HDR students, supervisors of Indigenous students, higher education institutions and educational policy makers on how best to support Indigenous students' engagement in higher education and enable them to complete their HDR programs.

Insights and challenges of Indigenous HDR supervision

The disparity between Indigenous and non-Indigenous people completing university studies is evident in the literature (Barney, 2018; Buckskin et al., 2018; Pechenkina & Anderson, 2011; Trudgett, 2014). While the majority of research investigating strategies to improve Indigenous higher education participation and completion focus on undergraduate students, little is known about how the Australian higher education sector can support Indigenous postgraduate students (Trudgett, 2015). The existing research on this particular topic (e.g. Laycock et al., 2009; Schofield et al., 2013; Trudgett, 2011, 2014) reveals that among the factors assisting and/or hindering Indigenous HDR students completing their qualifications is the role of academic supervision. Our review of the limited research literature exploring the supervisory practices of Indigenous HDR students reveals that the findings focus on the impact of cultural aspects on the student–supervisor relationships, supervisors' mentoring expertise and their availability and respect for students, as well as age and gender being contributing factors to the quality of Indigenous HDR supervision. Of concern is the lack of attention to what supervisors can do to supervise Indigenous HDR students through to completion by meeting the requirements set out by institutions. For example, Queensland University of Technology's (QUT's) examination of doctor of philosophy thesis notes for the guidance of examiners states that:

The PhD is expected to show evidence of:

- **originality of the research data and/or analysis of the data**
- **coherence of argument and presentation**
- **competence in technical and conceptual analysis**
- **contextual competence. (QUT, n.d., p. 1)**

Trudgett, Page, and Harrison (2016) were the first to publish on Indigenous doctoral education in Australia, with their research focused on study modes, age of candidates, completion times and employment. An interesting finding from their data was that the successful partnerships evident between student and supervisor usually comprised a team where the supervisor was older than the student. This finding specifies age as an important factor to consider for future supervision relationships between a non-Indigenous supervisor and an Indigenous student.

Based on responses by 55 Indigenous people who enrolled in or who had recently completed their postgraduate study, Trudgett (2011) found that no one-size-fits-all set of instructions guarantees that Indigenous postgraduate students receive appropriate supervision. The author concluded that Indigenous students are not a homogeneous group, but rather their individual needs must be catered for, along with respect for Indigenous peoples' knowledges, ancestry and history. Trudgett's research highlighted the need for providing cultural awareness training for all academic staff, but a problem with her findings was the lack of attention to the transfer of discipline knowledge from supervisors to HDR students. Students are required to demonstrate that they have completed a HDR study that is deemed to have followed a competent research approach accepted in their discipline.

In the three studies Trudgett conducted from 2006 to 2013 titled 'An investigation into the support provided to Indigenous postgraduate students in Australia', 'Close encounters of the western kind: Indigenous Australians and postgraduate education' and 'Enhancing the quality of academic supervision provided to Indigenous Australian doctoral students', supervisor practices were examined. Based on the findings from the abovementioned studies Trudgett (2015) provided an overview of the current challenges Indigenous HDR students regularly face and proposed a set of six strategies that research supervisors should consider to enable the success of Indigenous HDR students. She emphasised:

- **the importance of supervisors developing a strong relationship with students**
- **respecting students as respected knowledge holders**
- **involving Indigenous community members in the supervisory process**
- **understanding that research supervision processes are often interpreted differently by Indigenous students**
- **providing culturally appropriate supervision**
- **acknowledging the role of supervisors' own cultural background and gender in the supervisory relationship.**

Harrison, Trudgett, and Page (2017) investigated the factors that contribute to successful outcomes for Indigenous people who have completed HDR programs. They placed particular emphasis on supervisors and recommended that supervisors need to respect Indigenous knowledges and Indigenous ways of doing and be "more willing to 'give-up' on their own theoretical and conceptual positioning" and "embrace the 'situated knowledge' of the student" (p. 124). However, what remains unclear in this study is how the supervisor's situated knowledge, outside their theoretical and conceptual positioning, impacts on the supervisory relationship and what constitutes culturally appropriate supervision. If culture is everything transmitted by humans from one generation to another and is non-biological, then what makes for culturally appropriate supervision? Culture as a concept is not clearly defined, which begs the question of what constitutes culturally appropriate supervision?

Despite the reported importance of culturally appropriate supervision of Indigenous HDR students, how culturally appropriate supervision enables a HDR student to succeed remains to be demonstrated.

Laycock et al.'s (2009) guide for supervisors of emerging Indigenous researchers highlights the importance of culturally appropriate supervision. As indicated in the guide, supervisors need to be aware of the issues that are specific to being an Indigenous researcher and researching Indigenous knowledges and worldviews, and must adopt culturally safe strategies to support novice Indigenous researchers. They posit that Indigenous research students may have different preferences, expectations and study approaches, some of which may be related to their cultural background; good supervisors need to recognise and value this diversity, and adjust their supervision practices based on students' individual background, strengths and skills. Laycock et al. (2009) recommend that the mentoring process involve reciprocity and two-way learning for novice Indigenous researchers to become empowered through collaborative research endeavours with their supervisors. Additionally, supervisors' commitment to providing regular guidance and support is an important component of the supervisory relationship. The problem with Laycock et al.'s findings is that it assumes the institutionalised power relationship between student and supervisor will disappear through reciprocity and two-way learning. The cultural backgrounds of supervisors and students cannot be erased during the supervisory process and, while relevant, the requirements of the university in fulfilling the criteria for the award of PhD remain outside the supervisory relationship. Both supervisor and student are bound by these criteria.

Page, Trudgett, and Sullivan (2017) outlined the efforts made to reduce the gap in Indigenous staff and student outcomes in Australian higher education. They have also predicted factors Indigenous students tend to consider when choosing a higher education institution. The authors indicated that apart from the usual institutional reputation and financial support, students would value the opportunity to be supervised by an Indigenous academic and with the supervisor's specific discipline expertise (p. 41). This prediction correlates with McKinley, Grant, Middleton, Irwin, and Tumoana Williams's study (2011), conducted in the New Zealand context, in which the importance of supervisors having "the right mix of disciplinary knowledge and expertise, research skills, and understanding of students' needs" (p. 123) was highlighted.

In the Australian context, there is no empirical research to shed light on Indigenous students' views on their supervisors' disciplinary knowledge and/or expertise. Trudgett (2014), in her framework of best practice for supervising Indigenous doctoral students, recommended a set of requirements and targets that supervisors, universities and national bodies should aim towards to contribute to building the number of doctoral qualified Indigenous Australians. The framework is divided into four categories:

1. **academic skills-based support from supervisors**
2. **personal reflection of supervisor**
3. **responsibilities of university**
4. **responsibilities of national bodies.**

Although Trudgett (2014) emphasised the role of academic skill-based support from supervisors, there is a tendency to focus more on supervisors' ability to support Indigenous students to develop their academic skills in a more general sense. There is no importance attributed to disciplinary knowledge in the production of new knowledge, which is a criterion to be met in examination of the dissertation. Our project found it was important that supervisors have the disciplinary knowledge and expertise to match Indigenous' students' areas of research, but this was not given sufficient attention in Trudgett's framework.

Small sample sizes and modes of data collection

Due to the statistically small number of Indigenous students undertaking HDR, participant recruitment numbers in the research commonly involves small student group participants or participants from a specific discipline (e.g. Laycock et al., 2009, focus on the supervision of Indigenous research students in the Health discipline). Modes of data have also played an important role in limiting the overall view of the student experiences because they are primarily quantitative, which limits the depth of responses often found when using qualitative methods.

Trudgett's (2011) sample involved a large pool of 55 Indigenous people; however, the findings were based on a single method of data collection, which was a survey questionnaire. In the following section, we report on findings from our study that involved 34 Indigenous HDR students from different academic disciplines enrolled at different higher education institutions across Australia. We note that in the existing literature there is a trend to incorporate students' voices and reflect on their experiences in order to highlight factors contributing to the quality of Indigenous HDR supervision, in order to suggest different strategies that supervisors can use to enable the success of Indigenous students.

Data and method

The research participants for our study were Aboriginal and Torres Strait Islander HDR students from different disciplinary background and universities. The students attended the annual research capacity building workshops facilitated by the National Indigenous Research and Knowledges Network (NIRAKN). Prior to the capacity building workshops the HDR students were invited by The Department of Education and Training via NIRAKN to attend the inaugural Indigenous HDR forum. The HDR students were informed that the forum was an opportunity to share their experiences, needs and recommendations for changes to the HDR process. In addition to the invitation, HDR students were provided an information sheet about the research project and a consent form. Participation was voluntary and QUT ethics approval was obtained.

The data collected for this research project focused on Indigenous HDR students' perceptions and experiences of HDR supervision during their HDR candidature. Two types of data were collected and analysed for the current research.

1. Data obtained from different groups' discussions, which took place throughout the day at the Indigenous HDR forum and were analysed to provide an overview of the perceptions and experiences of Indigenous HDR students.

2. Individual written responses provided at the Department of Education and Training forum to obtain more in-depth perspectives on good practices, concerns, and suggestions of Indigenous HDR students about supervision during their candidature. Participants completed written responses within 30 minutes.

Eight questions guided group discussion and individual written responses:

1. What is your perception of quality supervision?

2. According to you, what characteristics or traits constitute a good supervisor?

3. Would you like to share some good practices in supervision that you have experienced?

4. Do you have any concerns regarding supervision practices? If yes, what are they?

5. According to you, what constitutes a good student-supervisor relationship?

6. Do you face any challenges in developing a productive relationship with your supervisor? If yes, what are they?

7. If you could make some suggestions to your supervisors, what would you like to suggest?

8. To what extent is the research training you received helpful to your future career pathway?

Data analysis of Indigenous HDR students' perceptions and experiences of research supervision

This qualitative study focused on meaning and associated values conveyed by Indigenous HDR students. A qualitative approach was an effective way to achieve a comprehensive overview of the study, including the perceptions of the participants (Miles & Huberman, 1994). We were concerned with identifying what meaning and values students considered important in understanding their journey as HDR candidates. We were also mindful that subjective experiences are processed by structural conditions.

We recorded group discussions and had these audio files transcribed. The data analysis consisted of three phases. Phase 1 involved data screening for its completion, fitness and to get a general sense of the data. In Phase 2 the data were coded into nodes using Nvivo. The third and final phase involved interpreting the data using themes that emerged from the nodes.

Analysis of the data involved using Nvivo Pro 12 software; both individual written responses and group-discussion transcriptions were coded into nodes to identify themes. The nodes consisted of the eight questions we asked students individually and then in a group to discuss. The eight nodes included:

1. **perception of quality supervision**

2. **characteristics or traits of a good supervisor**

3. **good practice in supervision**

4. **students' concerns about the supervision practice**

5. good student-supervisor relationship factors

6. challenges in developing a productive relationship with supervisors

7. suggestions to supervisors

8. impact of research training on Indigenous HDR students' future career pathway.

The coding process involved tagging text with codes as a way of indexing for easy retrieval. A line-by-line analysis was operationalised to code the passages of text into nodes. Each code was examined for data that reside with it. For the purpose of analysis, several identified node categories were sorted into themes relating to written response/group discussion questions. The next step in the process was to re-examine the categories and identify patterns in the nodes relevant to the perceptions and experiences of Indigenous HDR students of supervision. The three main categories are discussed in the next section of this report.

Results and Discussion

In this section, we discuss the findings in relation to Indigenous HDR students' perceptions and experiences of research supervision in three main categories:

1. students' perceptions of quality supervision

2. students' experience of supervision practice

3. students' suggested strategies to improve supervision practices.

Students' perceptions of quality supervision

Students perceive components of quality supervisors as:

1. the availability and commitment to support students

2. an open communication strategy and clear expectations

3. the provision of critical but constructive feedback

4. the ability to keep a balance between power and control.

In a group discussion, one participant highlighted that clear expectations on the part of the supervisor are critical to a successful supervisory relationship:

> *One of the things that we have to do was set up expectations and boundaries around what relationships we were engaging in [during a meeting] so they're quite separate. We had to set up those core expectations. At the beginning, it was all a bit grey and wasn't very useful but now it's very useful, it's a very clear understanding of our expectations when we meet. That's been really beneficial.*

What is clear from this student's understanding of the process is that the supervisor had adhered to standard supervisor practices. The supervisor demonstrated clear boundaries and core expectations of the process, which are good standard supervisory practices.

This view was supported by another participant's statement:

> *There are clear indications and expectations a bit and that keeps me on the straight and narrow basically.*

Inferred by the statement above is that boundaries have been set by the supervisor and this student understands what their supervisory team expects of the student.

Students were unanimous in the view that supervisors' availability and commitment to support students contributed a great deal to their success.

> *I think that time is really important and academics have a particular number of students they're meant to supervise and I thought that maybe if they are a supervisor of an Aboriginal or Torres Strait Islander student, that student can count as twice that load so that they can actually take a little bit more time to spend with that student. Perhaps that's something that would work. I'm not quite sure. So, that's my qualities of a good supervisor.*

The previous comment demonstrates a lack of knowledge of supervisory workload and the institutional requirements of supervisors to manage their time.

Trudgett (2014) emphasised the importance of supervisors scheduling regular meetings with HDR Indigenous students. Several participants pointed to the importance of supervisors arranging regular meetings with students and providing them with timely feedback. Whether as face-to-face meetings or in-person meetings, this communication mode is very important in supporting Indigenous HDR students to complete their research projects.
One of the participants expressed the importance of:

> *regular meetings every fortnight or monthly so that the supervisors can provide them feedback and support their study.*

Another student added:

> *[The supervisors] need to be committed to meetings and provide support in timely manner.*

The importance of regular meetings is essential for students' success. However, supervisors are bound by institutional time constraints due to their teaching, research and community service workload. The allocation of a principal supervisor or associate supervisor also affects the amount of time a supervisor is allocated to work with their student.

In line with the findings of Laycock et al.'s (2009) study, the student participants also stressed the personal dimension of the supervisory process. Several students in the group discussions strongly expressed the following:

> *I can't work in a strictly professional relationship. A good relationship for me is more personal. They know my family and I know a lot about their lives/background.*

Another student stated:

You can have the best technical skills and like they said be driven by their discipline but if they don't understand you as a human and know what you're really wanting to get out of that and support you, I think it'd be big chunk of your life that you're struggling in.

This student mentioned how the type of relationship style can encourage or discourage them:

I can't really work in an authoritative relationship, it really discourages me. I actually knew all of my supervisors going into it, which was very helpful because I knew them, they knew me well and how I worked because they supervise.

The importance of providing guidance and mentorship is revealed in this comment:

… so I like to think that an effective supervisor is someone that works in the developmental approach. Developing humans but also developing leaders, developing the researcher, there's so many aspects, even you're just being a person.

Empathy and understanding was a repeated theme in the students' individual written responses. According to the student participants, good supervision practice involves supervisors spending time getting to know the students to establish the foundations of a working relationship. Thus, respectful relations are highly valued by Indigenous HDR students. However, the supervisors' professional duty of care towards their students is not open ended and is legally constrained. This will have an impact on the nature of the supervisory relationship. There may also be a risk of professional relationships becoming personal relationships and supervisors adopting the role of counsellors, which has the potential to blur the boundaries of supervision responsibilities.

In group discussions, several students shared the view that they appreciated supervisors providing constructive and critical feedback in an open manner. A participant in a group discussion commented:

We've all got egos and it hurts. I'm sure you guys have all had it or if you're only three months into it, you might not have had it yet but it'll happen. You put all this effort into something and then you get feedback on it and there's red pen all through it and you're like, 'Oh, it's not worth the piece of paper it's written on.' So, my supervisor, he writes two good comments, two things I've done well and then two things or three things or ten things I need to improve on. So, that is really good constructive feedback for me and helps my ego a little bit.

Another participant supported this opinion:

I feel that they believe in me and they give me opportunities to fail and they give me really constructive criticism, and they're the things that I think make me feel that I've had a really productive year because of that.

In her framework of best practice for supervising Indigenous doctoral students, Trudgett (2014) stressed the critical role of supervisors' constructive criticism and thoughtful feedback. From the perspectives of Indigenous HDR students in the current study, critical but constructive feedback from supervisors helps them grow academically and achieve success in their HDR research journey. Constructive feedback is welcome and integral to a student's development and is part of the standard supervisory practice.

Good practices in supervision by HDR students

A large number of student participants expressed that they highly valued their supervisors' disciplinary expertise and/or good understanding of HDR process. They also communicated that supervisors' respect for students' knowledge and cultures, their availability and interest in students' research, and their willingness to develop a reciprocal supervisor-student relationship were critical to their success.

Several participants highlighted the importance of supervisors' disciplinary knowledge and expertise, as well as their familiarity with the HDR process in group discussions.

One student reported that his three supervisors were all professors in his field of research, and as such, he benefitted a great deal from the their disciplinary expertise and knowledge of the university system:

> *Three of my supervisors are at the professor level and so this means I have amazing support around discipline in my field, amazing support around them knowing the university system so they know how to get me through, they know expectations.*

Another participant in a group discussion appreciated his supervisor's

> *... good understanding of all the different approaches and methodologies and theories.*

Several participants, when asked about their positive experiences of the research supervision, commented that supervisors' familiarity with the requirements of HDR process is important. One student said:

> *... Yeah, they need to have knowledge of requirements of HDR students in their department and university requirements too.*

Another student expressed his gratitude for his supervisors' complementary knowledge and skills:

> *And I'm finding that really helpful because they don't step on each other's toes so I don't have to deal with the ego side of things and they both know those areas really well and then I'm getting to know the intersecting space really well. So, that's how I've handled it and they're both white people, so my cultural advisor is the person I go to where I say, 'Who do you know in these spaces who's good for this?'*

From their own experiences, supervisors' availability and interests in students' research are essential components of quality supervision. A student expressed his/her gratefulness that his supervisor 'make time' for him/her despite their heavy workload. Another student appreciated that his/her supervisor spent time to read his work, give feedback and scheduled face-to-face supervision meetings:

> *Yeah, I think it's about availability, about having the time to actually read your stuff and to make comments, to make time to see you face to face.*

One student participant highlighted the importance of supervisors' interests in students' research:

> *Good practice is when your supervisor is just as excited about your research as you are.*

The above comments highlight the important role of process supervisors follow when meeting with HDR students. It is the discipline knowledge, experience conducting research and experience supervising that these students value. However, the student quoted next discusses the importance of their supervisor having more personal understanding of their culture and country:

> *She came and done a cultural training on country and she walked my country with me and that showed me she really cares and she gets me.*

The supervisor's willingness to attend cultural training and 'walk on country' with the HDR student does demonstrate that the supervisor is willing to go above and beyond the institutional requirements of HDR supervisors. However, what is not known is whether this supervisor meets with the student regularly, provides the student with discipline knowledge and constructive feedback, and mentors the student on project management skills. Supervisors' time is limited, and in supervisory relationships that focus on the personal needs of the student may be at risk of failing if enough attention is not also devoted to developing academic skills and rigor needed to complete a HDR.

A student also mentioned the importance of a respectful supervisor-student relationship in a successful supervisory process.

> *Being able to relate as an equal even though there are differences academically.*

This view was echoed by another participant, who sees the research process as a collaborative learning experience between students and supervisors:

> *Listening and learning from each other. Some mutual vulnerability that we actually don't know (or need to know) everything about our culture.*

It is problematic why HDR candidates are positioned as 'knower' in a HDR relationship. Supervision relationships are primarily about supervisors having the knowledge required to complete a HDR because they have a HDR qualification. The disjuncture between knowledge holder of cultural and discipline knowledge appears to be blurring the boundaries in Indigenous HDR supervisory relationships. Laycock et al. (2009) suggested that the most successful student-supervisor relationships are reciprocal, and highlighted the need for a two-way approach to working, reflecting and learning from each other. However problematic the overemphasis on two-way approaches to working, reflecting and learning may be, Indigenous HDR supervisory relationships should also recognise that there are limits to knowing.

Concerns in supervision practices reported by HDR students

There are many examples of good supervision practices; however, there were concerns about supervision practices that were not positive.

When asked about challenges with supervision practices, the participants revealed several concerns, including supervisors' unavailability to meet and provide feedback for students, power dynamics inherent in the supervisory team, supervisors' lack of disciplinary knowledge and supervision expertise, and non-Indigenous supervisors' insufficient understanding of Indigenous culture and ways of doing. We wonder whether this understanding is warranted because of the HDR students' topics, or whether it is because they are Aboriginal and wish to set the relationship up according to their values.

Students' concerns over supervisors' unavailability was a recurrent theme arising from the group discussion and individual written responses to interview questions. These comments

were repeated several times 'too busy to read my work', 'I had to wait 4 months', 'no one followed up my questions', 'never reply to my message', 'not being available or following up on things they offer, and hard to contact', and so on.

The power dynamics inherent in the supervisory team was also a concerning issue expressed by several students. In a group discussion, a student reflected on a challenging situation in which his/her supervisors were not on good terms with each other:

> *I suppose one of the challenges that I faced was bringing on a new supervisor and watching the power play and dynamics between two that had already been established and a new one brought on, and then you saw the whole dynamic starting to work as to who was who and what was what.*

Given the power relations of the supervisory relationship, it would be incumbent upon the university to appoint an Indigenous postgraduate officer if standard supervisory practices are not adhered to.

Another student reported on the same issue:

> *… as you said a power-play between all the three supervisors, so that's what I'm dealing with at the moment.*

A number of participants criticised their supervisors' lack of disciplinary knowledge and supervision expertise. In a group discussion a participant expressed that although his Indigenous supervisor is a professor, she has never supervised any student to completion:

> *My secondary (co-supervisor) is a Murri woman who was given a professorship almost immediately after finishing a PhD. As a professor, she has never supervised a student to completion. She doesn't have the supervisory expertise I would expect of a professor. Now I don't blame her for that, I blame the system for offering position to people that are not qualified. But what happens is that not only my supervisor is affected, but these detrimental effects flow on me as a student.*

The previous comment questions the necessity for culturally appropriate supervision. Clearly, the student understands the importance of supervisors having disciplinary knowledge, training and expertise to achieve completion.

Indigenous and non-Indigenous supervisors' lack of disciplinary expertise and supervisory experiences disappointed several other students, as indicated in the following comments:

> *Just not really engaged with my project because they don't have the disciplinary expertise.*

> *Even though we had divided up what had to be done, bringing on an inexperienced supervisor created more problems than I had anticipated.*

> *I've just brought on a third for a cultural supervisor which I'm having difficulties with because she hasn't supervised before and doesn't understand the process.*

What we can discern from the above three comments is that cultural knowledge in the supervisory process is not deemed to be as important as disciplinary knowledge, skills and experience. However, while students raised issues of supervisors' lack of disciplinary knowledge and expertise, others expressed their disappointment regarding non-Indigenous supervisors' lack of understanding of Indigenous ethics. For example, one interviewee said:

> *… but my supervisors aren't Indigenous people, and the only difficulty that this has created for me is having just gone through the ethics process in the [HERA] when you're high level for ethics you have to do all this extra stuff, and neither of my supervisors had ever done it before because they've never actually formally gone through ethics to research on Aboriginal people, and that's really the only gap that I identify in having non-Indigenous supervisors.*

The comment above demonstrates a lack of experience in completing an ethical clearance application involving research with Aboriginal and Torres Strait Islander people. This example does not suggest that having an Indigenous HDR supervisor would overcome the challenges, as it cannot be assumed that Indigenous HDR supervisors all research Indigenous issues. Nor does this example demonstrate that cultural knowledge would help to overcome this lack of experience in completing an ethics application involving research with Aboriginal and Torres Strait Islander people.

Findings from previous research (e.g. Harrison et al., 2017; Laycock et al, 2009; Trudgett, 2011, 2015; Wilson, 2017) highlight the importance of supervisors' respect for Indigenous knowledge and ways of knowing and their ability to provide culturally appropriate supervision. However, what constitutes culturally appropriate supervision is not consistent in the literature, nor is it clearly defined as a concept. Data from our group discussions with students and their written responses to interview questions imply that the role of supervisor does require good understanding of Indigenous worldviews and knowledge, but the link between this understanding and producing the dissertation is not self-evident. At the same time, supervisors' disciplinary knowledge and expertise emerged as a dominant theme in our data sources.

Student's suggested strategies to improve supervision practices

The previous section focused on students' positive and negative experiences of supervision practices. In this section, we report on some strategies suggested by the participant students to improve supervision practices. An important finding arising from group discussion was the role of student agency in the research process. One participant stressed in a group discussion that Indigenous HDR students need to take ownership of their research. In their opinion, the supervisor should take the role of a facilitator, not a controller, of the research process:

HDR are independent training. Students need to take the initiative to guide their training around their career interests. A supervisor's role is to facilitate this.

Similarly, another student asserted that Indigenous HDR students need to drive the research agenda:

> *You are the one who is driving it, and they are there to help you out along the way, and that it is a relationship that goes both ways, and to get to that point you need to feel comfortable and you should feel comfortable.*

Another participant suggested that students should be proactive in seeking necessary support:

> *Students need to show up, seek support, be structured and do their best – prioritising PhD meeting and productive work, not so-so OK session.*

This student also shared the experience of managing supervisor-student conflict. Rather than accepting the supervisor's unprofessional behaviour, the student managed to change the supervisor who failed to fulfil their mentoring responsibility:

> *… but I have 'fired' a supervisor before. Early in my candidature when my supervisor is toxic, unable to treat me professionally, and their behaviour was noticed by other supervisor and colleagues. Knowing I could change supervisors has been key to then finding/building a dynamic team on this journey.*

It is clear that some students understood their right to be assigned good supervisors and develop professional relationships. However, Indigenous HDR students who are unaware of their right to change their supervisors may not be as assertive as the student quoted above. This provides evidence of the needs for an Indigenous Postgraduate Programs Officer to ensure HDR students are provided information about their rights as students and the professional requirement of the supervisory relationships.

The HDR students also made several suggestions for supervisors, as follows:

- **supervisors should encourage students' self-discovery and risk-taking**
- **supervisors should be open to differences and make efforts to understand Indigenous cultures and knowledges**
- **supervisors should build trust in the relationship with students that they can seek their academic and career support in the long term**
- **supervisors should empower students and provide medium and long-term academic and career support, taking into consideration the importance of the agency of the student to be open to self-discovery and risk-taking**

Apart from providing several suggestions to supervisors, the participant students also make recommendations for higher education institutions. Some participants expressed their dissatisfaction with the insufficient provision of research methods and training courses for HDR students at universities and proposed to have these courses in place to enhance students' knowledge and skills of conducting research. With regard to this point, one student expressed:

There is not enough research training on methodologies, methods (quantitative and qualitative), more software training is needed.

More noteworthy, the students also suggested universities should offer a HDR preparation program for Indigenous students before they actually commenced their HDR programs. In a group discussion, a student elaborated on this point:

I can get through a bachelor but HDR for me is this foreign space. So, we were talking you almost need a tertiary prep. You almost need an HDR prep six months or a year and imagine then how you could change the face of Indigenous students going into HDR programs because once you've had, like you, if you just had that little bit of learning.

Although students' suggestion regarding the provision of a six-month HDR preparation program is not directly related to supervision practices, this program could prove to be very useful for Indigenous students in their transition into HDR programs and to develop the foundations for students to start their research journeys with their supervisory team. We were unable to identify which universities these students attend, and we know that some university have research capability building and others do not. These students identified the need to attend Indigenous capacity-building workshops that include Indigenous research methodologies.

Conclusion and recommendations

In this study, 34 Indigenous HDR students from different academic institutions in Australia were engaged in group discussions and individual written responses to share their perceptions and experiences of supervision practices and suggest strategies to improve the quality of HDR supervision. Findings of the study reveal that Indigenous HDR students require supervisors' disciplinary knowledge, commitment, support, regular meetings, critical and constructive feedback, and that they appreciate supervisors' valuing Indigenous culture and worldviews. Students reported that they experienced many difficulties when facing the power dynamics inherent in the supervisory team, including supervisors' unavailability and lack of disciplinary knowledge, their limited mentoring experiences and insufficient understanding of the ethics process involving research with Aboriginal and Torres Strait Islander people, and the need for supervisors to value Indigenous culture and ways of doing. The HDR students also provided a number of suggestions to address HDR supervision challenges.

In line with the findings of this study, we provide a set of recommendations for key stakeholders at different levels, including Indigenous HDR students, supervisors of Indigenous students, higher education institutions and national education policy makers. We propose that this study will help to achieve key national social justice goals of reducing Indigenous disadvantage, providing support to Indigenous academics/supervisors and ensuring success for Indigenous HDR students across the disciplines.

Recommendations for Indigenous HDR students:

- **Establish ground rules with supervisors about regular supervision meetings and agendas and responsibilities at the beginning of the academic journey.**

Recommendations for Indigenous HDR students (continued):

- **Take ownership of their research but at the same time be open to communicating with supervisors about their difficulties and seek advice and guidance.**
- **Become familiar with the support structures of the university and its regulations regarding support when the student-supervisor relationship breaks down.**
- **Understand what the role of supervisors is and the boundaries of that role.**
- **Understand how a thesis will be examined and what the requirements are for HDR students.**

Recommendations for supervisors of Indigenous HDR students:

- **Establish ground rules with their students about regular supervision meetings, agendas and responsibilities at the beginning of the academic journey.**
- **Inform students of the professional and institutional boundaries around the supervisory process.**
- **Reflect on the inherent power dynamics within the supervisory team and strive to achieve mutual understanding and consensus within the team to provide the best possible support for students to enable their success.**

Recommendations for supervisors of Indigenous HDR students (continued):

- Take into consideration whether students' research interests match supervisors' disciplinary knowledge and skills when considering the supervision of new HDR Indigenous students.
- Be aware of the critical role of supervisors' disciplinary knowledge, identify areas for development and initiate activities to address any deficits.
- Recognise that Indigenous research students are from diverse backgrounds with different preferences and expectations, and adjust supervision practices accordingly based on students' individual background, strengths and skills.
- Be mindful of personal boundaries and limitations about Indigenous knowledge and worldviews and be willing to seek support from Indigenous researchers.
- Be accountable for students' academic success, schedule regular meetings with students and provide high quality feedback to their work.

Recommendations for higher education institutions:

- Appoint an Indigenous Postgraduate Officer to act as an intermediary and as an advisor to Indigenous HDR. This role can also liaise with relevant facilities about Indigenous HDR processes and support.
- Develop respectful relationships and inform students about the institution's requirements for the PhD journey.

Recommendations for higher education institutions (continued)*:*

- **Be aware of the disadvantage that continues to be faced by both Indigenous HDR candidates and Indigenous academics. Develop support mechanisms for Indigenous HDR students and supervisors.**
- **Arrange appropriate supervision for Indigenous HDR students to ensure that students are supervised by a team of academics who possess relevant disciplinary knowledge, mentoring experiences and value Indigenous knowledge and culture.**
- **Ensure that a good support mechanism is in place to provide Indigenous students with high quality advice and assistance.**
- **Offer a HDR preparation program for Indigenous candidates to develop good foundations before commencing the HDR research journeys.**

Recommendations for national education policy makers:

- **Establish a national framework to support collaboration between Indigenous and non-Indigenous academics within and across higher education institutions.**
- **Recognise the need for Indigenous research capacity building programs as part of research training within universities and allocate funding in university research block grants.**
- **Provide funding for Indigenous students and academics to participate in Indigenous specific research capacity building – e.g National Indigenous Research and Knowledges Network (NIRAKN).**

This research project was conducted to identify the enabling factors that contribute to successful Indigenous completions. We found that there is too much emphasis on placing Indigenous HDR students with Indigenous supervisors and/or supervisors with cultural knowledge rather than being placed with supervisors with discipline knowledge. Revealed in this study was how Indigenous students feel academically marginalised and want to be valued by their supervision team. It would appear that feeling inferior in a supervisory relationship requires further investigation, as it is not clear whether this is about the supervisor not having cultural knowledge or race influencing change in the relationship. What was given importance within the data was competence in disciplinary knowledge, skill and supervisory experience. The supervisors acquiring cultural knowledge was valued, but its relation to students completing their dissertation remains unclear. Thus, understanding what an Indigenous HDR students wants from their supervision team may not be what they need to complete their HDR qualification. For example, how does a supervisor's knowledge of the student's culture and ways of being help the student complete their HDR qualification? Thus, we aim to shift the focus back to Indigenous HDR students seeking qualified Indigenous and/or non-Indigenous supervisors who have the appropriate discipline knowledge, values the student, and has the capacity to supervise the student through to completion. Until universities develop their own Indigenous HDR capacity-building programs they could provide financial support to NIRAKN to continue offering capacity-building workshops, which have been specifically designed for Indigenous HDR students and their supervisors. Finally we recommend as an attempt to improve the completion outcomes for Indigenous HDR students continued participation in high quality capacity building workshops described above.

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