



'I am not alone': enabling factors for Aboriginal and Torres Strait Islander PhD success

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Abstract

Through yarning and storytelling led by Aboriginal researchers, this study explores the success factors for Indigenous PhD Graduates. Participants comprised 21 Aboriginal and/or Torres Strait Islander people who had completed their PhDs within the last 7 years. Our thematic analysis uncovered themes associated with participants' decision to enrol as a scholar and the factors and experiences that contributed to the successful completion of their PhD. We identified three overlapping yet distinct themes that represent why Aboriginal and Torres Strait Islander people choose to pursue a PhD: Telling our story in our way, My Community needs me to do this, and Practicality rules. A strong sense of Connection and Reciprocity was a crucial factor for participants' successful completion of the PhD. We present a model of our findings model that translates the three key success factors identified in this study as foundational to success for Indigenous scholars' success in their PhD journey.

Keywords Aboriginal and Torres Strait Islander · Indigenous · Higher education · PhD graduates · Success

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Introduction

In Australia, the Doctor of Philosophy (PhD) is the highest educational qualification a person can achieve. It is increasingly seen as the necessary qualification for progression in an academic career and is especially necessary for attaining leadership roles within the academy, particularly permanent positions (Jackson et al., 2011; Logan et al., 2014; May et al., 2013). While the PhD and postgraduate education are often framed in economic terms, it is vital to recognise the social contribution it can provide. Equity in accessing the opportunities to contribute to the intellectual discourse is critical for inclusion and achieving social justice. Schofield et al. (2013) describe Indigenous participation in higher-degree research as central to the capacity of Indigenous people to voice concerns, because the training provides the opportunity to acquire the conceptual and practical skills to contribute to and critique the dominant knowledges and understandings in public and corporate institutions (Schofield et al., 2013). Moreover, universities are typically empowered with the ability to legitimise knowledge and the methods for creating knowledge. Universities are working to speak back against the western standards of knowledge, such an example is the Indigenous Knowledge Institute, a case study from the Universities Australia (2023) Indigenous Strategy annual report. Therefore, the presence of sufficient numbers of Indigenous scholars in leadership roles within universities is essential to expand the 'legitimised' ways of learning and knowing to include Indigenous methodologies, knowledges and understandings.

In 2021 there were 79 Indigenous postgraduate research award completions, this equates to 1.3% of 1103 domestic completions total (Universities Australia, 2023). Further, to reach parity at 3.2% using the 2021 data, there would need to be 194 Indigenous research completions, which would be an additional 115 graduates (Universities Australia, 2023). We note that this is based on the 2021 census data, the Indigenous population is now 3.8%, so even more completions would be needed to reach population parity (ABS, 2023). This indicates the underrepresentation of Indigenous HDR students. This underrepresentation is replicated in the staff of universities. Only 1.4% of all university staff are Indigenous, well below the working-age population of 3.1% (Universities Australia, 2021). Achieving parity in attaining PhD graduates will contribute to the Indigenous talent pool within academia and provide broader representation for Indigenous peoples in other professional and leadership roles. This is further affirmed by Behrendt et al. (2012) who noted the importance of HDR completions in supporting future Indigenous peoples in both accessing and succeeding in tertiary education.

Universities Australia has set parity targets, aiming to reach comparable completion rates for Indigenous and non-Indigenous PhD graduates (Torka, 2020; Trudgett et al., 2021). Indigenous PhD student population doubled over the 13 years from 2005 to 2018 (Margolies & Strub, 2021), with full-time enrolments driving this growth (Australian Government: Department of Education, 2019). It is unclear at this point if increased commencements of PhD programmes for Indigenous scholars will be matched with a similar shift in the proportion of completions, thereby contributing to closing the historical gap between Indigenous HDR commencement

and completions (Australian Government: Department of Education, 2019). In addition to continued efforts to enrol more significant numbers of Indigenous scholars into PhD programmes, it is integral to understand the barriers and enablers to timely completion which will assist in reaching parity targets.

Research has demonstrated a variety of factors that impact the completion of the PhD degree, including the quality of the supervisory relationship, whether members of the Indigenous Community are involved in the supervisory process; academic and non-academic support provided by the university; access to financial assistance and the ability to cope with feelings of social and cultural isolation (Australian Government Department of Education, 2019; Barney, 2013; Hutchings et al., 2019; Trudgett, 2013; Trudgett et al., 2022). There is a growing body of evidence illuminating how universities can best contribute to the success of Indigenous PhD scholars. These critical success conditions include creating 'safe spaces' (Elston et al., 2013), cultivating a welcoming environment including employing Indigenous postgraduate engagement officers (Trudgett, 2013), privileging Indigenous knowledges and perspectives (Elston et al., 2013), and fostering a cohort of Indigenous doctoral students. (Hutchings et al., 2019). Likewise, there is growing scholarship in understanding the impact of the policies of both universities and the government in supporting and inhibiting success (Trudgett, 2013). This is further evidenced by the Universities Australia Indigenous Strategy and annual report (2021, 2023).

Purpose and aims

Building on Barney's (2013), work, exploring not only the inhibiting factors but also the enablers for retaining Indigenous Higher Degree Research Students (HDR), this study explores the success factors for Indigenous PhD graduates. The objective of this study was to uncover the success factors that Aboriginal and Torres Strait Islander graduates relied upon to complete their PhD. The specific aims were:

- Identify what factors contributed to Aboriginal and Torres Strait Islander people deciding to enrol in a PhD
- Uncover the success factors that contributed to scholars completing their PhD.

Positionality

Aboriginal researchers conceived and led this research using Indigenous and western research methodologies. Our positionality is integral to our research praxis as it informs our ways of engaging with the world.

Leanne Holt is a Worimi Biripai woman with strong family connections to the Karuah area of Port Stephens NSW. Although her family links are from these nations, she lives on Darkinjung country, and has forged strong links within this Aboriginal community. She is an Indigenous Higher Education leader.

Cara Cross approaches this study as a proud Goori woman also from the Worimi and Biripai nations of the Mid-North Coast of New South Wales with family connections to the Gringai, Wonnarua and Yuin nations. She lives on unceded Dharug Ngurra and strives to amplify Indigenous leadership in higher education. Dedicated to advancing Indigenous higher education, her research focus is Aboriginal and Torres Strait Islander higher education and health research.

Tamika Worrell is from Gamilaroi Country, and has been grown up by unceded Dharug Ngurra, Western Sydney, where she continues to work and live. She is passionate about Indigenous education. Her research is driven by the need for Indigenous representation in all facets of education.

Connie Henson is a non-Indigenous woman living on Gadigal country. She feels privileged to work alongside Indigenous colleagues to conduct health and education research.

Language

Language is dynamic and there is not currently a term that adequately represents the diverse nations of Indigenous peoples of the land now known as Australia. We acknowledge that the ways we choose to refer to people is inherently political (Roberts et al., 2021). In this study we respectfully use the terms *Indigenous* peoples and *Aboriginal and Torres Strait Islander* peoples. We utilise this language to reflect the diversity of our participants, as well as to contextualise our research to local and global policy and knowledge contexts.

Methods

Participants comprised 21 Aboriginal and/or Torres Strait Islander people who had completed their PhDs between 2014 and 2022. They represented universities in New South Wales, Victoria and South Australia. All participants completed an online survey comprising quantitative and qualitative questions. We invited the individuals who had completed the survey to participate in a one-on-one face-to-face or Zoom yarning session, depending on their availability and geographic locations. Locke et al. (2021) in their Early Career Researcher (ECR) study noted the silver lining of scholars engaging via Zoom, as they were most often away from their workplaces, which elicited an additional layer of openness. Participants were consented into the study via verbal and written consent as approved through the Macquarie University Human Ethics Committee (REF: 5201937388763). The yarning sessions were audio-recorded and transcribed. We refer to participants as scholars and graduates throughout this paper. This reference is a purposeful choice to reflect their extensive scholarship and experiences as graduates. We have chosen to refrain from including any demographic information on the participants due to the small population of this cohort. This includes the choice not to include pseudonyms, or any other research related identifying factors such as Nation groups. We acknowledge that these scholars, like the researchers in this project are aware of their peers, we have worked to

protect the privacy of participants whilst still reflecting the integrity of the words they have gifted us. We consider ourselves as researchers, the conduits of the stories we have been gifted. This is enacted in both our methodology and findings, as we allow the spoken words to stand alone to honour the sovereignty of those who spoke them. Thunig (2022) speaks of the 'word-gifts' that their participants, sovereign academic women offered, which we draw on as we too accept the word-gifts of participants. Storying, and storytelling assists in relationality and creating an image of experience sustaining the knowledge (Phillips & Bunda, 2018).

Yarning is an Indigenous research methodology validated as a safe and effective method to gather data from Aboriginal and Torres Strait Islander people (Bessarab & Ng'andu, 2010; Walker et al., 2014). This Indigenous research tool is also used for analysing and interpreting qualitative data. Yarning is a discussion whereby the yarning facilitator poses questions, and the participant/s are encouraged to explore the topic, including reframing and reinterpreting the questions. We used a yarning method in combination with storying for our one-on-one data-gathering sessions. Storying as method aligns with Indigenous ways of knowing and being (Phillips & Bunda, 2018). On storying, Phillips and Bunda (2018) 'We see story as the communication of what it means to be human, that tells of emplaced, relational tragedies, challenges and joys of living' (p. 3). This descriptive imagining of storying as a method, with consideration to relationality is drawn upon in our storying method. We asked graduates to tell us their story of how they came to pursue a PhD, what contributed to their successful completion and what recommendations they would provide for future scholars. Graduates were encouraged to tell their stories in their own way and share the information they thought was most relevant to their experience. Yarning facilitators were all Aboriginal researchers, who also shared their experiences as researchers with the graduates, creating a safe, comfortable, conversational tone for the sessions. These yarns varied in length from 20 min to an hour. We used thematic analysis to identify the factors that contributed to the successful completion of their PhDs. Three Aboriginal researchers and one non-Indigenous researcher independently coded transcribed interviews and then yarned about the themes until we reached a consensus on the most relevant themes This enabled an organic sharing of our independent findings as we established connections and shared meaning amongst the data (Bazeley & Jackson, 2013; Charmaz, 2006).

Findings

Graduates often positioned themselves within the context of their Communities. They shared personal stories and described how their decisions related to their beliefs, values and cultural understandings. Although, the majority of the Indigenous graduates interviewed had undertaken research related to Indigenous topics it was found that Indigenous graduates researching non-Indigenous topics had common factors contributing to their success. Our thematic analysis uncovered themes associated with (1) the decision to enrol as a scholar and (2) the factors and experiences that contributed to the successful completion of their PhDs. We report our findings on each phase of the scholars' journeys.

Fig. 1 The river of why. Why get a PhD?



Becoming a scholar

Deciding to enrol is the first step to completion, and it was not a straightforward decision for graduates in our study. For most graduates, the decision came after they were well into their careers rather than as a planned educational progression. We identified three overlapping yet distinct themes that represent why Aboriginal and Torres Strait Islander people choose to pursue a PhD: (1) Telling our story in our way, (2) My Community needs me to do this, and (3) Practicality rules—I need this for my job. These three themes are represented in Fig. 1. We describe each theme and illustrate it with representative quotes from the graduates.

Telling our story in our way

Graduates talked about the importance of recording the history and experiences of Aboriginal and Torres Strait Islander people, particularly older people, before they are lost forever. Further to this, many graduates wanted to amplify Indigenous knowledges and experiences and for this scholarship to contribute to their communities and the academy more broadly.

I just wanted it to have a record because the message is changing all the time, so there's got to be a history... If you don't write it down you think, it's going to be lost.

The generational passing forward of knowledges and storying has been a practice that has existed for thousands of years in Indigenous communities (Phillips & Bunda, 2018). Graduates saw a PhD as tool that could contribute to informing our

future communities of significant knowledges and histories from an Indigenous perspective. Although for many doing a PhD was not a planned trajectory, it was determined that for too long Indigenous knowledges had been recorded through a western lens.

Never imagined doing a PhD in my life but I wanted to write a story about the history of the mission and my people and my family, or for my family, and that was the whole point of it, was to have a record for my kids and that to understand what that was like, growing up for their grandmother, people before them, even myself growing up there, because it was a different world. Much of the historical landscape, the cultural landscape, has been written by white Australia and how are we to argue against something that is on paper? Well, then you have to find a means of being able to indicate or suggest why people got it wrong, or at least people are seeing it from one view only.

Likewise, for some, the motivator was to correct misinformation prevalent in present-day Australia. Graduates saw telling their stories through an Indigenous lens as an act of de-colonisation.¹

By documenting this and putting it out there, it lets the wider Community know how important our sovereignty is, and how devastating it is when it's taken away. And we should never do it again.

The specific content of their thesis varied, but the opportunity to gather and systematically document aspects of historical and contemporary experiences of Aboriginal and Torres Strait Islander people inspired many scholars to embark on this journey. The 'credibility' afforded by the formality of a PhD was important for some graduates. Desire for credibility was augmented with the strong commitment to tell the story respectfully and through an Aboriginal and Torres Strait Islander lens. Additionally, scholars felt telling their truth through story provided a way for other Indigenous people to find their own truth and stories.

Producing a PhD ultimately in the end of it, you have a range of those points where you make statements, you justify them and you show where the justification comes from. So eventually what ends up happening is you do make statements that will hold into the future.

What you're actually able to give them is not an insight into your story, but about providing them with cultural meaning for themselves.

¹ Decolonisation is a term used throughout Indigenous communities and is also present within the realm of Indigenous methodologies (Battiste, 2013; Patel, 2016) As noted by Tuhiwai-Smith, 'Decolonization... is about centring our concerns and world views and then coming to know and understand theory and research from our own perspectives and for our own purposes.' (2012, p. 41).

My community needs me to do this

The Community's needs stimulated some of the graduates to commence a PhD. For some, it was a particular question that the Community was asking itself. For others, addressing racism, injustice or inequity was the key motivator. Scholars emphasised the importance of co-design and that the research agenda was driven by the Community (Gwynne et al., 2022). Many of the graduates never envisioned a PhD in their future however their passion for improving the outcomes in their communities and the future of their peoples led them to this journey and empowered them to succeed.

My PhD was in direct response to Community desire...to get some research initially on literacy and Aboriginal kids but after we talked it through, it was quite obvious that the real question was why do Aboriginal kids switch off school. So I got to respond to a community demand.

We do research that makes a difference and is stimulated by the Community.

Graduates emphasised that the knowledge was not theirs but belonged to the Community. They saw the PhD as an evolution in how Community knowledge holders could pass on crucial cultural knowledge. Likewise, they saw themselves as a conduit rather than the creator or as having discovered the knowledge independently. Moreover, they saw it as their responsibility to take custodianship of knowledge, preserve it and pass it on.

It is not my knowledge, I am amplifying it and other Aboriginal people will intuitively recognise it.

We no longer have the same oral history that preserved the nuance. Now we are using this co-design process to record with the same level of precision.

I was told by one of the Elders I interviewed; you were meant to do this work – you were chosen to take custodianship of this knowledge.

The letter from my Elders stating their approval and support for me (not just my research!) to conduct research on ... Country as part of the Ethics application process. I am still moved by the aspirations they shared for me as a member of the [Aboriginal] Nation.

PhD pathway can be fruitful and rich, and the knowledge you gain can be handed down to others along the way.

While a PhD is often seen as a marker of individual achievement and profile, Indigenous scholars prioritised responsibility to Community and valued Community's reception of their work. Scholars described a feeling of personal responsibility to Community. They were being entrusted by the Community to undertake research that reflected Community needs and expectations, as well as deliver outcomes that responded to the needs of the Community in a culturally appropriate way. Scholars felt this was a significant responsibility however they also felt privileged to be given the opportunity to make such an important contribution to their communities.

I have to face the Community if I don't get it right, whilst it may seem onerous there is feeling of responsibility and pride to make this type of contribution to my Community.

It held me to account during the challenging times. I knew that I had to keep progressing because I didn't want to 'shame' myself.

Do a doctorate because it allows you to help in ways you could not before. If you do it for kudos you diminish your ability to help.

Graduates also noted the value formal western qualifications bring to their Communities. There have been generational impacts on the opportunities for Indigenous peoples to participate in tertiary education due to the history of exclusion from these credentials which are highly valued in western culture. This extends into employment and has an overall impact on Indigenous peoples' sovereignty over their own futures. Increasing educational opportunities and outcomes at the highest tertiary level results in increased sustainable outcomes in such areas as Indigenous employment, health and socio-economic indicators. They also emphasised how their research could be used to educate the broader population and impact policy for the benefit of all Aboriginal and Torres Strait Islander people.

The more educated Aboriginal and Torres Strait Islander people we have, the better off our Communities are gonna be in the long run.

My PhD topic was always something I was really passionate about 'cause I did employment relations as an undergraduate and I think it was kind of an extension of what I'd been through in my life's journey. You work for an employer who, has no idea or understanding about how Aboriginal people go about their daily lives, they have no idea how to be culturally appropriate in workplaces or anything like that.

I have a lifetime career that I could build on through some research, that hopefully would lead to policy change.

Practicality rules: I need this for my job

A number of the graduates in our study were well established in academic or other professional roles before attaining a PhD. However, for many, although they were successful and high achieving in their roles, they felt a subtle and sometimes overt pressure to complete a PhD. The sector is also changing, and in the early years if universities wanted to appoint Senior Indigenous roles there weren't many Indigenous people with PhDs so they would target Indigenous people with undergraduate degrees and leadership attributes. In more recent years the requirement for even junior academics to have PhDs has become more prevalent and for Indigenous academics and leaders to remain competitive a PhD has become imperative.

It just became increasingly more important if you wanted a job.

Increasingly seeing people get promoted and brought in around them who don't have maybe as much experience but they have PhDs, and the university really valued that. So that they were employing people with limited experience... if you wanted to stay, you had to do it.

And if you look at all the job ads now when they come out, pretty much all of them say PhD.

Others recognised that a PhD was a prerequisite for advancement into leadership or other roles with more significant influence. Whilst others highlighted the importance of role modelling for members of the Community and for future scholars. For those working in the sector it was important to lead by example and demonstrate that achieving a higher degree as realistic, as Marian Wright Edelman (2015) said, ‘you can’t be what you can’t see’ (para 5).

if I wanted to progress into senior academia, I couldn’t do that without a piece of paper. And I certainly didn’t have the credibility unless I had that piece of paper.

My career has always been keep doors open. I did the masters and I could have done a coursework masters but I chose to do it by research, and that kept the academic door open more than just a coursework masters, so my advice is to look for options that don’t close doors but actually give you another lead on if you want to go somewhere else you can move into.

Well, I think for role modelling, I find it very wrong when you’re encouraging people into higher education and you’re not prepared to take it to the nth degree yourself. So I thought for that reason, it’s a bit hypocritical, you’re encouraging people to stay on, and secondly for their own future careers and development, they need to have these qualifications. And I knew and I openly said to them, ‘look, I got this job, when I was appointed professor, I got this job on a research masters.’ I said, ‘in ten years I won’t be competitive’.

Completing the PhD

A key focus of this research was to identify the factors that contributed to not only enrolling but to the successful completion of the PhD. Many of the graduates in our study described a sense of responsibility or obligation to complete. They identified a range of factors, conditions and practices that contributed to their success. Each individual is unique, and the same things that are motivating and helpful to one person may impede progress for another. It is vital to respect the diverse resources and methods Indigenous scholars rely upon to complete a PhD successfully. Nevertheless, there were several strong themes that came through in our analysis, all underpinned by connectedness. In addition to connectedness, graduates recognised two other factors contributing to their success: (1) Personal resources and (2) Finding meaning in the research process. We have organised these themes into a model that describes the factors that underly success including motivating factors from the participants’ history/past; conditions that existed during their tenure as PhD candidates; and the outcomes they anticipated following completion.

Connectedness

A strong sense of connectedness and reciprocity was evident for most participants. We titled this overarching theme ‘I am not alone’. It signifies the strength, motivation, and support participants felt from, and a sense of responsibility to,

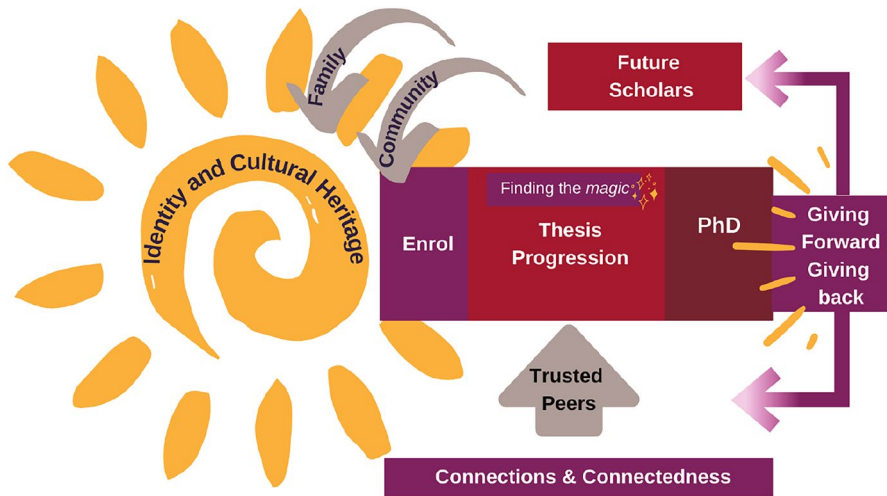


Fig. 2 Connectedness—I am not alone

their connections. Connections included: Ancestors, Community, family and peers. Each of these connections played a specific role in facilitating scholars' ability to cope and thrive in the academic environment. While each connection was important for different participants and relevant at different points in time, all participants described benefiting from solid personal connections at some point in their PhD journey. This theme of connectedness also emerged as an outcome upon completion of their PhD. This is represented in Fig. 2. This illustrates the sun as the symbolism for identity and cultural heritage, like the sun, they give life and permeate all facets of life as the light extends and reflects to all elements.

Significantly, participants identified themselves as part of an interwoven infinite existence that stretched back since time immemorial, including Ancestors, Elders and Aboriginal and Torres Strait Islander scholars (Huggins, 1993; Langton, 1993; Martin & Mirraboopa, 2003; Moreton-Robinson, 2013; Nakata, 2007; Rigney, 1999). This also extended into the future to the next generation of scholars, family and community members. Seeing themselves as the conduits of knowledge and wisdom for their Communities, participants express a sense of responsibility, strength and empowerment because of their connectedness.

I'd also acknowledge that, with all of that work, that's come by other Aboriginal scholars and academics to make space in university, I honour all of those Elders and Community and scholars that have really trailblazed. And we've been able to do it, following their Deadly paths. I feel really honoured to be a part of it. And then to also be able to pass on.

I felt like I was writing with them, to them, and this idea of a call and response methodology. So we were really thinking about ancestors and calling to the future and kind of calling and responding to the past in the future

to say, ‘This is the kind of work we’ve wanted to see happen. These are the ideas that are important’.

Family and Community provided emotional and functional support. Emotionally participants absorbed the trust, confidence and positive expectations family had in them. Although, graduates expressed that their families and communities did not necessarily understand the technical aspects of undertaking a PhD they knew it was important work and were proud and supportive. To know that families and communities were walking with them inspired the graduates to continue, even when it was challenging. Graduates also described the importance of practical support from family and community members. This included cultural advice and problem solving to integrate cultural needs and protocols related to expectations within a western academic environment. They also offered words of wisdom to the next generation of scholars.

That my family and Community were also behind me, meant that it wasn’t just about what I felt.

[on father] he was just like, I’m so proud of you, he said, you have just done so much...

I think having a really supportive family really, really helped.

Surround yourself with people that love you and that care about you, and that will help you get through the PhD, because it’s a bloody long slog, and you know how hard it is on you...like, mentally.

And so actually having that Elder there as well, the Aunty, my old Aunty, kind of support that change and support that, and I engaged with my Council for Elders quite a bit, and they kind of approved of the initial project, and they oversaw what I continued to do. And that really helped because I think a lot of the time, as I said before, it can be a really solitary process, and some of the systems don’t necessarily reflect you or what you want to do.

Graduates also were driven by the example they were setting their children. Demonstrating to their children resilience and commitment in their drive to contribute knowledge for the benefits of community and to future generations strongly contributed to their PhD progression and ultimate completion.

Well, I think the first thing that comes to mind was my own children so showing them that anyone can do it was really important and that you can succeed even against multiple odds and trying to show them that if you’re really committed, you can achieve it and they’re fully aware of what all the circumstances that happen during those four years.

The third element of connectedness was with academic peers. Undertaking a PhD can be a very isolating experience, particularly as an Indigenous candidate (Barney, 2013). As our participants highlighted, they were often the only Indigenous candidates in their discipline or one of a small number across the university. The opportunity to connect with other Indigenous students to share their experiences, challenges and insights was seen as integral to success. A collaborative approach was thought to be more aligned to an Indigenous way of doing and knowing. It

boosted self-belief, drive and determination knowing that they were not alone. Scholars described the significance of peer relationships with other Indigenous PhD scholars within and outside their field of study.

And we were sharing a lot of our ideas together. So that was a really good way for us, because we really encouraged and supported and believed in each other, even if we didn't always believe in ourselves. Believed, like I have so much faith in their talent and their importance. Because it's also something about the individualism of academia that is not really the way that you're raised.

I mean drawing on strength from everybody else is the only thing that I think got me through.

I used to have one girlfriend who was doing her honours at the same time I was doing my PhD, like towards the end, and we would have a date night once a month. Where she would take me out of the house, to a local restaurant or pub or something just to have a meal, to talk, just to debrief and relax. And that was really, really important to be able to do.

So knowing that my sisters [cultural reference for Indigenous colleagues] believed in me, that they really believed in me and they believed that I could do it.

In addition to comradeship and companionship, they noted the importance of creating trusting relationships with peers who understood their cultural context. It allowed for a collective of shared values, perspectives and aspirations in building a sense of community within the HDR environment. The ability to 'try out' ideas and ask questions provided confidence, reassurance and contributed to the development of professional and academic courage. This aligns with what Behrendt et al. (2012) identified in the review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander peoples, noting 'Universities may wish to consider how their informal and formal networks can be facilitated and strengthened to further support Aboriginal and Torres Strait Islander students, without placing any extra burden on Aboriginal and Torres Strait Islander academic staff.' (p. 86).

We knew each other's families. We knew each other's parents, grandparents. We have this sense of our community context, but also the ethics of that person. Because I don't know if it would've been as easy if I didn't totally trust. There was total trust there. But when you've got that cultural capacity around you, you feel a lot more grounded in it. So you think, 'Okay, I trust my Deadly sisters' thoughts on that. So I feel strong in that'. And then you're more confidently moving forward.

I think that was a major thing because they understood everything you were going through as far as your family... Community... and all of the obstacles that you were going through as well.

The National Indigenous Research and Knowledges Network (NIRAKN) was funded by the Australian Research Council (ARC) to contribute to building on

the capacity of Indigenous HDR students through collective Indigenous research workshops and forums, as well as developing and distributing resources to Indigenous HDR students (NIRAKN, 2022). NIRKAN further provided mentorship by senior Indigenous scholars and led a strong national network that all Indigenous HDR students could be a part of. Graduates highlighted the value of organisations such as NIRAKN (NIRAKN, 2022) in terms of facilitating connections with other Indigenous scholars. Unfortunately, programmes such as NIRAKN are reliant on funding that has a finite timeline and unless universities commit to funding a sustainable model these important opportunities cease to continue. For many graduates these peer relationships developed into close personal bonds and trusted professional collaborations, reducing feelings of isolation and contributing to their personal growth.

it's important to find other colleagues who are in a similar situation to help motivate and keep you on track. The NIRAKN master course was of great value to me not just research methodologies but meeting other PhD students. I think it also made us a bit braver, because we were there with each other, so we were able to speak about the important things... we could advise each other... Keep each other safe, but also be brave in what we said, because we had each other's backs.

So from my perspective, the success factors were a collective process that allowed me to do a lot of work collaboratively, and then still write about my contribution to that.

And so for us it felt like a really comfortable way of being, which was that we come together and we speak together and we help each other finish our ideas and add to each other's ideas and support and listen really carefully with each other and remember different things.

Sitting in the classroom or sitting in other spaces we were in where other people had similar experiences to me, I think really kind of not only value-added to my research, but value-added to me as a person and allowed me to grow.

Connectedness and collaboration were fundamental to the graduates' success. Many believed that without community, family and peer support the experience would have been more isolating and may not have been completed. Graduates recognised two other factors contributing to their success: (1) Personal resources and (2) Finding magic in the research process. The recommendations they made for future scholars also reflected these themes. These too are reflected in Fig. 2 and explored below.

Personal resources

This theme included the wide-ranging attributes, habits, practices and skills that contribute to the scholar's success. Graduates highlighted the value of resourcefulness and determination. Our Indigenous authors similarly reflected on the value they gained by tapping into the examples provided by previous Indigenous scholars.

So if I didn't know what I was talking about, say, for example, thesis structure, I'd get onto the library research database and I'd download 20 theses

and I would just look through all of their tables of headings and I would go through and I'd see, what did this person do? What did that do? That was helpful because there was every model.

It takes tenacity, and persistence, and determination, and strength really. That's what drags you through in the end.

It wasn't some mentor, some magical supervisor that was going to make this all happen, so, if you didn't find the answer, then you didn't have the answer. I got really good at looking at other models and other language and the way things were written. I wouldn't copy what people had written, but I'd certainly get an understanding about how they were framing it. I just was a lot more self-directed and trying to find answers. Because otherwise you just didn't get it done.

Self-discipline was often cited as a necessity to get through the significance of undertaking the PhD. Graduates also mentioned various practices of work and study habits that contributed to their success. They generously shared advice they had learned the hard way to guide future scholars.

Yeah, it's discipline. And when you read, make, or watch something, any source material. Write about it straight away, because you will forget, even a couple days later.

I think we all romanticise it a little bit too. ...the truth of it is, it's flaming a lot of work. It's a lot of hard work and, and the onus is completely on you.

Structure. It helps you. You need a timeframe. I worked best to timeframes.

And also these are all practical things. Don't leave your referencing, your bibliography to the last, and do it manually when there are tools.

The magic in the research process

This theme reflected ideas, philosophy, or even the process of gathering data (stories) as a source of satisfaction and magic. Scholars shared the unexpected outcomes and unanticipated pleasures they gained from the research journey. This was emphasised when exploring topics that they were passionate about or that contributed to their communities. A passion for the topic was foundational for success.

Did a master's degree and then because I was employed as an academic, I thought I've got to do my PhD and I love ideas. I love philosophy.

So I really enjoyed it... I like writing. So the process of publishing a paper was really enjoyable. So I did it by publication. So getting those publications and those hurdles, overcoming those, was probably the motivating steps. I found they were very motivating to get them under my belt.

That was the great part about it is if you got some of the old people. That was magic, hearing some of the old stories.

In addition to motivators and supports from the past and present, participants gained strength and a sense of empowerment from their aspirations for the future. Indigenous scholars saw themselves within the context of their Community and

heritage. They regarded the knowledge produced through their research as Community owned. Scholars felt a responsibility to continue the legacy created by those that came before them, such as the Indigenous scholarly trailblazers previously mentioned. Moreover, they were strengthened and inspired by the responsibility to bring it forth and into the future for future scholars, community members and the broader public. They recognised themselves in the long line of community members chosen to receive and pass on knowledge and wisdom.

We have responsibility for knowledge, but it's not yours alone. Your responsibility is also to share it, to contribute to the greater good.

I really wanted to do the PhD to make a difference, and then just to give back. For me it was all about, you know, giving back, and how do I do that once I've got a PhD.

So to some extent what happens is that you broaden your cultural horizon. Your identity does not improve, but it makes you feel more capable, able to scrutinise, hold an argument, overcome some of those really tough challenges, particularly when you're feeling under pressure or you're concerned that anything you do or say might have an effect on somebody else.

The second component of future-focus motivation was the recognition that attaining a PhD would provide credibility for themselves, reflect positively on other Indigenous people, and encourage others to pursue higher education. Although not the focus of this research, participants often talked about how they were 'giving forward' their learnings from their experiences as scholars.

I feel like I've really earned my place at the table as well with the non-Indigenous academics.

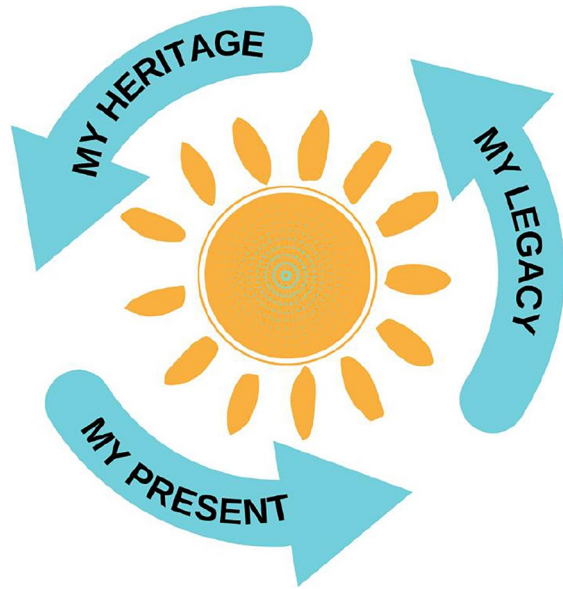
And I just got a grant that has three PhD students attached to it, but at different universities, and it's something I'm really aware of, making sure that that isolation doesn't grow. Actually minimising it saying how can we make sure that people are there that they're able to support each other and get to know each other.

Discussion

The first requirement to achieve a PhD is to enrol, which can be daunting in and of itself. But to have real value, it also requires completion. There are enablers that equip people to accomplish both parts of this process. Previous research has primarily examined the impact of supervision and the role of the University or other institutional support in facilitating success (Barney, 2013; Hutchings et al., 2019; Trudgett, 2013; Trudgett et al., 2022). 'In this study, we have defined success factors that contribute to scholars taking the first step of enrolment and the critical success factors that sustained them through this journey. Interestingly, despite when yarning openly with the scholars about any and all success factors, internal institutional programmes such as supervision were not prioritised.

The PhD journey for Indigenous scholars is a circle of learning and growth through connections as represented in Fig. 1. Scholars were strengthened by an

Fig. 3 Success through connecting for the past, present and future



understanding of themselves within the existence of their past and the knowledge they were part of continuing that legacy into the future. They were inspired by their Ancestors, Elders and scholars that came before them. These connections sustained them and were reinforced by family and community relationships and bolstered by connections with Indigenous peers. The connectedness included practical and emotional support and was reciprocated through the scholars' sense of responsibility to respectfully process and pass forward their learnings. Scholars demonstrated reciprocity by their awareness of how they broadly represented Indigenous people and how they could use their learnings and accomplishments to benefit other Aboriginal and Torres Strait Islander people. As described by one of our authors *'the scholars experienced the longevity of knowledge as a thread that runs from the ancient past through the present and into the yet unknowable future'*. There is a continued consciousness and awareness of the pivotal work that the previous generation of Indigenous scholars have undertaken. This is met with a unique responsibility and honour. The scholars continue the work to challenge the academy by incorporating Indigenous ways of knowing and doing into a western system of knowledge transmission (PhD thesis). This generation of scholars are positioned in history to shepherd these new creations as well as pass forward a true account of the Indigenous knowledges that have come before.

Thus, building current and future scholars' capacity to tap into the enabling factors uncovered in this research early in their journey is vital. We present a framework that translates the three key success factors identified in this study as foundational to success for Indigenous scholars success in their PhD journey. This is reflected in Fig. 3, connecting for the past, present and future.

With this framework, we encourage scholars to consider the layered connections that will drive them towards success. This includes a range of critical reflection

questions that relate to the three drivers of my heritage, my legacy and my present. Whilst we present these three areas separately below, they are in many ways inseparable as we look at these as capturing an interrelated existence of looking back and looking forward. We present the framework represented in Fig. 3 as a first draft. This framework will be explored in further depth in a future paper.

Strengths and limitations

The main limitation of this study is that potentially, it is over representative of the arts, humanities, health and education. In identifying this we also acknowledge that these disciplines represent the majority of our HDR study by Indigenous students. Future research that seeks explicitly to involve graduates in technology, business, engineering, and other disciplines will strengthen and potentially refine this study's findings. A key strength of this study is the Indigenous leadership and governance. The use of Indigenous methodologies for data collection was in keeping with the values expressed by the graduates and likely to have created a comfortable trusting relationship between the researchers and participants, thereby increasing the depth and reliability of the information they were willing to share.

Conclusions

This paper has presented a journey with Indigenous scholars for Indigenous scholars. Through drawing on past and present experiences we aim to fortify pathways for the future. We do so through the Elders and knowledge holders who have come before us (Huggins, 1993; Langton, 1993; Martin & Mirraboopa, 2003; Moreton-Robinson, 2013; Nakata, 2007; Rigney, 1999). In the spirit of continuing this work, we invite other researchers to collaborate in knowledge creation and transmission by testing and refining this framework. We further invite current and future PhD scholars to use this tool, share your experiences and help us build a stronger foundation for success for those that come after us. We also welcome collaboration from Global Indigenous scholars, as we move to identify shared and varied factors that contribute to Indigenous PhD success around the world. We look to draw connections and collaborations with other Indigenous nations who too are impacted by settler-colonialism (Wolfe, 2006) and the nature of western institutions and knowledges.

Cultural heritage, Community, family and trusted peers are significant assets that Indigenous scholars hold and can call on to motivate and sustain their efforts throughout their PhD journey. These relationships are vital. Tapping into these connections early and often is likely to benefit scholars when challenged. The strong sense of connection with family and Community that many Aboriginal and Torres Strait Islander people experience is a strength that scholars can rely upon even before they enrol. Moreover, they can build upon their ability to connect by actively seeking relationships with Indigenous peers both within and beyond their primary area of study to promote not only surviving but thriving in the academic world by remembering you are not alone.

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Declarations

Conflict of interest The authors declare that there exists no competing financial interest or personal relationships that could have appeared to influence the work reported in the paper.

Ethical approval This study has been approved by MQ Human Research Ethics Committee 5201937388763.

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