

Resilient Epistemologies: Integrating Crotty's Framework With Indigenous Yarning Protocols for Decolonial Research

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Abstract

Indigenous Knowledge Systems (IKS) are grounded in relationality, land-based learning, and intergenerational practice. This research centres those knowledges through the integration of yarning as both method and methodology, alongside a structured framework adapted from Crotty (1998), to support ethical, culturally grounded, and socially just inquiry. Grounded in relationships with Aboriginal communities on Bundjalung Country (Northern NSW, Australia), the study affirms Indigenous sovereignty in research, where knowledge is guided by Elders, shaped by ceremony, and transmitted through oral tradition, dance, and storytelling. Conducted in collaboration with the Aboriginal Reference Group at Southern Cross University, the research draws on principles articulated by Gnibi Elders that assert Indigenous Knowledge as intelligent, ethical, and relational. External disruptions such as the Lismore floods and COVID-19 reinforced the value of cultural resilience and care in research design. Yarning circles offered culturally safe spaces for reciprocal exchange and collective learning, enabling the community to shape both the method and the message. The study demonstrates methodological insight and innovation by adapting Crotty's Western epistemology, theoretical perspective, methodology, and method within an Indigenous research paradigm strengthens reflexivity, data sovereignty, and accountability. It positions yarning as a methodological process of transformation that enables deep engagement with place, identity, and ancestral knowledge systems. By aligning Western academic frameworks with Indigenous protocols, this work challenges colonial research hierarchies and affirms community-led knowledge production. It offers a decolonial and relational model for research grounded in care, ethics, and cultural continuity. In doing so, it contributes to broader global efforts to transform institutional research practices and prioritise equity, Indigenous governance, and affirming methodologies across disciplines.

Keywords

crotty method, cultural interface, decolonising knowledge systems, Indigenous methodologies, yarning as research

Introduction

Indigenous Knowledge Systems (IKS) are deeply relational, place-based, and interwoven with cultural practice, kinship, and land. These systems reflect an enduring commitment to ethical engagement, intergenerational learning, and holistic understandings of the world. Yet within academic research, IKS are often marginalised or distorted through attempts to fit them within rigid Western paradigms (Day, 2022; Day et al., 2024; Sheehan, 2011). The persistence of colonial hierarchies in academia continues to diminish the legitimacy of Indigenous perspectives, calling for an urgent transformation in how research is conceptualised and conducted (Moreton-Robinson, 2017; Smith, 1999). This article responds to that need by

demonstrating how Affirming Methodologies grounded in Indigenous values, protocols, and sovereignty can be enacted through relational research design.

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Drawing on a six-year research journey conducted in partnership with Aboriginal communities on Bundjalung Country, this article shows how collaboration at the cultural interface fosters ethical, reciprocal, and decolonial research practices (Nakata, 2007). Guided by Elders and informed by ceremonial and oral traditions, the project integrated yarning as both a method and a methodology, supporting the transmission of knowledge in ways that affirm cultural identity and relational accountability. The research was further shaped by external disruptions, including catastrophic floods and the COVID-19 pandemic, reinforcing the need for culturally responsive and flexible design grounded in care.

To navigate institutional demands while upholding Indigenous research principles, the study adapted Crotty's (1998) four-part framework: epistemology, theoretical perspective, methodology, and method through an Indigenous lens. The epistemology is grounded in relational ways of knowing, where knowledge is co-created through connection to Country, community, and kinship rather than extracted or owned. The theoretical perspective draws from decolonial and Indigenous standpoints that privilege story, responsibility, and reciprocity as central to understanding. The methodology is expressed through yarning, a culturally embedded process of conversation and reflection that honours oral traditions and relational accountability. Used reflexively, this structure provided a bridge that allowed Indigenous ways of knowing to remain central, while meeting the formal requirements of academic inquiry. For example, one student reflected that Crotty's method "helped me set up the bones of the thesis," illustrating its potential to scaffold culturally grounded scholarship within systems not built to accommodate it.

The methods emerge through practice-based engagement with Elders, students, and Country, guided by cultural protocols rather than externally imposed procedures. Through this reconfiguration, Crotty's model becomes a decolonising scaffold: one that not only situates Indigenous Knowledge Systems within formal research structures but also challenges those structures to evolve in response to Indigenous sovereignty and intellectual leadership.

Crotty's framework, when aligned with relational and decolonial perspectives, as proposed in this paper, enhances the methodological rigour of Indigenous research by promoting transparency, coherence, and cultural responsiveness. This paper follows a decolonial structure that resists linear, Western academic conventions by centring Indigenous voices and relational knowledge systems (Day, 2022). The structure moves from contextual grounding in Country, to collective reflection, to the emergence of key themes through story and dialogue. This is particularly important in education, where the adoption of yarning and ceremonial dance has shown to enrich Science, Engineering, Technology and Mathematics (STEM) learning and foster meaningful student engagement (Day, 2022; Gammage, 2011). The interconnectedness of knowledge, land, and cultural identity within research and pedagogy disrupts deficit-based models and supports more just and holistic educational outcomes.

The theoretical perspectives grounding this study draw from Decolonial Theory (Smith, 1999) and Critical Indigenous Theory (Moreton-Robinson, 2017), which critique the colonial logics underpinning knowledge production and assert Indigenous intellectual sovereignty. Smith's work in *Decolonising Methodologies* (1999) challenged dominant paradigms by positioning Indigenous peoples as researchers and theorists in their own right, an approach further extended by Moreton-Robinson's (2017) interrogation of how settler institutions deny Indigenous sovereignty through capitalist and patriarchal reasoning. These theoretical foundations, combined with the relational design of Crotty's method, enabled a culturally grounded critique of research conventions while affirming Indigenous knowledge governance.

By centring yarning and ceremonial knowledge within an adapted academic scaffold, this article contributes to the transformation of research practice and highlights the possibilities for Indigenous and Western knowledge systems to coexist, provided that Indigenous epistemologies are genuinely privileged. This is not merely a methodological choice, but a political and ethical commitment to relational accountability, equity, and community-determined futures.

Research Design and Cultural Protocols

This manuscript is intended for researchers working at the cultural interface (Nakata, 2007), where Indigenous and Western knowledge systems meet, often under conditions shaped by colonial legacies. The narrative design draws upon journal entries, quotes from Elders in the Aboriginal Reference Group (ARG), and artefacts of Aboriginal dance, collectively forming a ceremonial structure that reflects the relational ethos of Indigenous Knowledge. This design honours the evolving transmission of knowledge and the strength of intergenerational guidance embedded within Indigenous epistemologies.

The integration of yarning as both method and methodology (Braun & Clarke, 2006) enriched the research process by enabling critical insights into cultural permissions, ethical engagement, and the reflective learning that occurs through culturally safe relationships. Yarning was not only a means of data collection but a transformative practice that prioritised care, deep listening, and reciprocal exchange. The protocol, situated at the intersection of method and methodology, documented what the researcher brought, respected the community's values, and validated the lived experiences of participants, reinforcing relational ways of knowing (Braun & Clarke, 2019).

The thoughtful recognition and support of Professor Lynne McPherson, a non-Indigenous supervisor, exemplified affirming research practice across cultural contexts. Lynne's guidance of the bridging potential of Crotty's method contributed significantly to the project's progress and integrity, particularly during times of disruption. This collaboration underscores the importance of reflexive, respectful partnerships in enacting Indigenous-led research that is culturally

grounded, ethically robust, and aligned with principles of care, relational accountability, and knowledge sovereignty.

Positionality Statement

As an Aboriginal scholar, my engagement in this research is grounded in lived experience, cultural responsibility, and community accountability. This work reflects a lifelong commitment to Indigenous pedagogies, sovereignty, and relational research practice. My role as both researcher and community member necessitated a continual process of critical reflexivity, guided by the wisdom of Elders, ceremonial practice, and the cultural protocols of Bundjalung Country. The support of my non-Indigenous supervisor, who recognised the bridging potential of Crotty's method, exemplifies how respectful, culturally responsive partnerships can enable Indigenous-led research to flourish within institutional settings.

Decolonising Research: Setting the Framework

Research within settler-colonial contexts such as Australia continues to be shaped by the enduring legacy of colonisation, which began with European invasion in the 1770s. These colonial foundations underpin institutional norms that often marginalise Indigenous voices and knowledges. When research fails to centre Indigenous epistemologies, it not only perpetuates epistemic violence but reinforces entrenched power imbalances within the academy (Ali et al., 2021; Yashadhana et al., 2021). True decolonisation requires more than rhetorical inclusion; it demands a fundamental interrogation of dominant research logics and a shift toward affirming alternative ways of knowing, being, and doing (Ali et al., 2021; Martin & Mirraboopa, 2003; Moreton-Robinson & Walter, 2009).

Positioning research within Indigenous philosophies fosters relational accountability and ethical, sustainable inquiry. For instance, the Anangu and Yugul Mangi Peoples prioritise long-term relationships over short-term conflict, offering models of governance and engagement grounded in respect and continuity (Macdonald, 2019). Such philosophies challenge the transactional nature of Western research and affirm practices that are slow, careful, and relational. Indigenous Knowledge Systems are inherently holistic and interwoven with land, language, kinship, and community, requiring researchers to engage in active listening and meaningful consultation with Elders and community members.

As Aunty Dale Williams, a respected Elder of the Goodjinburra Peoples of the Far North Coast, NSW, explains, "Stealth is how we have survived; we have always found ways to pass on our knowledge, even when they tried to erase it" (Aunty D. Williams, Goodjinburra Nation, personal communication, 2020). This insight reflects the strength and adaptability of cultural protocols that continue to carry knowledge forward under the weight of systemic erasure.

Following MacLeod's (2021) guidance on citing Indigenous Elders and Knowledge Keepers, this citation recognises Aunty Dale's Nation and her authority as a Knowledge Holder, moving beyond the limiting 'personal communication' label. This approach ensures that Indigenous oral teachings are cited with the same scholarly respect afforded to written academic sources, supporting decolonial principles of attribution and intellectual sovereignty. The metaphor of stealth, further embodied by the White Owl totem, illustrates how Indigenous educators affirm culture and embed deep meaning within constrained institutional environments. This process is not only a method of survival but also an act of cultural sovereignty, ensuring that knowledge transmission remains grounded in community authority, ceremony, and resilience.

The Role of Totems and Yarning in Indigenous Knowledge Systems

Totems are not mere cultural symbols; they are living repositories of law, learning, and identity, rooted in the Dreaming and sustained through relational responsibility. Within many Indigenous communities, totems carry spiritual, ecological, and educational significance. They are bound to land, law, kinship, and intergenerational wellbeing (Burarrwanga et al., 2013; Day, 2022; Rose, 1996, 2003). Passed down through matrilineages, totems also play a key role in environmental stewardship and the management of complex ecosystems (Steffensen, 2020). In this research, totemism formed a central pedagogical scaffold, demonstrating how Indigenous frameworks align learning with Country and local protocols.

The White Owl totem of the Bandjalang Peoples of Bundjalung Nation in northern New South Wales exemplifies this stewardship. It symbolises stealth, protection, and resilience. Knowledge holders have shared how its silent flight offers metaphorical guidance for navigating education systems and designing culturally responsive STEM curricula (Day, 2022). These insights affirm that totems are not static motifs; they are dynamic tools for cultural survival, continuity, and transformation, positioning education as a site of resurgence rather than assimilation (Alfred & Cornassel, 2005).

Yarning, as both a method and a methodology, was employed to uphold these cultural protocols and deepen understanding of totemic significance. Yarning enabled participants to express how totems continue to shape lived experiences, offering a relational and ethical research approach. Far beyond a narrative technique, yarning is a sovereign practice that affirms Indigenous ways of knowing. It enables storylines to flow in layered, non-linear ways, linking personal memories with ancestral knowledge and place-based responsibilities (Rose, 2003).

This process revealed that Indigenous Knowledge is not merely archived in human memory but is encoded in Country, story, and ceremony. The practice of yarning allowed these

knowledges to emerge authentically, supported by trust, deep listening, and mutual respect. The dual application of yarning, as both method and methodology, ensured that totems were not compartmentalised into data but honoured as cultural expressions of law and learning (Braun & Clarke, 2019).

Throughout this research, the principles articulated by Gnibi Elders were honoured and upheld (see Appendix 1). These principles assert that Indigenous Knowledge is relevant, ethical, intelligent, practical, and helpful, and that Indigenous Peoples are active, able, and worthy. They affirm that Elders are the custodians of Aboriginal Spirituality, deciding what can be shared and what must remain protected. These principles challenge deficit framings and reiterate that culture is sacred, identity is lived, and knowledge is inherently relational. They formed the normative backbone of this research and ensured that yarning remained culturally grounded, ethically robust, and sovereign in process.

Integrating Yarning Protocols into Crotty's Framework

A key innovation in this research was the integration of yarning protocols into Crotty's (1998) structured framework. This alignment of Western and Indigenous Knowledge systems is an example of how Aboriginal Scholars can be supported at the cultural interface to articulate research findings. Yarning also enriched Crotty's framework by embedding cultural protocols into each element, ensuring that research was not only coherent and rigorous, but also relational, reflexive, and respectful.

Within yarning circles, participants shared stories in ways that celebrated strengths, relationships, and responsibilities. These circles upheld culturally safe spaces where openness, honesty, and deep listening were central (Bessarab & Ng'andu, 2010; Hughes & Barlo, 2021). Unlike Western extractive methods, yarning affirms the dignity of participants and honours the sovereignty of knowledge shared.

As a data collection process, yarning enabled flexible and culturally responsive engagement (Dean, 2010). It allowed multiple threads to emerge organically, fostering collective meaning-making through narrative flow (Martin, 2016). In this project, the use of yarning circles foregrounded community voice, relational authority, and deep respect for cultural protocol (Bessarab & Ng'andu, 2010; Dean, 2010; Hughes & Barlo, 2021). In turn, this affirmed Indigenous Knowledge not as content to be analysed, but as a living and evolving pedagogy of place.

Culture, Identity, and the Dialogic Power of Yarning

Culture provides identity, values, and the framework for living ethically on Country (Uncle Glen, Bundjalung Elder, personal communication, 2021; Eastman, 1994). Through yarning with the Aboriginal Reference Group (ARG), it became clear that culture emerges dynamically when stories are shared. Yarning circles nurtured resilience, belonging, and cultural continuity,

especially in times of disruption (Uncle Glen, Bundjalung Elder, personal communication, 2020–2021).

Participants described how these circles build strength by connecting individuals to kin, place, and identity (Fredericks & Bradfield, 2021; Graham, 2017; Rix & Rotumah, 2020). Without these practices, knowledge transmission is disrupted, and culture risks becoming fragmented (Nakata, 2007). Within yarning, law and social practice are carried not through documentation, but through voice, dance, silence, and drawing (ARG1, 2020–2021; Barlo et al., 2020).

Yarning with Elders preserved ancestral narratives and strengthened collective futures (Woodward et al., 2020). In doing so, it mitigated the harms of colonisation (Ali et al., 2021; Yashadhana et al., 2021) and contributed to cultural repair. Sharing of totems, songlines, and story reinforced the ontological depth of Indigenous ways of knowing, and the responsibility to sustain these for future generations (Matapo, 2021; Nakata, 2007). Recognising the lived authority of Elders and maintaining data sovereignty were central to this research's affirming and transformative outcomes (Ali et al., 2021).

Conceptual and Theoretical Connections

Indigenous conceptual models have long been misrepresented, marginalised, or forcibly reshaped to fit within Western academic traditions. This research reaffirms that when communities are meaningfully consulted and respected as intellectual authorities, Indigenous frameworks can powerfully transform mainstream disciplinary spaces. One such example is the Goompi Model, which demonstrates how mathematics education can be reimaged through relational and culturally grounded frameworks (Matthews, 2009).

The Goompi Model is based on the understanding that mathematical concepts are abstract and relational, an insight that resonates with many Indigenous Knowledge Systems. It links mathematical understanding to cultural expression and lived experience through three key connecting principles: abstraction, critical reflection, and creativity (Matthews, 2019). Creativity, a central tenet of the model, is expressed through both symbolism and cultural interpretation, enabling students to see their world and themselves reflected in the learning process. As an affirming methodology, the Goompi Model supports educational equity and the decolonial approach as a relational process that can include yarning by engaging learners in ways that affirm identity and promote deeper critical inquiry.

Developed by Associate Professor Chris Matthews in 2005 through an Australian Research Council grant, the Goompi Model emerged in response to the question: "How can mathematics be taught to Indigenous students so that mathematics connects with their cultural identity?" (Matthews, 2019, p. 147). The result was a framework that challenges the colonial structures of mathematics education by embedding cultural protocols and narrative practice into

STEM learning. When used alongside approaches like yarning and art-based inquiry, the model offers a decolonising pedagogy that resonates with students and affirms community-defined knowledge systems.

Crotty's (1998) emphasis on epistemological coherence is significantly strengthened when combined with yarning protocols that prioritise lived experience, community engagement, and Elder guidance. This alignment disrupts objectivist assumptions and promotes meaningful engagement with knowledge as relational and place-based. As shown through correlations between totems, kinship systems, and ecological models, yarning fosters the pattern recognition and abstraction needed in higher-order thinking, particularly in STEM disciplines (Matthews, 2009). Yarning, therefore, serves not only as a cultural protocol but also as a cognitive and pedagogical tool that affirms Indigenous learning approaches across academic contexts.

The Role of Crotty's Method in Indigenous Research

Crotty's (1998) framework provided a vital scaffold for integrating diverse epistemological perspectives. His synthesis of interpretivism and critical inquiry demonstrated that understanding the world is rooted in culturally derived, historically situated patterns. Qualitative research using Indigenous methodologies has only recently started gaining broader acceptance in academia (Maddox & Morton, 2024). Ethical Indigenous research necessitated establishing, maintaining, and nurturing reciprocal and respectful relationships (Smith, 2005). However, research has yet to fully explore learning dynamics from Country and Community within classroom contexts (Fogarty et al., 2018). Although his original work did not explicitly address Indigenous epistemologies, its inherent emphasis on interrelatedness and reflexivity resonates strongly with Indigenous research paradigms.

The integration of yarning protocols into Crotty's framework ensures not only methodological rigour but also addresses the ethical, relational, and cultural imperatives central to Indigenous Knowledge Systems. Moreover, the principles articulated by Gnibi Elders (see Appendix 1), asserting that Indigenous Knowledge is a relevant, ethical, and intelligent way of knowing, provide a normative foundation that aligns with Crotty's call for reflexivity and epistemological

coherence. The supportive guidance of my non-Indigenous supervisor, who recognised the bridging potential of Crotty's method, was instrumental in sustaining the worthiness of the research journey through severe disruptions.

Applying Crotty's Method to Indigenous Research

Crotty (1998) asserted that qualitative researchers must clearly define their epistemology and theoretical framework before selecting a method. Ensuring that the theoretical framework and methods aligned with research goals was crucial, and these decisions needed to be explicitly acknowledged (Braun & Clarke, 2006). In Indigenous research, this alignment necessitated a relational design that privileged Indigenous Knowledge and centred the voices of Elders (Crotty, 1998; Wener & Woodgate, 2013). In adapting Crotty's framework, this research integrated Indigenous epistemologies by incorporating yarning protocols. Table 1 illustrates the alignment between Western and Indigenous approaches across epistemology, theoretical perspective, methodology, and method. In contrast, Table 2 demonstrated how yarning protocols embedded culturally responsive practices into every stage of the research process.

Qualitative data collection was facilitated through purposive sampling, made possible by relationships developed at Gnibi College of Indigenous Australian Peoples, which had an established Elders Group. These Knowledge holders were consulted to ensure that local principles and respectful research design were upheld, forming the Aboriginal Reference Group (ARG) (Lavrakas, 2008). While no single method fully encapsulated an Indigenous sampling perspective, the research initially took shape through the structure of Aboriginal ceremonial dance. This design influenced both the theoretical approach and practical research decisions. The method was, therefore, underpinned by purposive sampling within the framework of Aboriginal ceremonial dance, which encapsulated the principles and laws required for working respectfully on Country. This approach was reflected in a yarn with ARG1 (2020):

Knowing what is best in this situation, but how do I navigate it so people get the best outcome? Some people can help others find their own strengths, and that is their strength. Some people have

Table 1. Aligning Crotty's Method With Indigenous Knowledge Systems. Adapted From Crotty (1998), the Foundations of Social Research: Meaning and Perspective in the Research Process

Component	Western knowledge system	Indigenous knowledge system
Epistemology (Theory of knowledge)	Objectivism, Subjectivism, Constructivism	Country (Place), kinship (Community), Ancestry (Spirituality)
Theoretical Perspective	Linear, individualistic, scientific logic	Complex, relational, collective, decolonisation-oriented
Methodology	Individual interviews, focus groups	Oral narratives, relational methodologies, storytelling, yarning
Method	Representation, connection, collaboration	Active engagement with Elders, cultural protocols, artistic expression

Table 2. Integrating Yarning Protocols Within Crotty's Framework

Aspect	Yarning as a method	Yarning as a methodology
Knowledge Transmission	Achieved through facilitated dialogue via storytelling, song, and dance that brings together multiple topics and threads (Martin, 2016, p. 50)	Embeds oral traditions that situate knowledge within lived experience and intergenerational sharing
Cultural engagement	Begins with an Acknowledgement of Country expressed in the local language, ensuring a culturally safe space for sharing strengths	Emphasises relationality, kinship, and the sacred connection to Country, which informs identity and practice
Ethical Practice	Involves co-created guidelines that require respectful interactions, openness, honesty, deep listening, and acknowledgment among participants	Requires continuous reflexivity and negotiation of respect and care, ensuring that cultural protocols are maintained
Data ownership & Sovereignty	Ensures that community Elders and participants are actively engaged in ethical data collection and validation through yarning sessions	Upholds Indigenous data sovereignty by embedding cultural protocols into the research process, ensuring community control over shared knowledge

Table 2 Illustrates how yarning enriches both the practical (Method) and philosophical (Methodology) dimensions of research, aligning indigenous processes with crotty's structured framework

strength in knowledge; they are able to showcase and broadcast information, allowing others to receive it. That takes a certain strength. To be able to stand in front of a group of people and present yourself, to test yourself.

As the research evolved, it mirrored the natural flow of yarning circles, reinforcing the relational nature of the inquiry. Audio-recorded yarns were transcribed and returned to participants for validation, ensuring accountability and respect for Indigenous Knowledge. Thematic analysis, conducted using N-VIVO 12, further reinforced critical reflexivity while minimising interpretative bias. Through this process, the research maintained a decolonial approach, integrating Indigenous ways of knowing and being at every stage.

NVivo 12 was used as a qualitative tool to organise and interpret yarns and journaling materials while maintaining community-led interpretation in line with decolonial principles. The software assisted in identifying recurring themes and patterns, which were then taken back to participants for validation, ensuring the analysis reflected community perspectives and cultural meaning. This process reinforced transparency and reciprocity by allowing participants to confirm or adjust thematic interpretations. NVivo also supported reflexivity by helping manage potential researcher bias and ensuring that cultural analysis was grounded in Bundjalung ways of knowing, being, and doing. The approach aligned with Braun and Clarke's flexible thematic analysis framework while remaining accountable to Indigenous research protocols that privilege relational knowledge and community authority (Day, 2022).

Context, Crisis and Community Care

The context in which research takes place significantly shapes its possibilities, ethics, and outcomes. For this project, the localised context of Bundjalung Country, particularly in and around Lismore, Northern NSW, offered not only rich cultural insight but

also complex and challenging conditions that demanded deep reflexivity and resilience. In late February 2022, the area experienced catastrophic flooding, with river levels surpassing those recorded since 1974 (Rolfe et al., 2020). Declared a National Disaster, the floods devastated homes, cultural spaces, and workplaces, causing profound mental, emotional, and spiritual impact across the community (Chenery, 2022). Many residents remain in transitional housing, and the long recovery process continues to inform how care, knowledge-sharing, and responsibility are enacted on Country.

Overlaying these floods were the COVID-19 lockdowns (2020–2021), which disrupted traditional research processes and compounded feelings of disconnection. However, these crises also reaffirmed the importance of relational, flexible, and culturally grounded research practices. Adaptive strategies, shaped by community networks and informed by the ethics of care, enabled the research to continue despite these disruptions. The critical support of a non-Indigenous supervisor, who recognised the relational and bridging capacity of Crotty's method, further anchored the research in a respectful, collaborative spirit. Together, these conditions illuminated the strength of yarning protocols as a culturally embedded method that centres community priorities, ensures safety in times of crisis, and sustains knowledge transmission when formal systems fail.

These localised experiences validated the importance of designing research that is not only methodologically coherent but also responsive to the lived realities of participants and researchers. They also exemplify how affirming methodologies are grounded in both theoretical intent and the practical need to uphold community wellbeing, especially in contexts marked by environmental injustice and systemic neglect.

Embedding Reflexivity in Affirming Methodologies

Critical reflexivity is not a supplementary act in decolonial research, it is foundational. It involves a continuous, embodied

process of self-location, questioning, and relational accountability that enables researchers to navigate the ethical tensions of working within and against colonial systems (Purdie et al., 2011). In culturally affirming and transformative research, reflexivity demands more than internal reflection; it compels us to centre Indigenous voices, challenge dominant research paradigms, and commit to practices of care, responsibility, and equity.

In many institutional contexts, rigid assessment structures and narrow success metrics burden Indigenous students and researchers, marginalising diverse ways of knowing and teaching (Martin & Mirraboopa, 2003). Critical reflexivity enables researchers and educators to challenge these structures by foregrounding cultural diversity, intergenerational learning, and relational knowledge systems. Reflective practice, including reflection, critical reflection, reflexive thinking, and dialogical engagement, serves as a decolonial tool to explore moral purpose, examine embedded biases, and affirm Indigenous sovereignty within research contexts (Rix & Rotumah, 2020).

By weaving yarning into the research design, reflexivity becomes more than a theoretical stance, it is an ethical and cultural practice that is carried through each interaction, circle, and dialogue. Yarning cultivates an environment of openness and humility, where stories unfold in relation and meaning is co-constructed rather than extracted. In this way, critical reflexivity aligns with affirming methodologies by disrupting colonial logic and affirming Indigenous traditions of critical thought, relational pedagogy, and ceremonial engagement (Ali et al., 2021).

Crucially, reflexivity is not a final step but an ongoing dialogue with Country, Community, and Culture. It shapes and is shaped by the stories shared, the questions asked, and the responsibilities taken. It strengthens methodological integrity by grounding research in context, care, and community-led accountability, hallmarks of Indigenous research sovereignty and affirming methodological practice.

Discussion

Crotty's framework, enriched by the integration of yarning protocols and a steadfast commitment to critical reflexivity, provides a robust scaffold for decolonial research that is both methodologically rigorous and culturally authentic. Indigenous epistemologies understand knowledge as inherently relational and dynamic, transmitted through lived experience, storytelling, totemic law, and intergenerational practice. The inclusion of yarning as both a method and a methodology ensures that these relational dimensions are central to the research process while aligning with Crotty's (1998) call for epistemological coherence and cultural responsiveness.

The dual presentation of Table 1 and Table 2 illustrates how Indigenous and Western paradigms can be respectfully aligned when Indigenous principles guide the research process. This dual approach reinforces Crotty's structural clarity while

expanding his method to include ethical imperatives of care, cultural authority, and data sovereignty. Yarning circles created safe, inclusive spaces for culturally grounded dialogue, demonstrating the tangible outcomes of affirming methodologies; both for participants and researchers. These protocols foregrounded accountability, reciprocity, and the right of Indigenous communities to determine the terms of engagement.

Crotty's insistence on clarity of epistemology, theoretical perspective, methodology, and method aligns with Indigenous approaches when interpreted relationally. The ceremonial design of this research, including its structure around totemic knowledge and Aboriginal dance honoured the sovereignty of Country and kinship, while resisting colonial research hierarchies. As Moreton-Robinson (2017) argues, Indigenous sovereignty is not recognised by settler states, yet persists in practice. This research operationalised her call for Indigenous intellectual sovereignty and Smith's (1999) challenge to conventional methodologies. It demonstrates that affirming Indigenous Knowledge is not only ethically necessary but methodologically powerful as a decolonising approach.

Kinship and the transfer of knowledge emerged as central themes, particularly in spaces where Elders and younger community members collaborated in ceremonial and dialogic ways (Smith, 2019; Uncle Glen, Bundjalung Elder, personal communication, 2020). Knowledge was not extracted, but grown through relationships. As Professor Smith (2021) describes, Indigenous Knowledge behaves like a seed: it flourishes through nurturing, protection, and the right environment. This insight shaped how the research honoured cultural safety and ensured that identity, spirituality, and community wellbeing remained core.

The localised context of Bundjalung Country also shaped the inquiry profoundly. The Lismore floods and COVID-19 lockdowns posed significant emotional, logistical, and cultural challenges (Chenery, 2022). These events made visible the importance of resilience, local leadership, and reflexive adaptation in Indigenous research. Remote yarning sessions, strengthened community protocols, and continued guidance from the Aboriginal Reference Group ensured continuity. These conditions affirmed the value of yarning protocols, not only as methodological tools but as systems of care, response, and community continuity.

Importantly, the principles articulated by Gnibi Elders were not abstract ethics; they provided a living guide. These principles, affirming Indigenous Knowledge as intelligent, ethical, and sacred, enabled the integration of Western research frameworks without compromising cultural sovereignty. They exemplify what affirming methodologies look like in practice: culturally responsive, community-led, and deeply accountable.

The research also extended the scope of yarning into analytic practice. Thematic analysis, as articulated by Braun and Clarke (2006, 2019), shares key qualities with yarning: it is iterative, reflexive, and dialogic. Rather than extract fixed themes, meaning was co-constructed through sustained engagement, collective review, and validation with participants.

This approach enabled insights to emerge in culturally appropriate ways, grounded in shared experience and guided by Elders' authority.

This discussion has also brought into view the significance of frameworks such as the Goompi Model (Matthews, 2009, 2019), which exemplify the integration of relational knowledge systems with educational practice. The Goompi Model, grounded in abstraction, creativity, and critical reflection, affirms cultural identity while advancing STEM engagement. As this research demonstrated, the metaphorical logic of totems, such as the White Owl's stealth and insight, provides pedagogical tools that Indigenous students can relate to, reinforcing knowledge in ways that are transformative and affirming.

Together, these methodological contributions, yarning protocols, ceremonial structure, thematic analysis, and the Goompi Model, extend Crotty's original framework into a culturally robust and sovereign research design. The research challenges Western assumptions and proposes a relational, decolonial alternative rooted in care, community, and accountability. This approach not only generates rigorous scholarship but actively supports community healing, educational equity, and the transformation of research practice in line with the values and principles articulated in this special edition on Affirming Methodologies.

Conclusion

This study contributes meaningfully to ongoing efforts to decolonise academic research by demonstrating how Crotty's (1998) framework can be respectfully adapted to support Indigenous methodologies. Rather than using Crotty's structure as a rigid model, this research reimaged it as a relational scaffold, one that affirms Indigenous sovereignty, cultural protocol, and epistemological coherence. By embedding yarning protocols as both method and methodology, the research design upheld relational accountability, community authority, and ethical engagement throughout the inquiry process.

Importantly, the work affirms that structured academic frameworks need not diminish cultural integrity. Instead, when approached with humility and reflexivity, they can offer space for Indigenous Knowledge Systems to flourish on their own terms. This requires more than inclusion; it demands a transformation of institutional research cultures to centre Indigenous voices and uphold the values of care, reciprocity, and self-determination. In doing so, this study aligns with the aims of affirming methodologies, those that privilege lived experience, relational learning, and community-led outcomes.

The project also reinforces the potential for Western and Indigenous Knowledge Systems to coexist in mutually enriching ways, particularly when guided by cultural authorities and responsive supervision. The critical support of a non-Indigenous supervisor, who recognised the bridging role of Crotty's method, enabled the research to navigate major disruptions such as the Lismore floods and COVID-19 lockdowns without compromising cultural protocol or community wellbeing. This collaboration exemplifies what

relational, decolonial, and affirming practice can look like in research.

Ultimately, the integration of culturally grounded methods such as yarning, ceremonial design, and Elder validation demonstrates how Indigenous research can challenge dominant paradigms while producing rigorous, relevant, and relational knowledge. Future research must build upon this foundation, embedding Indigenous Knowledge Systems into education, governance, and policy in ways that position Indigenous peoples as leaders, theorists, and knowledge holders at the centre of academic and social transformation.

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Appendix

Appendix 1: Gnibi Elder's Principles

The following principles are presented as a guide for teachers and students in this learning place.

- (1) Indigenous Knowledge is a relevant, ethical, intelligent, effective and a useful way of knowing.
- (2) Indigenous peoples are active, able and worthy peoples.
- (3) The truth about our histories and value of Indigenous ways are determined by us, we carry this knowledge.
- (4) Elders hold our Aboriginal Spirituality and our culture close. We choose what is open and shared and what will be closed. Aboriginal spirituality is the basis for life Indigenous Education and Cultural Competency, it infuses everything.
- (5) Our knowledge is relational. Our principles are the basis for SCU to establish and sustain an active informed and respectful relationship with Indigenous Elders who will give considered collective input. The

continuance of this relationship through the Elders group is essential.

- (6) Culture is sacred to us. We are and own this living culture. We do not need a 'book'. We share with you so that you can learn how to listen and hear what we say.
- (7) Identity is based upon things [inside] beneath the surface. Empowered, individual, affirmed identity is the basis of positive, productive, healthy and non-destructive lives - opportunities to engage and build knowledge builds [strong mob] through [inside learning]. 8. Learning everyday with each other has to be informed and sustained by a politic of open, positive and ethical interactions.
- (9) We as Elders have presented these things all our lives without being heard – we are often listened to but our message is not heard nor heeded. We take this opportunity to speak in the understanding that you will listen in the right way, hear us and learn.

Appendix 2

Table A1. Glossary of Terms

Term	Meaning
Yarning	An Indigenous conversation method used in research that emphasises storytelling, deep listening, and relationality
Totemic law	Cultural laws and responsibilities derived from ancestral totems that structure kinship and land relations
Country	More than land; encompasses people, language, spirit, law, and ecology in an interconnected whole
Cultural interface	The space where Indigenous and western knowledge systems interact (Nakata, 2007)
Ceremonial dance	A structured, cultural performance used in this research to reflect the journey and structure of knowledge sharing