

# The Third Cultural Space Guide



Supporting information  
for educators



stronger smarter

**Mathematics**  
Hub

# Contents

## Country and its resources: artist's statement

Resources and Country are intrinsically connected as is the need to come together and learn. Each element in this artwork is a reflection of the resource's movement and their natural shape. The organic nature of the shapes furthers the connection with the naturally occurring shapes of Country.

Cover artist Keisha Leon is an Aboriginal graphic designer and digital artist. She is a proud Waanyi-Kalkadoon (Mount Isa, Queensland) and Chinese woman. Keisha creates a visual story that is driven by culture and the modern world, connecting people, and helping create the narrative for the future.

## Acknowledgement of Country

The authors and partners of this guide would like to acknowledge the Traditional Custodians and Elders across all Nations. We acknowledge your place as owners of the lands and waterways we work, teach and learn upon. We acknowledge the continuing cultures and connections to Country. We acknowledge ancestors as the First Mathematicians. We also pay our respects to our emerging Elders, our future leaders, our strong and smart students. They are the mathematicians of our future. We pay our respects to all Aboriginal and Torres Strait Islander peoples working within teaching and learning. We are confident that the information in this guide will be useful in supporting an understanding of the connections between mathematics and cultures.

## A note on the terminology used throughout this guide

Where the Australian Cross-Curriculum Priority is referred to in this guide, the term First Nations Australians is used.

Where Indigenous Teaching Assistants are referred to, they may identify themselves as:

- Aboriginal peoples of mainland Australia or Tasmania
- Torres Strait Islander peoples who have descended from the peoples between northern tip of Queensland and New Guinea.

The authors acknowledge that the word Indigenous is sometimes viewed as a dirty word (Daniels-Mayes & Sinclair, 2014) by First Nations Australians as it is perceived to represent a homogeneous group of people. The word Indigenous does not recognise the diversity of the many unique identities and cultures of many First Nations Australians. Indigenous is often still used in some job descriptions and policy titles. Where this is the case, the word Indigenous has been used in those contexts. Also the word Indigenous is used when quoting cited sources.



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# About this guide

This guide is for a range of readers. School leadership, teachers and Indigenous Teaching Assistants will find information within this guide useful.

This guide explains the concept of the Third Cultural Space and:

- 
- how it is situated as a culturally responsive pedagogy
  - how to enact the Third Cultural Space in Mathematics teaching and learning.
- 

This guide explains how the Third Cultural Space enables interactions where two different knowledge systems meet as equals. It then discusses planning and implementation of contextualised Mathematics curriculum.

The guide then explains how images and videos from Indigenous Knowledge holders can support Indigenous Teaching Assistants and other educators to partner to contextualise and localise Mathematics curriculum content and pedagogy.

Educators will get enough background information from this guide to:

- 
- understand the Third Cultural Space
  - set up a Third Cultural Space
  - respectfully interact within the Third Cultural Space.
- 

This knowledge will support educators to collaborate with Indigenous Teaching Assistants to plan culturally responsive curriculum content and pedagogy for Mathematics teaching and learning.

Educators can use the supporting posters and videos with local First Nations community members and other Indigenous Knowledge holders. This will help educators start to plan and implement Mathematics curriculum and pedagogy for their own local context.

This guide uses embedded links so readers can seek further information. The end of this guide has a list of references for further reading.

## Summary

When parents, community, Indigenous Knowledge holders and Indigenous Teaching Assistants are enabled to share knowledges, students are 'more likely to perform better academically, stay in school longer and enjoy their schooling' (DEEWR, 2018).

To be high quality, curriculum resources should:

- 
- privilege and highlight Indigenous Knowledge
  - engage students
  - align to the Australian Curriculum.
- 

To implement culturally responsive curriculum (CRC) and culturally responsive pedagogy (CRP) a Third Cultural Space needs to be created.

The Third Cultural Space recognises that Indigenous communities have distinct and deep cultural and world views – views that differ from those found in most Western education systems (Davis, 2008). When these western and traditional systems are acknowledged and valued equally, the overlapping or merging of views represents a new way of educating.

Within the Third Cultural Space, teaching assistants and teachers can view curriculum and pedagogy through a different cultural lens.

The Third Cultural Space can also be used as a CRP. Mathematics content can be more culturally responsive if it's taught using Indigenous Knowledges.

# Culturally Responsive Pedagogy and Culturally Responsive Curriculum

Morrison, Rigney, Hattam and Diplock (2019) offer a definition of Culturally Responsive Pedagogy (CRP) as ‘those pedagogies that actively value, and mobilise as resources, the cultural repertoires and intelligences that students bring to the learning relationship. Such pedagogies are taken to be intrinsically dialogic and critically conscious, opening up generative and decolonising possibilities. This conceptualisation rests on the premise that all curriculum and pedagogy are culturally based.’

Pedagogies are the strategies for teaching and learning. Morrison et al (2019, p.18) positions three key practices for enacting CRP in the classroom:

- Having high academic expectations of all students.
- Developing the cultural competence of students.
- Incorporating critical consciousness.

The Stronger Smarter Approach extends the concept of high academic expectations to High-Expectations Relationships<sup>1</sup>. This promotes the quality relationships that Morrison et al (2019, p.21) position as critical.

CRPs are developed and enacted through:

- creating and using a Third Cultural Space (Davis, 2008)
- incorporating CRC content developed in partnerships with First Nations Australians.

The Third Cultural Space is a place where Indigenous perspectives and western world views are complimentary to one another (Davis, 2008). Effective partnerships can be enacted through the Third Cultural Space.

*‘Combining Indigenous knowledges with western knowledge is critical in improving achievement outcomes for Indigenous students’*

– (Rioux et al., 2019).

Sharing Indigenous Knowledges develops teachers’ cultural competence and confidence to present mathematics content linked to Indigenous Knowledges. This enables educators to develop culturally responsive mathematics through combining culturally competent teaching strategies (pedagogy) and Culturally Responsive Content (CRC).

CRC happens through developing place-based CRPs in equal partnership with First Nations Australians. It can assist First Nations Australian students to:

- understand curriculum content through their own cultural lens
- readily see their histories, cultures and identities reflected through curriculum.

It also provides an opportunity for non-Indigenous students to engage in reconciliation, recognition and respect of the world’s oldest continuing cultures<sup>2</sup>.

## Supporting research

Matthews (2019) asserts that mathematics is culturally based, however he suggests ‘to see and understand an Indigenous perspective of mathematics, you must accept the premise that mathematics is intrinsically connected to culture and, consequently, has many different cultural expressions’ (para. 3). The Australian Curriculum Assessment and Reporting Authority (ACARA) supports this premise stating that ‘Mathematics has its origin in many cultures’ (ACARA, 2019a, para 1).

Matthews (2008) recommends that ‘mathematics is taught holistically...rather than through sequential teaching of number and algorithm’ (p. 4). Matthews promotes the Goompi Model pedagogy, which is a cycle starting with the reality of the observer.

Incorporating CRC and using CRPs can interest and motivate students which leads towards engagement in learning (Perso, 2012; Simone, 2022).

- To become culturally responsive pedagogies, they should mobilise as resources, the cultural repertoires and intelligences that students bring to the learning relationship (Morrison et al, 2019).

## Implementation strategies and considerations

Strategy	Rationale
<b>Incorporate culturally responsive content to interest and motivate students to engage in learning.</b>	<ul style="list-style-type: none"> <li>• Engaging within the Third Cultural Space will support teachers to embed the Australian Cross-Curriculum Priority: Aboriginal and Torres Strait Islander Histories and Cultures.</li> <li>• Teachers must consider how they enable the voices of Indigenous Teaching Assistants, families, community, Indigenous Knowledge holders and Traditional Custodians.</li> <li>• Without support, it is difficult for teachers to build equal perspectives into their teaching and learning.</li> <li>• A safe Third Cultural Space will support teachers in this collaborative process.</li> </ul>
<b>Implement culturally responsive pedagogies that encompass cultural ways of knowing, being, and doing.</b>	<ul style="list-style-type: none"> <li>• Pedagogies are strategies that facilitate teaching and learning.</li> <li>• To become CRPs, they should mobilise the cultures and knowledges that students bring to the learning relationship.</li> <li>• One CRP is creating a Third Cultural Space using yarning circles, where all students can share the cultural strengths they bring from their home and community.</li> <li>• Being aware of students’ cultural strengths enables teachers to build on them and plan culturally responsive mathematics that includes multiple knowledges.</li> <li>• Storytelling is a CRP which has been used effectively for teaching and learning mathematics (Matthews, 2015).</li> <li>• The Goompi Model (Matthews, 2015) is a CRP which is represented through the resources with this guide.</li> </ul>

<sup>1</sup> <https://strongersmarter.com.au/high-expectations-relationships/>

<sup>2</sup> <https://australiancurriculum.edu.au/f-10-curriculum/cross-curriculum-priorities/aboriginal-and-torres-strait-islander-histories-and-cultures/>

# The Third Cultural Space

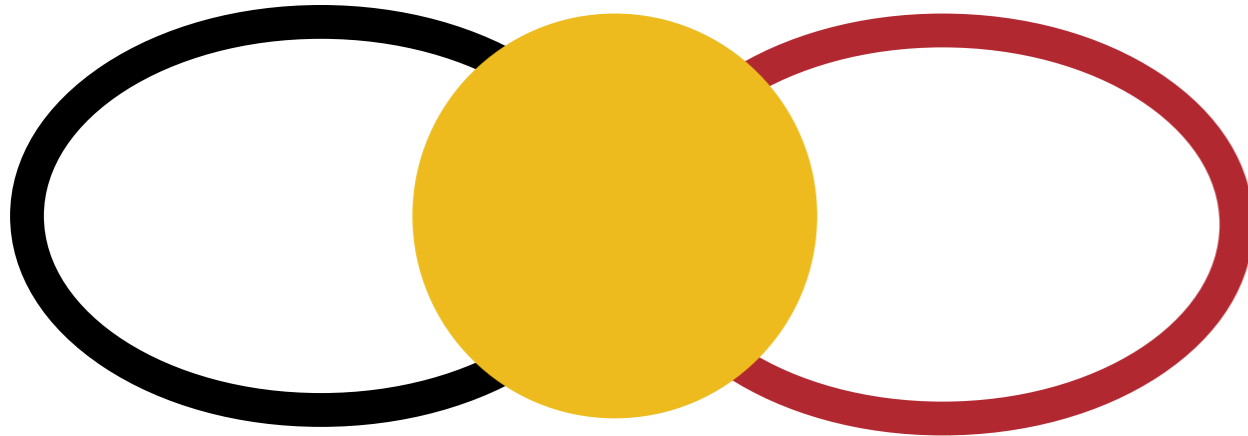


Image 1. The Third Cultural Space (Davis, 2008)

This conceptual framework of the Third Cultural Space uses the colours of the Aboriginal flag.

The black circle represents First Nations Australians ways of knowing, being and doing, incorporating Indigenous Knowledges developed over 65,000 years<sup>3</sup>.

The red circle on the opposite side of this image represents western ways. This is how the Australian Curriculum: Mathematics is viewed from First Nations Australians perspectives.

The yellow centre represents the Third Cultural Space of not knowing; of innovation and creation. The Third Cultural Space creates a place for dialogue, where diverse cultural worldviews come together to form unique knowledges.

## The intent of the Third Cultural Space

*'The third cultural space recognises that Indigenous communities have distinct and deep cultural and world views – views that differ from those found in most Western education systems. When Western and Indigenous systems are acknowledged and valued equally, the overlapping or merging of views represents a new way of educating.'*

(Davis & Grose, 2008)

## Guiding Principles of the Third Cultural Space

- The Third Cultural Space is a place where First Nations Australians perspectives and western world views complement one another (Davis, 2008).
- Acknowledge, value and empower First Nations Australians ways of knowing, being and doing.
- Encourage multiple perspectives within culturally safe spaces.
- Recognise the important role for non-Indigenous school leadership and teachers in enabling Indigenous Teaching Assistants to voice their perspectives on culturally responsive teaching and learning.
- Ensure schools provide culturally safe spaces where First Nations Australians can discuss, practise and share their cultures and beliefs.
- Enact culturally safe processes through using the Third Cultural Space.
- Ensure all school staff understand the Third Cultural Space as a place of deep listening to diverse perspectives, expectations, hopes and aspirations of others.
- Enable Indigenous Knowledge holders, teaching assistants and families with spaces to come together to share unique knowledges.
- Enable teachers of mathematics to view curriculum and pedagogy through a different cultural lens.

## Supporting research

Teachers should find common links between western content and pedagogy and First Nations ways (Riley, 2015).

Teachers should focus on strengths-based approaches, not deficit-based approaches. Paris (2012) defined a deficit perspective as 'eradicating the linguistic, literate, and cultural practices many students...brought from their homes and communities and to replace them with what were viewed as superior practices' (p. 93).

Mutually acknowledging and affirming strengths builds connectivity, trust and optimism. This is outlined in Stronger Smarter Institute's High-Expectations Relationships (2018, p. 16).

It has been recognised that when parents, community, Indigenous Knowledge holders and Indigenous Teaching Assistants are enabled to share knowledges, students are 'more likely to perform better academically, stay in school longer and enjoy their schooling' (DEEWR, 2018, p. 3).

The Third Cultural Space should be a culturally safe space that captures innovation and creativity. Indigenous Teaching Assistants are empowered to navigate the space between their community Indigenous Knowledges and western curriculum content and pedagogies (Sarra & Ewing, 2021). In 'navigating' the space Indigenous Teaching Assistants can be the conduit to bring these two spaces together.

<sup>3</sup> <https://www.nma.gov.au/defining-moments/resources/evidence-of-first-peoples>

## Implementation strategies and considerations

Strategy	Rationale
<b>The Third Cultural Space is a place where First Nations Australians perspectives and western world views complement one another.</b>	<ul style="list-style-type: none"> <li>The Third Cultural Space is the place in the centre – the yellow circle.</li> <li>To come to the centre, know the places where we as educators are coming from and the strengths we each bring to the Third Cultural Space. See the Stronger Smarter Approach<sup>4</sup>.</li> <li>Mutually acknowledging and affirming strengths builds connectivity, trust and optimism.</li> </ul>
<b>Acknowledge, value and empower First Nations Australians' ways of knowing, being and doing.</b>	<ul style="list-style-type: none"> <li>Acknowledge and value the strengths of Indigenous Knowledges and Australian Curriculum content knowledge.</li> <li>Recognise that within the Third Cultural Space knowledges complement one another.</li> <li>Indigenous Knowledges encompass First Nations Australians' ways of knowing, being, and doing. Indigenous Teaching Assistants bring Indigenous Knowledges through knowing the community, cultural protocols, histories, cultures and identity.</li> <li>Empower Indigenous Teaching Assistants within culturally safe spaces to enable the respectful sharing of information, knowledges and protocols.</li> </ul>
<b>Encourage multiple perspectives. Enable Indigenous Teaching Assistants and communities to share their perspectives.</b>	<ul style="list-style-type: none"> <li>Enable Indigenous Teaching Assistants and communities to share their perspectives through the Third Cultural Space.</li> <li>High-Expectations Relationships are one of the cornerstones of the Stronger Smarter Approach. To implement it, connect the personal, the community, and the school spheres (this is the Third Cultural Space): <ul style="list-style-type: none"> <li>Personal sphere – First Nations Australians guide educators to develop their personal cultural understanding.</li> <li>Community sphere – High-Expectations Relationships are enacted to develop community partnerships built on cohesion and collaboration.</li> <li>School sphere – non-Indigenous school staff are enabled with culturally appropriate tools for school transformation.</li> </ul> </li> <li>Encourage dialogue between partners, leading towards respectful working relationships and enabling multiple perspectives on knowledges. Authentic engagement among First Nations Australians and non-Indigenous people then takes place.</li> </ul>
<b>Create culturally safe spaces where innovation and creativity are captured.</b>	<ul style="list-style-type: none"> <li>Make a culturally safe space that captures innovation and creativity.</li> <li>Indigenous Teaching Assistants are empowered to navigate the space between their community, Indigenous Knowledges and western curriculum content and pedagogies (Sarra &amp; Ewing, 2021).</li> <li>Teachers of mathematics are enabled to view curriculum and pedagogy through a different cultural lens.</li> </ul>

# The role of non-Indigenous people in the Third Cultural Space

*'Schools that create environments which enable effective collaboration between classroom teachers and Aboriginal and Torres Strait Islander educators can maximise impacts on positive student learning.'*

– (AITSL, 2021, p. 18)

Non-Indigenous school staff have a responsibility to create culturally safe spaces with power balance, where Indigenous Teaching Assistants have equal voice.

School staff are often ranked. This system means that sometimes Indigenous Teaching Assistants in schools go unnoticed. Often in these situations, schools do not draw on their valuable strengths and they are unable to contribute to transformative change<sup>5</sup>. Indigenous Teaching Assistants may also be challenged by meeting with school leadership to discuss their concerns, putting high expectations on them.

A school that uses hierarchy has a triangular structure with:

- the school principal at the top
- teachers (including teachers of mathematics) towards the middle
- Indigenous Teaching Assistants towards the bottom of the structure.

When this happens in schools, Indigenous Teaching Assistants have limited access to communicating with mathematics teachers. There are even more barriers between the layers of communication with school leadership.

<sup>4</sup> <https://strongersmarter.com.au/stronger-smarter-approach/>

<sup>5</sup> <https://strongersmarter.com.au/responsibility-for-change/>

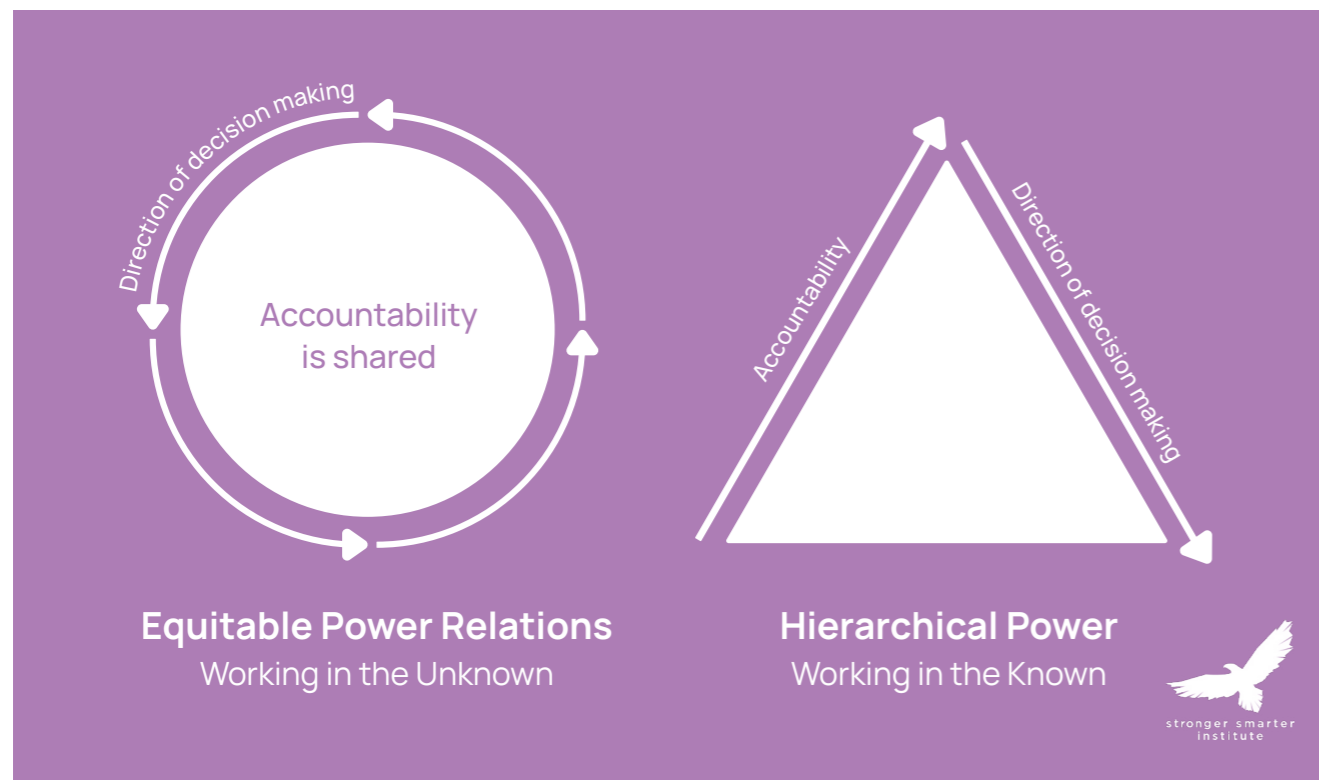


Image 2. Equitable Power Relations and Hierarchical Power, Stronger Smarter Institute.

### Supporting research

Often Indigenous Teaching Assistants do not have a voice into Indigenous education. They are employed in schools to carry out an extensive list of responsibilities (see Appendix 3 and 4) both in and outside of the school. They may be directed by teachers who have not had opportunities to develop their own personal cultural competencies in their schooling or during their Initial Teacher Education degree (Simone, 2022). School staff expect different tasks from Indigenous Teaching Assistants with minimal training or professional development experiences offered to the Indigenous Teaching Assistants.

A partnership between the Jumbunna Institute and Diversity Council of Australia has identified Ten Truths to centre Indigenous Australian voices to create workplace inclusion. This relates to teachers and school leadership using culturally safe places to work well with Indigenous Teaching Assistants.

One of the Ten Truths is to 'focus on workplace readiness [cultural safety] rather than worker readiness' (Jumbunna & Diversity Council of Australia, 2020, p. 18). Teacher reflection is also required, especially regarding the Australian Professional Standards for Teachers.

In schools where places are created for all school staff to interact and learn from each other, relationships between teachers and Indigenous Teaching Assistants can flourish. There is better understanding and more effective working relationships. The Third Cultural Space enables Indigenous Teaching Assistants to work 'well alongside teachers in designing and providing contextualised learning support' (AITSL, 2021, p. 5).



Image 3. The creation of a safe Third Cultural Space, Stronger Smarter Institute.

### Implementation strategies and considerations

Strategy	Rationale
Use the Third Cultural Space to support equitable knowledge sharing and accountability	<ul style="list-style-type: none"> <li>Enable processes for Indigenous Teaching Assistants and teachers to work together to design and implement place-based learning.</li> <li>Use a yarning circle where all people are working within a space of equal power, safety and trust, and where everyone's beliefs, values and stories are validated.</li> <li>Provide ways to shift individual perspectives through drawing on multiple views, experiences and knowledges.</li> <li>Enable a whole-school culture where school staff and school community are empowered to co-create and co-design culturally responsive curriculum and pedagogy.</li> </ul>

# Cultural safety in the Third Cultural Space

*'Workplace cultural safety supports Indigenous staff to feel welcome and included, providing them a sense of belonging. When a safe third cultural space is created, Indigenous staff feel respected and are comfortable to put forward their ideas, contribute knowledges and identify ways they can work between the school and the Indigenous community.'*

– (Simone, 2022)

Cultural safety has been defined as 'being able to practise your culture free of ridicule or condemnation' (Brown et al., 2020, p. 11). Cultural safety relates to First Nations Australian students and staff. For staff, cultural safety 'occurs when a workplace acknowledges, respects and accommodates difference' (Brown et al., 2020, p. 11).

## Supporting research

In a survey to over 1000 First Nations workers across Australia, the Gari-Yala Report found that 28% felt their workplaces were culturally unsafe. The workers responded that:

- they did not feel safe and supported in their working environment
- their skills, perspectives and experiences were not valued.

Culturally safe spaces enable ways of working where knowledges can be shared both ways. Matthews (2008) states 'activity should work both ways and emphasise sharing of knowledge from one culture to the other' (p. 3). First Nations Australians share knowledges of real, meaningful and authentic cultural contexts for mathematics and teachers share curriculum content knowledge of mathematics.

Culturally safe spaces are created when non-Indigenous people enact processes to work 'with' First Nations Australians as opposed to working 'to' or 'for' them (Singh & Major, 2017; Stavrou & Murphy, 2019).

Workers in identified positions<sup>6</sup> in schools should know that their voices and perspectives are welcomed and valued across the whole school environment. Identified positions help people who experience disadvantage to access equal opportunity in employment. Identified positions also benefit employers by allowing them to hire a person with particular experiences and expertise, such as cultural knowledge.

Teachers and school leadership are required to provide culturally safe spaces where First Nations Australians are enabled to discuss, practise, and share their cultures and beliefs. Under the Australian Standards for Principals<sup>7</sup>, all principals have the responsibility to work with members of the school community to ensure a knowledge and understanding of the traditional rights, beliefs and culture of Australia's First peoples.

<sup>6</sup> Identified positions help people who experience disadvantage to access equal opportunity in employment. Identified positions also benefit employers by allowing them to hire a person with particular experiences and expertise, such as cultural knowledge (<https://humanrights.gov.au/quick-guide/12047>).

<sup>7</sup> <https://www.aitsl.edu.au/tools-resources/resource/australian-professional-standard-for-principals>

## Implementation strategies and considerations

Strategy	Rationale
<b>Consult Indigenous Teaching Assistants (if the school employs them) and Indigenous families about the cultural safety within the whole school environment.</b>	<ul style="list-style-type: none"> <li>• Non-Indigenous people may be unaware or unable to comprehend the impacts of culturally unsafe school policies, practices and environments.</li> <li>• Cultural safety impacts First Nations Australian staff. It can also impact First Nations students and their families, and can extend into the community.</li> </ul>
<b>Enable First Nations Australians to share their perspectives in identifying processes, policies and environments that are culturally unsafe.</b>	<ul style="list-style-type: none"> <li>• First Nations Australians see, hear and feel cultural safety. Identifying processes, policies and environments that are culturally unsafe is the first step towards working in the Third Cultural Space.</li> <li>• To fix a problem, school leadership must be aware there is a problem. Asking Indigenous Teaching Assistants and First Nations families about their feelings of cultural safety will: <ul style="list-style-type: none"> <li>• help school leadership to understand different perspectives</li> <li>• support school leadership in their initial stages of working within the Third Cultural Space.</li> </ul> </li> </ul>
<b>Acknowledge that cultural safety can be seen, felt and heard.</b>	<ul style="list-style-type: none"> <li>• Elements of cultural safety will be visible in the school environment through murals, yarning circles, printed and framed Acknowledgements of Country. Deeper elements of cultural safety will be felt and heard.</li> <li>• Non-Indigenous people are expected to reflect on how First Nations Australian staff, visitors, families and students are welcomed into the school and provided with a sense of belonging.</li> <li>• School leadership must ask themselves: are they aware of the experiences of First Nations students, families, the wider community? Who else could provide differing perspectives?</li> <li>• Word travels fast in the community. If someone has had a challenging experience entering or interacting with a school environment, this adds to the complexity of creating a safe Third Cultural Space of knowledge sharing.</li> </ul>
<b>When working within the Third Cultural Space enact High-Expectations Relationships.</b>	<ul style="list-style-type: none"> <li>• Working within the Third Cultural Space requires courage, presence, patience, respect and honour, which are integral to High-Expectations Relationships.</li> <li>• At times, people will be challenged and feel they need to challenge others. Non-Indigenous school leadership may also feel challenged by not being able to control the discussion within their hierarchical structure.</li> <li>• Within the Third Cultural Space, High-Expectations Relationships develop when people listen to multiple perspectives and understand others' personal assumptions when they engage in challenging conversations.</li> </ul>



# Enacting the Third Cultural Space

*'Diversity and richness of Indigenous communities in Australia and the vast distances between communities, means Aboriginal and Torres Strait Islander educators are vital to meet student and community needs'*

– (AITSL, 2021 p. 8).

It is important for all school staff to understand the Third Cultural Space as a place of deep listening to diverse perspectives, expectations, hopes and aspirations of others. This is a space where authentic dialogue happens between members of diverse cultural groups.

Within the Third Cultural Space, creating and accepting equal positions of power builds stronger relationships. There should be equal partnerships between First Nations workers, community, school teaching and leadership staff. The Third Cultural Space accepts diverse perspectives, where:

- people's experiences are not denied
- the impact of experiences are not diminished
- people are not demeaned.

Importantly, Third Cultural Spaces have potential for growth and transformative change.

## Supporting research

In the Third Cultural Space, creating and accepting equal positions of power are essential to building stronger relationships. Teemant et al, (2021) advocate for equitable partnerships between First Nations workers, community, school teaching and leadership staff in local contexts.

## Implementation strategies and considerations

### Strategy

### Rationale

**Within the Third Cultural Space, value equal positions of power to build stronger relationships.**

- In the Third Cultural Space:
  - diverse perspectives are valued
  - people's experiences are not denied and the impacts of these are not diminished
  - people are not demeaned.
- Third Cultural Spaces are places for innovation and creativity.
- Working collaboratively within the Third Cultural Space is often done through an indoor or outdoor Yarning Circle. However, it does not have to be a physical space.
- Yarning Circles are a culturally safe way to share knowledges. There is no hierarchy, each person can see everyone around the circle, and everyone is seated in equality.
- Third Cultural Spaces can also be created spiritually, emotionally and socially, driven by relationships of equal power and authority.



Image 4. Indigenous Teaching Assistants enacting the Third Cultural Space, Stronger Smarter Institute.

# Engaging community in the Third Cultural Space

*'Parents play a crucial role in supporting their children's learning, and levels of parental engagement are consistently associated with better academic outcomes.'*  
 – The Guidance Report, 2019

Spaces and places where Indigenous Knowledge holders, Indigenous Teaching Assistants, and First Nations families and communities come together for meaningful dialogue culturally safe spaces to share knowledges.

Yarning circles and storytelling between adults are examples of working in the Third Cultural Space. Through sharing knowledges within the Third Cultural Space, teachers learn about realistic and relevant teaching and learning contexts.

Indigenous Knowledge holders sharing their stories of mathematics on Country can help teachers to contextualise mathematics from different perspectives. Teachers then:

- increase their cultural capability through listening to others
- use their expert content knowledge of mathematics to localise the Australian Curriculum: Mathematics.

## Supporting research

Indigenous Teaching Assistants working collaboratively between home and school act as the cultural bridge (Price, Jackson-Barrett, Gower & Herrington, 2017, pp. 93–105).

Indigenous Teaching Assistants are invaluable resources in Australian schools. When supported to work effectively, they can make a significant difference to students' learning outcomes.

In First Nations communities, the teaching team must be grounded in an approach that is culturally responsive and pedagogically strong. This empowers First Nations Australian educators to link cultural knowledge with contemporary curriculum and pedagogical knowledge. Team-teaching practices that classroom teachers and Indigenous Teaching Assistants share help classroom teachers to gain understandings of Indigenous ways of being, knowing and doing. They can then incorporate these into their teaching repertoire, which strengthens their practice (AITSL, 2021, p.10).

## Implementation strategies and considerations

Strategy	Rationale
Collaboratively plan culturally responsive mathematics content and pedagogy within the Third Cultural Space	<ul style="list-style-type: none"> <li>• When teachers plan culturally responsive mathematics content and pedagogy within the Third Cultural Space, it helps them to implement the cross-curriculum priority: Aboriginal and Torres Strait Islander Peoples' Histories and Cultures.</li> </ul>

# Examples of culturally responsive mathematics

These are mathematics teaching and learning resources that were developed using the Third Cultural Space:

- Garma Maths (Yirrkala Community Education Centre, 1994).
- Murri Maths; Connecting to Country (QDoE, NCR, 2019).

To develop Murri Maths, Aboriginal teachers, Indigenous Teaching Assistants, Traditional Custodians, Elders and western mathematics professionals came together to form a committee to yarn about ways to weave mathematics curriculum and Indigenous Knowledges together. This is a representation of two-way teaching and learning, where each person both teaches and learns. The result was relevant, meaningful teaching and learning resources influenced by two different knowledge systems.

Invitations for positive communication, respectful sharing of knowledges and purposeful planning are ways to engage in culturally safe spaces. A Murri Maths Yarn Up took place in a communal space where all participants sat in a yarning circle, out of role for a collaborative discussion. By creating a safe Third Cultural Space, each person was able to take turns and make turns to speak. All ideas were considered important to the discussion. There was no authoritative figure at the front of the room directing the yarning circle. This allowed time and space for each person to equitably contribute their knowledges including:

- background information and the purpose of developing a collaborative, culturally responsive mathematics resource
- how mathematics has traditionally been taught and learnt on Country
- how mathematics is taught in contemporary Australian classrooms
- how we view mathematics differently by inviting different perspectives
- personal stories of mathematics learning.

Following this, each person moved to a smaller yarning circle to reflect on different concepts. Reflections were written on butchers' paper within the smaller yarning groups. Educators then requested permission from Indigenous Teaching Assistants, Traditional Custodians, Elders and First Nations teachers to collate the reflection notes. Through creativity and innovative thinking, these ideas contributed to cultural contexts for mathematics learning.

This process also used the Third Cultural Space through sending draft notes and the developing resource to all First Nations Australian members at three-monthly intervals. First Nations members were invited to contribute further feedback and suggestions on the developing resource. Changes were made and suggestions were incorporated before the draft resource was next sent to all members of the Murri Maths Committee.

# Posters and video resources

At this stage, part of the Third Cultural Space was conducted virtually, as all members could not be in the same physical space at the same time. Educators may find that they need to seek alternative ways to invite communication to understand different perspectives of mathematics. In this way, the Third Cultural Space was not viewed as a physical space, but rather as an emotional space or a way of being and doing. It is the enactment of:

- values of co-designing
- developing partnerships
- High-Expectations Relationships.

The Third Cultural Space can be used to culturally customise mathematics to ensure all students have equal access to the Australian Curriculum: Mathematics.



Figure 5. The Third Cultural Space for Culturally Responsive Mathematics, Stronger Smarter Institute.

Six posters and video footage of Indigenous Knowledges in mathematics accompany this guide. They are examples of seeing mathematics through a different cultural lens.

## Posters

The posters enable educators to view mathematics through a different cultural lens. This helps educators to visualise Indigenous Knowledges of mathematics from many perspectives. When mathematics teaching and learning is grounded in culture and connections to Country, holistic teaching and learning of mathematics is enabled.

## Video

Videos of Indigenous Knowledges in action enable educators to listen, view and reflect on holistic ways to teach and learn in the cultural contexts. It shows First Nations Australian students' real situations where mathematics and their cultures connect. This empowers students to have a strong sense of pride as they view mathematics through their own cultural lens.

## Using the posters and the video

School staff are advised to consider these resources within the Third Cultural Space. Mathematics may be viewed from diverse perspectives, so each unique school community should enact the Third Cultural Space with their own local community.

As First Nations Australians are diverse in cultures and knowledges, more local examples should be explored from within whole school communities. This will enable Indigenous Teaching Assistants to be involved in the processes through the Third Cultural Space to translate multiple perspectives of Mathematics teaching and learning.

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## Appendix 1 – Reflection questions for school leadership on creating Third Cultural Spaces

School leadership can create a positive whole school culture for all.

These reflection questions were adapted from the SSI paper 'High-Expectations Relationships: A Foundation for Quality Learning Environments in all Australian Schools' (Stronger Smarter Institute, 2018).

- 
- What strategies has our school implemented to create a culture that supports robust and challenging conversations?
- 
- What strategies has our school implemented to create high expectations relationships with First Nations Australian parents, families and the school community?
- 
- What opportunities exist to engage the wider community in our school and classrooms?
- 
- How do I support equal power relationships between teachers of mathematics and First Nations Australians within and outside of our school?
- 
- How do teachers of mathematics at our school engage with First Nations Australians to understand different perspectives of mathematics?
- 
- How do I take personal responsibility for change to ensure teachers of mathematics and Indigenous Knowledge holders have time and space to co-create culturally responsive mathematics?
- 
- How do I enable culturally responsive teaching and learning of mathematics to ensure all students have access to rich and engaging curriculum and pedagogy?
- 

## Appendix 2 – The role of teachers in creating a Third Cultural Space

Teachers of mathematics may find difficulty embedding First Nations Australians' Histories and Cultures through culturally responsive pedagogies and culturally responsive curriculum. Enabling culturally safe Third Cultural Spaces will support teachers of mathematics to enhance curriculum content and pedagogy. Listening to diverse perspectives and ways of seeing mathematics will increase personal cultural capability for teachers. Using the Third Cultural Space will also support teachers in knowing their students, families and community.

Where First Nations students, families and community are enabled to co-create power within the Third Cultural Space, underlying beliefs and assumptions about First Nations students, families and their abilities are challenged. Teaching staff may come face to face with families and community members who have a negative sense of:

- 
- their own cultural identity
- 
- the value of schooling based on their own experiences.
- 

Teachers working with Indigenous Teaching Assistants are also encouraged to reflect on their personal assumptions regarding mathematics. Mathematics does not have to be taught through a pedagogy of transmission and absorption, textbooks and worksheets. It can be facilitated through rich connections to cultures enhanced by Country or local contexts.

Sarra (2017) through the Stronger Smarter Approach Framework asks teachers faced with this situation to question themselves. He suggests teachers ask themselves these questions:

- 
- What is happening in my classroom that is valuable to First Nations Australian students?
- 
- How well do I know each First Nations student in my class?
- 
- What am I doing that may contribute to First Nations Australian students failing when I teach?
- 
- What am I doing that may contribute to absenteeism?
- 
- What am I doing that may contribute towards disengagement from the curriculum?
- 
- How can I enhance mathematics teaching and learning and ensure all students are able to see their histories, cultures and identities reflected through both content and pedagogy?
-

## Appendix 3 – Indigenous Teaching Assistants

Indigenous Teaching Assistants are known by different titles across states, territories and jurisdictions. ‘Assistant Teacher’ is used in current Northern Territory employment agreements for government schools to describe a ‘person of Aboriginal or Torres Strait Islander descent who has been employed to assist in a teaching capacity in a school’ (Australian Institute for Teaching and School Leadership, 2021, p.2).

This Third Cultural Space Guide is inclusive for all Aboriginal and/or Torres Strait Islander education workers within schools across all sectors. For inclusivity, relevant literature has been sourced through searching these key words:

- Aboriginal Education Assistant
- Indigenous Education Assistant
- Aboriginal Education Worker
- Indigenous Education Worker
- Aboriginal Education Officer (NSW & TAS)
- Aboriginal and Torres Strait Islander Education Officer (ACT)
- Aboriginal and Islander Education Worker (WA)
- Assistant Teacher (NT)
- Community Education Counsellor (QLD)
- Indigenous Teacher Aide (QLD)
- Koori Engagement Support Officer (VIC)
- Aboriginal Community Education Officer (SA).

An extensive search found publicly available data to determine the numbers of Indigenous Teaching Assistants employed in schools across Australia. However, there does not appear to be any recent data available. One source states there are over 2,500 Aboriginal Education Workers employed in schools across the country (Same Kids Same Goals, 2007). The Australian Institute of Health and Welfare lists the main industries of employment for Indigenous Australians where 8% of First Nations Australians have identified their main industry of employment is education and training. It is unclear what occupations they hold within education and training, however, 2.02% of the Australian teaching population identify themselves as Indigenous teachers (Australian Council of Deans of Education, 2018).

## Appendix 4 – The role of Indigenous Teaching Assistants

Role descriptions for the work of Indigenous Teaching Assistants vary according to their titles and the state, territory or jurisdiction they work within. However, there are over 30 duties listed for Indigenous Teaching Assistants in schools across Australia (Peacock & Prehn, 2019).

The Australian Institute for Teaching and School Leadership (AITSL) recommends the type of work that Indigenous Teaching Assistants conduct within schools. Indigenous Teaching Assistants play significant roles in schools due to their ‘deep understanding of the local context, languages, histories and cultures’ (AITSL, 2021, para 1). They are also reported as bringing relevance to learning from their perspectives which supports both teachers and students (Gervasoni et al. 2011).

The Mparntwe Education Declaration sets this important goal:

***‘Ensure that learning is built on and includes local, regional and national cultural knowledge and experience of Aboriginal and Torres Strait Islander peoples and work in partnership with local communities’***  
(Education Council, 2019, p. 5).

Consequently, ‘Aboriginal and Torres Strait Islander educators work in partnership with classroom teachers, combining knowledge and practice with specific community understanding’ (AITSL, 2021, p. 3).

