

Brain Building in Queensland

Year 1 In Review





Acknowledgement of Country

The University of Queensland (UQ) acknowledges the Traditional Owners and their custodianship of the lands on which we meet. We pay respects to their Ancestors and their descendants, who continue cultural and spiritual connections to Country. We recognise their valuable contributions to Australian and global society.

Artwork: *A Guidance Through Time* by Quandamooka artists, Casey Coolwell and Kyra Mancktelow

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Message from Michael Hogan

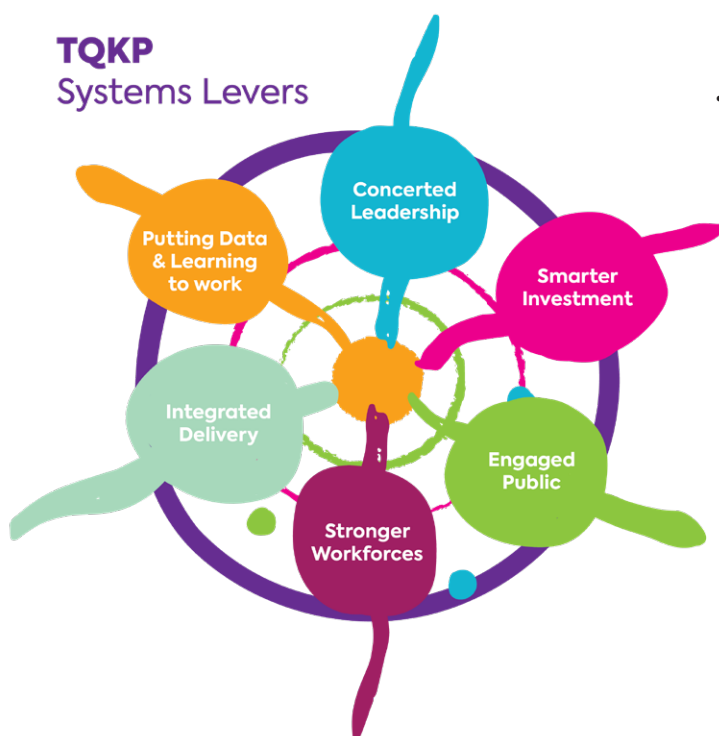
The Thriving Queensland Kids Partnership (TQKP) was conceived through conversations with hundreds of organisational and systems leaders and looking around the globe for 'best in class' precedents. One of the key opportunities that quickly became apparent was the vital need to better translate and mobilise what we **know** about brain development, brain health and skills, the interaction of our human biological systems and the social and ecological contexts in which we live into what we **do** for kids and their caregivers. Thriving Kids Brain Builders Initiative (TKBBI) is one of 10 TQKP initiatives.

The impetus for TQKP came from years of working on systems leadership with others for child and youth wellbeing including the Australia and New Zealand School Government (ANZSOG), Every Child Campaign, Australian Research Alliance for Children and Youth (ARACY), and the Paul Ramsay Foundation.

One of the key insights from this work was that 'human capability development', especially 'brain building', ought to be at the core of systems design, investment and practice and should be a focus of systems change, workforce, and organisational development efforts. 'Brain building' is not a silver bullet, but is an essential component needed to address the epigenetic, inter-generational transmission of trauma and adversity, build capabilities and resilience, and ultimately disrupt enduring cycles of disadvantage.

As we know, who and what surrounds us in our formative years, what happens to us and what we consume shapes our lives. Across the Queensland eco-system in which we raise our children and young people, there are:

- over **60,000 babies born** each year and many other children and young people settling here in Queensland with their families through internal or overseas migration
- **millions of parents**, grandparents and other caregivers doing their best to give their children and young people a great start and journey in life
- **thousands of community organisations** and not-for-profit service providers focusing on children and young people's wellbeing
- **eight public universities** with numerous faculties and institutes, and many thousands of students, teachers and researchers
- **a few dozen philanthropies** investing in innovative ways to enable child, youth and family wellbeing
- **dozens of Queensland and Australian Government agencies and authorities** delivering and administering complex systems of services
- **many hundreds of Commonwealth and State programs** and initiatives focused on children and youth
- **tens of thousands of adults** working in our health, early and school education, disability, mental health, housing, sport and recreation, child protection, justice, transport and other systems – interacting on a daily basis with children and young people, and their families and communities
- **tens of thousands of businesses** selling products and offering services related to children and young people and offering jobs and training for older kids.



Thriving Queensland Kids Partnership (TQKP) is a Queensland-based intermediary and relationships broker focused on systems change for the benefit of children, young people, and families. Instigated and hosted by ARACY, TQKP brings together a cross-sectoral coalition of Queensland leaders, organisations, practitioners, and collaborators working together with the shared purpose of catalysing systems to change the odds for Queensland children and young people to thrive.



That's a lot of brains and 'brain building' opportunities!

Let's imagine that all of those brains who are shaping the lives of children and young people were better informed by contemporary neuroscience to maximise the billions of everyday brain building opportunities that happen with Queensland's children and young people each year.

Over this past year, the fledgling Thriving Kids Brain Building Initiative (TKBBI) has been taking shape. It started with the University of Queensland's Queensland Brain Institute (QBI), signing an agreement to be ARACY/TQKP's primary knowledge and implementation partner. TKBBI is being delivered by an amazing team led by Associate Professor Sally Staton.

We are deeply grateful for the partnership with The University of Queensland's Queensland Brain Institute (QBI) and with a growing array of partners and collaborators, including those from Emerging Minds, Yiliyapinya Indigenous Corporation, Queensland Mental Health Commission, State Library of Queensland, Children's Health Queensland Hospital and Health Service and Queensland Child and Youth Clinical Network as well as all the many organisations, researchers, teachers and practitioners engaging with the six elements of TKBBI, the Queensland Brain Builders Summits and Implementation Workshops, eLearning Modules, iECHO Community of Practice and the many other spin-off initiatives.

We are very grateful too for the continuing international collaborations, with inspiration from the Canadian Palix Foundation and its Alberta Family Wellness Foundation who have led the way with incredible application of neuroscience into policy and practice across systems in Canada.

It is the extraordinary support of our philanthropic partners and investors—the Paul Ramsay Foundation, The Bryan Foundation, Hand Heart Pocket, the John Villiers Trust, the Tim Fairfax Family Foundation, Helping Hands Network Foundation and the Ian Potter Foundation—that is making TQKP and the TKBBI possible.

Thank you. If you are not already engaged, please join in so all of us can be the best 'brain builders' our children and young people deserve.

Michael Hogan

*Executive Convenor, TQKP
ARACY*

*Industry Fellow, UQ Queensland Brain Institute
Adjunct Professor, QUT Centre for Justice*



Message from TKBBI Lead

Associate Professor Sally Staton

The Thriving Kids Brain Builders Initiative (TKBBI) has provided a unique opportunity to collaborate and build new connections between researchers, workforces and communities across Queensland.

When we were first approached by TQKP to be a key implementing partner we were thrilled to have the opportunity to support this ambitious and exciting initiative. From the outset we could see the huge potential in applying understanding of brain development with the goal of building a shared language, knowledge and purpose across those working with children and young people in Queensland.

Year 1 of TKBBI has focused on deepening partnerships, strengthening our messaging, raising the profile of the TKBBI, and developing resources for people to learn basic brain building messages. Our new Brains Trust collaborative consists of industry, advocacy and community organisations, as well as diverse academics and researchers from across Queensland and beyond. This new collaborative shares a vision of applying understanding of brain development within their fields to bring about widespread change for families, communities and across the system.

We have gathered data to evaluate our processes to deliver Year 1's outputs and look forward to gathering outcomes data in Year 2 as per our evaluation framework. It is wonderful to see the many ways in which our collective efforts are already contributing to TQKP's phase 2 objectives outlined in Table 1 below:

TQKP Objectives	TKBBI Project Areas	
1. To improve the connectivity and capabilities of leaders and change agents to steward systems and facilitate leading and adaptation	Brains Trust	Brain Building Modules
	Communities of Practice	Brain Building Workforces
2. To improve the connectivity and capabilities of workforces and organisations to contribute to child and adolescent development, especially neuro-capability	Brains Trust	Brain Building Modules
	Brain Healthy Places and Spaces	Podcast
	Communities of Practice	Brain Building Workforces
3. To improve capabilities and capacities of caregivers and communities to contribute to healthy child and adolescent development	Deadly Brains	
	Brains Trust	Communities of Practice
4. To improve systems-level strategies that contribute to child and adolescent development	Brain Healthy Places and Spaces	Brain Building Modules
	Brains Trust	Brain Building Workforces

Table 1: TKBBI project areas that have contributed to TQKP's objectives during Year 1

We are grateful to TQKP, ARACY and the funding partners for putting collaboration and partnerships at the centre of this work and making it an explicit goal and valued outcome in and of itself. A focus on partnerships is crucial to making a bigger difference than the sum of our individual parts and to move the dial for children and young people in Queensland. No one place or organisation can solve the issues by themselves, we can only do this together, in partnership. We thank TQKP for the opportunity to contribute to this collective vision.

Associate Professor Sally Staton

Associate Professor (Child Development)

*Australian Research Council Discovery Early Career Research Award Fellow
Lead, TQKP Thriving Kids Brain Builders Initiative*

Thriving Kids Brain Builders

Initiative Overview

Thriving Kids Brain Builders Initiative (TKBBI) is designed to generate, translate, and apply knowledge from neurosciences and related child and adolescent sciences for the benefit of Queensland children, young people and their families and communities.

TKBBI is an initiative led by the Thriving Queensland Kids Partnership (TQKP) and the Australian Research Alliance for Children and Youth (ARACY), in conjunction with The University of Queensland's Queensland Brain Institute and other research, government, NGO and social enterprise partners across Queensland.

"The brain runs everything, and we ignore it at our peril. This is not new science, this is science that goes back decades. The challenge is to implement it. It affects parents, children, teachers, people looking after children. It affects all of us. And we've got to integrate and bring it all together so that children have the best start in life."

Norman Swan, Physician and ABC Radio Presenter

Thriving Queensland Kids Partnership's (TQKP) purpose is to 'catalyse systems to change the odds for Queensland's children and young people to thrive'. TQKP is working with tertiary education, philanthropic, not-for-profit, government and community entities to strengthen connections, capabilities and capacities across organisations, sectors, and systems in the key areas of:

- concerted leadership,
- smarter investment,
- enabled caregivers and communities,
- stronger workforces
- integrated delivery, and
- putting data, evidence, and experience to work.

Australian Research Alliance for Children and Youth (ARACY) is a national not-for-profit organisation working as an intermediary to catalyse change by bringing people and knowledge together for the benefit of children and young people in Australia. ARACY is the auspicing entity for the TQKP.

"The key thing is that we are all brain builders. Whatever we do in our day job, whether we're an educator, researcher or parent, we've all got a powerful role to play as brain builders."

Penny Dakin, CEO of ARACY until Dec 2023

"We just need governments with conviction and willingness to put the resources towards creating a supportive, well-resourced environment for everyone working in the early childhood sector and with youth right through to adolescence."

Michael Berkman MP for Maiwar

The Queensland Brain Institute (QBI) at The University of Queensland is a leading Australian centre for brain research, devoted to a fundamental understanding of how the brain works from its smallest components through to the integrated networks that underpin human thought and behaviour. QBIs vision is to improve lives through a deeper understanding of the brain in health and disease. Our investment in discovery and translation, and nurturing tomorrow's research leaders, is directed at making these possibilities a reality. QBI recognises the early years of life as critical in brain development, and that positive early experiences across childhood as setting the foundation for lifelong health, learning and wellbeing.

As the TKBBI's key knowledge and implementation collaborator, QBI is supporting TQKP/ARACY to:

1. Build workforce, organisational, caregiver and public understanding on neuroscience for children and young people.
2. Build practice, community, and systems capabilities and collaboratives to embed neuroscience across places, spaces, and workforces.
3. Leverage the expertise and efforts of academics, leaders, practitioners, and organisations across Queensland to enable large scale and sustainable practice and systems change.

Political and Academic Endorsement for TKBBI

Professionals working with children and young people will be offered training in brain science in an Australia-first initiative between The University of Queensland (UQ) and the Australian Research Alliance for Children and Youth (ARACY) through the Thriving Queensland Kids Partnership (TQKP).

Thriving Kids Brain Builders is a neuroscience translation initiative being developed with UQ's Queensland Brain Institute (QBI) for people working across the health, education, social and community services, justice and housing sectors.

UQ has signed a \$1.835million agreement with ARACY for QBI to be the key implementation partner and has received \$1.25million over 5 years from The Ian Potter Foundation to extend the work.

TQKP and TKBBI are also supported by the Paul Ramsay Foundation, Hand Heart Pocket, The Bryan Foundation, The John Villiers Trust and the Tim Fairfax Family Foundation.



Queensland Education Minister Grace Grace said she welcomed the initiative.

"The Palaszczuk Government is committed to giving every child the best start in life, no matter their circumstances—that's why we're making kindy free for every Queensland family," she said.

"We're also investing heavily to support the early childhood workforce, and in extra support for those children who need it through our Inclusion Service and expansion of Kindy Uplift.

"The Thriving Kids Brain Builders initiative will get the latest neuroscience research straight into early educators' hands and help them manage challenging behaviours, create positive experiences, and flag where early intervention and support might be needed."

TQKP Convenor and QBI Industry Fellow Michael Hogan said the Brain Builders Initiative will help meet a need in the community and complement government initiatives.

“People working with children and young people have told us that they need access to the latest science and what it means for their practice—for teaching and caring across all the services and programs used by children, young people and their families,” Mr Hogan said.

“There is growing concern about levels of school readiness and achievement, about the emotional, mental and behavioural issues that children and families experience, and about the rates of stress and attrition in our teaching, caring and justice workforces.”



QBI Executive Director Professor Pankaj Sah said research linking neuroscience, psychology and education helped to increase understanding of the growing brain.

“Early learning experiences shape our brains and are critical in moulding the life chances of the youngest Australians,” Professor Sah said.

“We are dedicated to better understanding how we learn, and, through this initiative, we are providing a new way to support childhood and adolescent development and successful school learning.

“QBI is thrilled to partner with like-minded institutions that share our passion for the science of learning and development.”



QBI Laureate Fellow Professor Karen Thorpe said the initiative aimed to help build a stronger and more equitable early childhood education and care workforce.

“UQ has world-leading neuroscience experts who are motivated to share knowledge with professionals working with children in the crucial early years,” Professor Thorpe said.

“The experiences and environments young children encounter have a profound impact on their brain development.

“This partnership will bridge the gap between research and practical application, ensuring all children have access to the support they need to develop and flourish.

“We are excited to collaborate with partners from diverse sectors to make a positive difference in the lives of Queensland children, their families and communities.”

Brain Building

Year 1 Highlights

Let the Brain Building Begin!



In August 2023, at the inaugural Brain Builders Summit, the Thriving Kids Brain Builders Initiative was formally launched by Queensland's Minister for Education, the Hon. Grace MP.

"We're just so excited to have so many different people—from health, education, family support, child protection, justice, you name it—here today. Hopefully they're all going to go away and come back to us with ideas about what they can do to use this new tool."

Michael Hogan - Convenor of Thriving Queensland Kids Partnership (TQKP)

During the month before the Summit, the Brain Builders Academic Roundtable and Thriving Kids Brain Builders Implementation Workshop were held at The University of Queensland.

"It's so important that we are asked about our experiences, and this was part of that—a step towards making that a reality."

Ishika Digurmarti, TKBBI Summit speaker, Year 10 student

Together, these three key events brought together research and systems leaders from across Queensland to connect, catalyse and learn. The focus was to advance research, build knowledge and leverage expertise to embed brain building across workforces, services, training, place-based and community organisations in Queensland.

"We represent around 80,000 parents of Australia and are hugely grateful for initiatives like this."

CEO, The Parenthood

Brain Building at the United Nations Science Summit

In September 2023, as part of the 78th United Nations General Assembly Science Summit in New York City, members of the TKBBI, TQKP and ARACY teams were thrilled to be invited to attend the Global Partnership for Brain Health and Brain Building @UNGA78 gatherings. These gatherings re-affirmed the global relevance and resonance of the design, development and translation of the TKBBI.

The Global Partnership for Brain Health brought together over 150 key stakeholder organisations all committed to the same goal: fostering and enhancing global collaboration in brain health, with the goal of improving the lives of people of all ages in all communities. This event culminated in the release of a Call to Action for Putting Brain Health on the Global Agenda to guide national, regional and global policymakers. During their visit the team also visited and met with representatives of the Boston-based Harvard Centre on the Developing Child.



L-R: Michael Hogan, Sally Staton, Karen Thorpe, Penny Dakin in Boston while visiting the Centre on the Developing Child



Thriving Kids, Active Brains: A Collaborative to Support Early Child Development

In October 2023, TKBBI announced a \$1.25million grant over 5 years from The Ian Potter Foundation to fund an extension of TKBBI called Thriving Kids, Active Brains: A Collaborative to Support Early Child Development.

Through Thriving Kids, Active Brains, TKBBI will work with partner organisations to develop a neuroscience-informed Australian training program targeting the Early Childhood Development (ECD) workforce. The training program aims to build workforce capacity in understanding brain health and architecture so that early childhood development professionals can better understand when and where to intervene and how to best support children's brain development and help nurture children's resilience.

The training program will build on the evidence-based Brain Story program developed by the Harvard Center on the Developing Child, and Alberta Family Wellness Initiative, adapting it for an Australian context based on the five indicators of development assessed in the Australian Early Development Census (AEDC).

Food for Thought

In 2023, a Knowledge Transfer Grant of \$10,000 was awarded by the Australian Research Council (ARC) Life Course Centre to fund a new project—Food for Thought. Nutrition underpins brain development and is vital for brain health. This project will work with stakeholders, including children, to develop a research plan to address barriers to nutrition for children attending early childhood services. The aim of this project is to provide new knowledge of systems barriers and opportunities to support brain health in Queensland communities experiencing high levels of developmental vulnerability and food insecurity.

Families in Focus

In November 2023, a Families in Focus event was held by researchers and clinicians from UQ's Queensland Brain Institute and Children's Health Research Centre at the Queensland's Children's Hospital. This interactive event used the ARACY Wellbeing Nest to frame questions and support discussions and activities with families who shared their experiences of accessing education, health, and social service systems for their children and young people with chronic illness or disability. The findings gathered from the event have been used to inform the Children's Health Queensland Strategic Plan 2024-2028, particularly in relation to supporting access to care for diverse communities.

Building on the success of this event, a collaboration was developed with Juiced TV to explain the basic brain function for World Infant and Adolescent Mental Health Day.

Resilience Scale Masterclass

In December 2023, the Palix Foundation Resilience Scale Masterclass with Nancy Mannix was held online. Fifty-five workforce participants from a range of child-centred sectors joined to learn about how the resilience scale can be used to help meet the developmental needs of individuals, organisations and systems. This masterclass aimed to improve the connectivity and capabilities of workforces and organisations to contribute to child and adolescent development, especially neuro-capability by learning about how different uses of the resilience scale can be used to help meet the developmental needs of individuals, organisations and systems.

Timeline of Brain Building

Key Achievements and Activities for Year 1

February 2023	Foundational Brain Builder eModules with Emerging Minds developed
March 2023	Brains Trust Collaborative established
April 2023	Neuro-informed Policy and Practice Scoping Review undertaken
July 2023	Brain Builders Academic Roundtable and Brain Builders Implementation Workshop held
August 2023	Brain Builders Summit held – Official Launch of Brain Builders Initiative and release of the Barriers, Enablers and Opportunities for Workforces in Queensland
August 2023	Foundational Brain Builder eModules with Emerging Minds launched
September 2023	UN Global Partnership for Brain Health and Brain Building @UNGA78 in New York invitation to attend
September 2023	Brain Building Stories of Implementation collection begins
October 2023	\$1.25m over 5 years grant from Ian Potter Foundation announced
October 2023	Brain Building in Place barriers, enablers and opportunities research begins
October 2023	Deadly Brains evaluation co-designed with Yiliapinya
November 2023	Communities of Practice partnership with Queensland Health's iECHO online platform established

All year long: Consultation with systems change agents

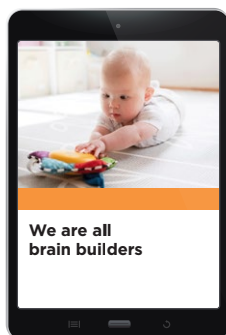
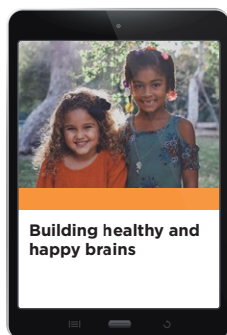
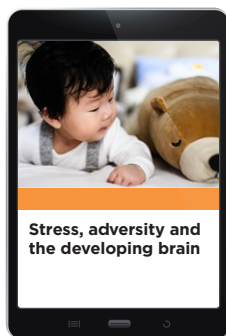
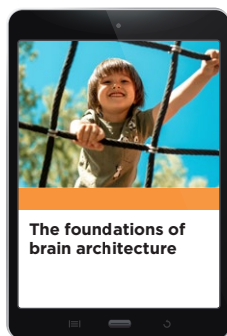
Brain Building

Year 1 Activities

Brain Builder Modules

In collaboration with Emerging Minds in 2023, **four foundational eLearning modules** were launched, aiming to increase the awareness, knowledge, and understanding of foundational concepts of neuroscience and child development among the workforce and public.

The content of the modules is also being made available for organisations to embed within their own online professional learning platforms with modification to specific workforce contexts and formats. Sharing and use is underpinned by the key principle of free to end-user and maintaining efficacy to the evidence base.



Thanks to our partners at Emerging Minds, the modules are now live and free for anyone who is interested in understanding brain development.

The modules have been used by QUT in new curricula for nurses and are being adapted by Early Childhood Australia to be available free on the ECA professional learning platform. The State Library of Queensland will use the modules to train their First Five Forever facilitators in local libraries across Queensland.

Nearly 400 professionals from across Human Services, Health and Emergency, Health and other have completed the Modules so far. Below is a breakdown, by sector, of who has accessed the modules:

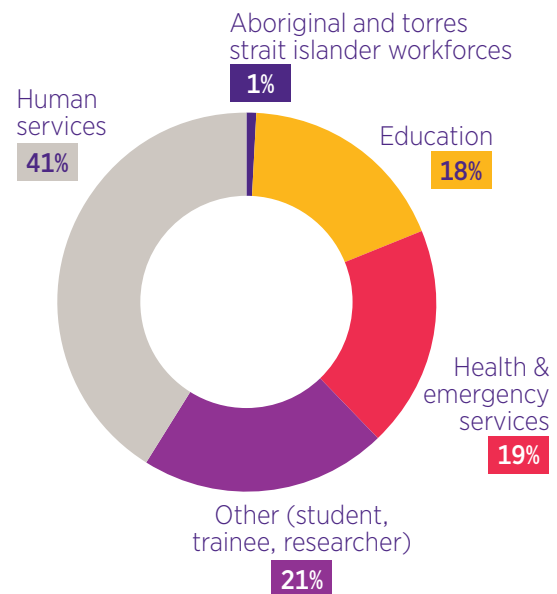


Figure 1: Sector participation in the e-modules

"As a leader for the field in my team, I'm going to really invest time into these brain building modules and really try to push that through to families as well."

Educator, Kindergarten, QLD

In collaboration with Emerging Minds an Understanding Brain Development podcast episode was released on Apple Podcasts, Spotify, Google Podcasts and Youtube. Special guests Michael Hogan (ARACY – Australian Research Alliance for Children and Youth), Associate Professor Sally Staton (Queensland Brain Institute) and Vanya (child and family partner) discuss the contributions that neuroscience can make to front-line practice with children and families. By February 2024, over 1,540 people had listened to the episode.





Brain Builder Workforces

In collaboration with government, non-government, and tertiary training organisations, TKBBI is supporting the development of neuroscience-informed training programs and implementation across sectors and workforces. This project involves sourcing, developing, and sharing key frameworks to guide curricula reviews and implementation into frontline practice. In order to progress this work, a definition of neuro-informed policy and practice was necessary.

A Definition of Neuro-informed Policy and Practice

Over the last two decades there has been increasing interest in the application of neuroscience and related sciences to inform policy and practice decisions. This has led to the proliferation of publications that refer to 'neuro-informed' policy and practice across a range of fields and disciplines. However, despite the growing interest in neuro-informed policy and practice, a clear definition and framework to guide this approach has not been previously available.

In response to this clear need, TKBBI undertook a systematic scoping review. This in-depth process resulted in a definition and a framework of neuro-informed policy and practice. Together, the definition and framework can be used across and within systems, workforces and contexts to guide the much-needed development of common neuroscience-informed language and messages to translate knowledge of neuroscience into action.

The definition of neuro-informed policy and practice that emerged is as follows:

- **Neuro-informed policy and practice** is the method and outcome of translating and applying current evidence from neuroscience and related fields about the processes underpinning human development and behaviour to guide policy and practice actions.
- **The intent of neuro-informed policy and practice** is to create and promote optimal conditions for Brain Health* and related positive physical, social, and community outcomes.

***Brain Health** is defined by the World Health Organisation as: "the state of brain functioning across cognitive, sensory, social-emotional, behavioural, and motor domains, allowing a person to realize their full potential over the life course, irrespective of the presence or absence of disorders".¹

The Scoping Review Process

The extensive process undertaken in the scoping review to develop the definition and framework is shown below in Figure 2. It originally identified 6,119 academic and policy documents published from the year 2000 onwards that included a definition, discussion or example of neuro-informed policy or practice. Researchers reviewed these documents to determine eligibility against pre-determined inclusion/exclusion criteria.

In total, 116 documents that discussed the application of neuro-informed policy and practice were eligible from across many fields including clinical psychology, developmental psychology, counselling, social policy, education, public health, nursing, medicine, nutrition, law, psychiatry, psychotherapy, social work, art therapy, educational psychology, economics, urban planning, religion, and science communication.

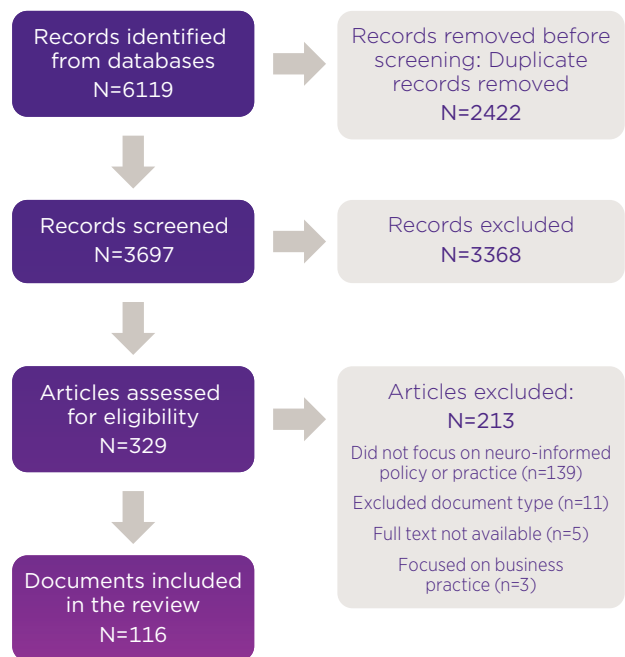


Figure 2: Identification of relevant academic and policy documents via databases and registers

Two publications which explain the scoping review in more detail will be released in 2024: *The Brain in Context: A Scoping Review and Concept Definition for Neuro-Informed Policy and Practice* and a *Neuro-informed Policy and Practice Scoping Review - Evidence Brief*.

¹ Brain health (who.int)

A Neuro-informed Policy and Practice Framework

Findings from the scoping review were used to develop a new Neuro-informed Policy and Practice Framework which can be seen below in Figure 3. Analysis of the literature identified 12 knowledge bases underpinning neuro-informed policy and practice which reflect current applications and implementation across the fields of health, education, social service, law, and physical/built environments.

The 12 knowledge bases in the Neuro-informed Policy and Practice Framework, which have been categorised into the three main areas of the ecology of the developing child, highlights the underlying key messages from neuroscience within each. This enables policymakers and practitioners to understand how their work intersects with neuroscience, where the gaps are and therefore how to promote optimal conditions for supporting brain health and/or related positive physical, social, for positive community outcomes.

The Neuro-informed Policy and Practice Framework is already being used by Tertiary training partners to inform curricular reviews for pre- and in-service workforce training and will inform related policy and practice responses. It is also being used in the Brain Builders Community of Practice to frame neuroscience knowledge delivery, discussions and the participants' own practices allowing them to link their work and learnings directly to the neuroscience.

Stories of Implementation

The TKBBI Implementation Workshop identified a need to share real-life examples that demonstrate how neuro-informed policy and practice, i.e. brain building, are being embedded across practice in Queensland. TKBBI responded to this need by developing a methodology designed to enable the voices of representatives from a diverse range of workforces to share their stories.

The team are currently collecting and collating stories of how people in frontline service delivery organisations, government departments, and tertiary sectors are undertaking brain building in Queensland. These stories will be available in 2024.

A Neuro-informed Policy and Practice Framework

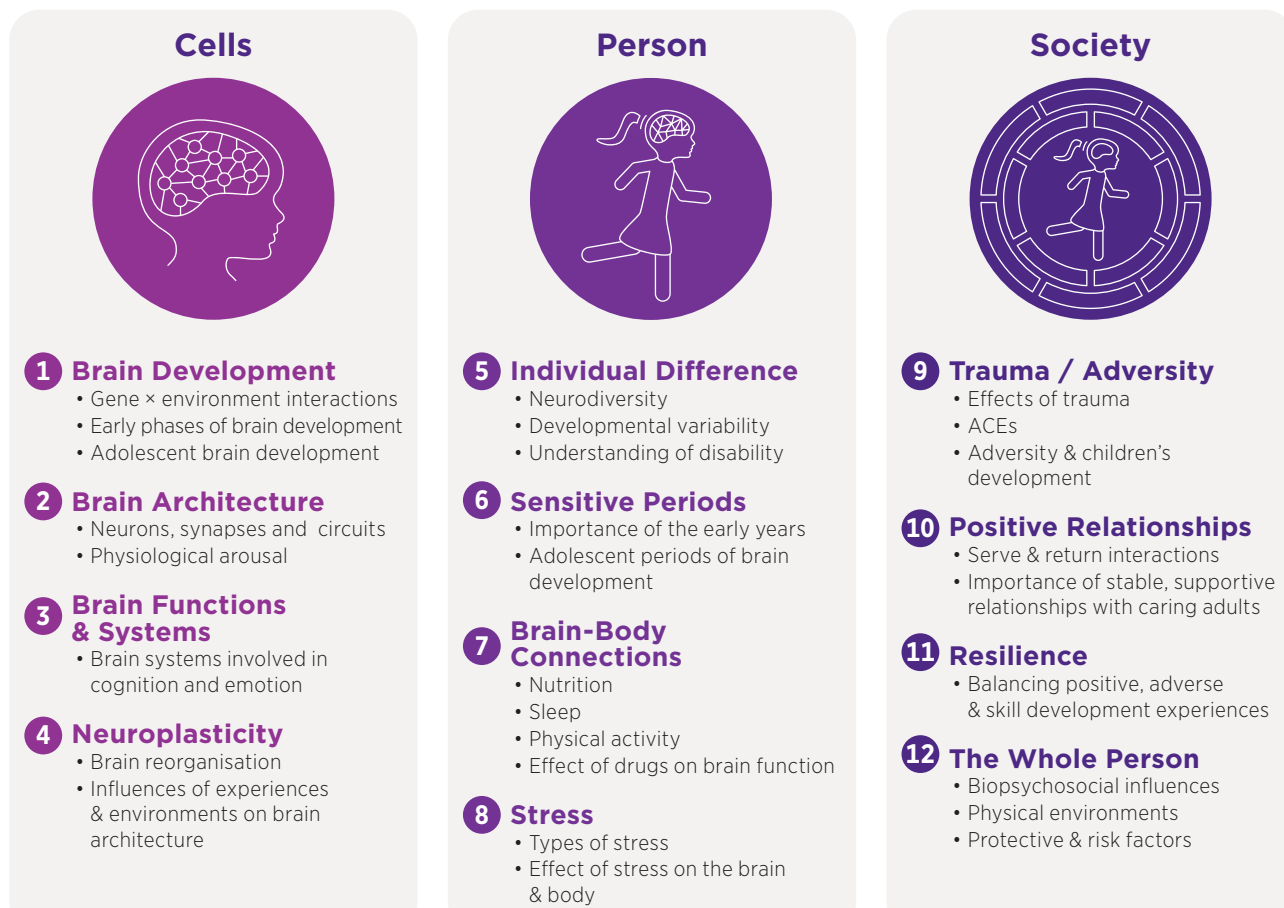


Figure 3: Twelve key knowledge bases underpinning Neuro-informed policy and practice



Deadly Brains



In collaboration with Yiliyapinya Indigenous Corporation, the Deadly Brains project is supporting the research and development of place-based neuroscience initiatives for Aboriginal and Torres Strait Islander communities.

Year 1 has seen the establishment of a collaboration between the Yiliyapinya Indigenous Corporation, TQKP, The Queensland Brain Institute, UQ Poche Indigenous Health Research Centre (Let's Yarn About Sleep) and UQ School of Human Movement and Nutrition Sciences. Cultural mentorship with Dr Kai Wheeler, a proud Ngarabal person, has been established and access to culturally appropriate co-design methods established by the Let's Yarn About Sleep (LYAS) program has been secured for use.

The goal of this collaboration is to learn from Australia's first Indigenous-led neuroscience-informed program that addresses the impact of adverse life events on Aboriginal and Torres Strait Islander children and young people.

This collaboration has led to the development of two research evaluation plans aimed at identifying opportunities to adapt and scale the Yiliyapinya program through consultation and co-design with other Aboriginal and Torres Strait Islander communities.

Funding is currently being sought to implement the research evaluation.

Yiliyapinya Indigenous Corporation delivers three important brain building programs which contribute to the Deadly Brains element of TKBBI:

1. **The Yili Program** provides select 10-17 year-olds **Indigenous youths** and their families with social, emotional, healing, education, and training support with the aim of keeping them out of custody, reducing their likelihood of reoffending and reducing domestic and family violence by adolescents. The program also assists them to engage in school, training or employment as well as prosocial behaviours such as sport. The focus is on brain health screening and improving brain health, healing and physical fitness with input from the local Traditional Owners and Elders. The 'Know Your Brain' curriculum, codesigned with the Brisbane Youth Detention Centre (Qld Education) is delivered to all young people in detention weekly.
2. **The Workplace Brain Health Program** uses brain health science to boost the wellbeing and productivity in specific child focused workforces and create a flourishing workplace environment. Brain health screenings and programs are offered to staff in the Education, Child Safety, Youth Justice, Police and Educators sectors while integrating brain health conversations and learnings through a cultural lens into existing services.
3. **The Deadly Brains Playgroup** aims to enhance parental understanding and behaviour as well as strengthen children's cognitive, social, emotional and communication skills. **Indigenous** Parents with children under five years old learn about brain development in the early years. Lego therapy is used to improve executive function skills in children and parents. Culture is at the core of the playgroup.



Brain Healthy Places and Spaces

In collaboration with place-focused initiatives in Queensland, this project is investigating the driving forces, enablers, barriers, and opportunities for implementing place-focused, neuro-informed practices. Resources, good practice frameworks, and examples to support the set-up and strengthening of brain healthy practices in places that intersect directly with communities are being developed.

What do we mean by 'Places' and 'Spaces'

Place-focused initiatives vary in terms of organisations, services, and programs that respond, on a daily basis, to the specific needs of the unique places in which they are located. Interviews with middle-management and leaders of place-focused organisations and initiatives have been undertaken to better understand the driving forces, enablers, barriers and opportunities for embedding neuro-informed policies and practices in place across Queensland.

The interview methodology was designed so we could hear voices from across the diverse range of Queensland's place-focused initiatives. First, we conceptualised a definition of places and spaces to be:

Places

- Physical locations—including geographical areas, their natural environments and infrastructure
- Online locations e.g. website forums, chat groups, social media.

Spaces

- The physical aspects of place such as how the space is utilised, designed, and resourced.
- The social aspects of place such as the interactional spaces people create when they come together. These often involve 'less tangible but powerful aspects of relationships, peoples, histories, stories, rituals, knowledge, energy, identity, meanings, spirit, lifeforce'²

² QCOSS Continuum of Place-based Approaches, First Iteration, <https://www.qcoss.org.au/contents-page-for-place-based-approach-and-toolkit/> accessed Sept 2023



Next, we developed a framework to differentiate the various types of place-focused initiatives and developed a strategic and meaningful approach to select and invite places for interview. The selection focused on both whole-of-systems-change place-based initiatives such as Stronger Places Stronger People sites and services or groups of services operating 'in place' with a reach, through referral and recommendation pathways, beyond their own individual workforce and clientele, and therefore with the potential to influence systems change. This led us to adopt the term 'place-focused' for the research project rather than 'place-based'.

In total, we identified over 30 umbrella initiatives, organisations and programs operating in Queensland which fitted the definition of place-focused, with a combined total of over 300 individual branches.

In our interviews we targeted organisations that:

- focus on early childhood and/or early adolescence—the two biggest windows of opportunities to influence brain development;
- aimed to reach all children and adolescents in community – to give opportunity to influence the maximum number of lives through potential implementation of brain building by those interviewed.

Interview questions were designed to ensure relevance to the diverse types of place-focused initiatives being interviewed. The barriers, enablers and opportunities for implementing brain building in place are now being analysed and being used to inform the development of co-designed resources, tools and supports.

Strengthening Brain Healthy Practices in Place

During year 1, a suite of resources to support practical application of neuro-informed principles and practices in place-focused initiatives have been developed. These resources draw from, and build on, a range of national and international tools and frameworks that enhance the sharing of neuro-informed knowledge, language and messages.

Development of the resources have been guided by five key principles, emerging from our consultations, and relevant to the positive experiences of intended end-users:

1. **High quality** – aligned with current, established evidence bases from neuroscience and related child development fields
2. **Cross-sectorial** – applying to and encouraging dialogue between the wide variety of workforces supporting children and young people in Queensland
3. **No or Low cost** – free or very low-cost ensuring equitable access to the knowledge
4. **Accessible** – no prior or background knowledge required
5. **Feasible** – responsive to the very limited time practitioners have available to engage

In Year 2, a process evaluation will be carried out in partnership with a diverse range of services and place-focused initiatives

Introducing The Nested Resilience Game



The Nested Resilience Game has been developed to support workforce development through increasing practitioners' understanding of brain development and the elements that underpin a person's resilience. The game allows players to practice identifying potential supports for a person at the individual, family, and community level, (i.e., the whole system), and through a neuro-informed lens.

The Resilience Game draws content from the Centre on the Developing Child³, the Alberta Wellness Initiative⁴, The Nest – Australia's Wellbeing Framework for children and young people⁵, UNICEF's What Makes Me: Core Capacities for Living and Learning⁶, and the ACES⁷ and PACES⁸ literature.

During the game, players work in groups to identify a significant life challenge (e.g. the death of a family member, ongoing insecure housing etc.) that a hypothetical person is facing. Players then work together to develop a deeper understanding of the context within which that person lives by exploring the person's resilience using the resilience scale and the elements of The Nest – Australia's Wellbeing Framework for children and young people. The group does this by 'building' the person's resilience scale through selection and discussion of hypothetical, everyday scenarios the person faces, skills they or their families have acquired, external supports they may have access to and ongoing challenges they may face on top of the significant life challenge identified at the beginning of the game. Players discuss how these scenarios, in relation to the significant challenge, could impact the person's resilience and work together to develop a supporting resilience plan.

3 Centre on the Developing Child Harvard University, 'Resilience'.

4 Alberta Wellness Initiative, 'Resilience'.

5 Goodhue, R and Dakin, 'What's in the Nest? Exploring Australia's Wellbeing Framework for Children and Young People'.

6 Richardson, D *et al.*, 'What Makes Me? Core Capacities for Living and Learning'.

7 Malave, Van Dijk, and Anacker, 'Early Life Adversity Shapes Neural Circuit Function during Sensitive Postnatal Developmental Periods'.

8 Morris *et al.*, 'The Heart of the Matter'



Brains Trust Collaborative

In collaboration with diverse government, non-government, philanthropic and academic partners, TKBBI is convening events, establishing critical networks, and generating new collaborative opportunities. Knowledge and implementation of neuroscience to support children and their families is shared at these events. On 25th July 2023, TKBBI held an Academic Roundtable and an Implementation Workshop.

These key TQKP events brought together research and system leaders from across Queensland to connect, catalyse and learn. The focus of the events was to advance research and embed knowledge of brain development across workforces, services, training, place-based and community organisations in Queensland.



Academic Roundtable

Thirty research leaders from Queensland universities and institutes attended the academic roundtable. The purpose of the roundtable was to identify and build research collaborations, with a view to building R&D focused on applied neuroscience and child development across Queensland. The session drew on participants' extensive expertise in applied neuroscience and related fields focused on supporting children and young people to thrive.

Attendees were representatives from:

Australian Research Alliance for Children and Youth

Central Queensland University

Griffith University

James Cook University

Queensland University of Technology

The Academy of Organisational Neuroscience Australia

The University of Queensland

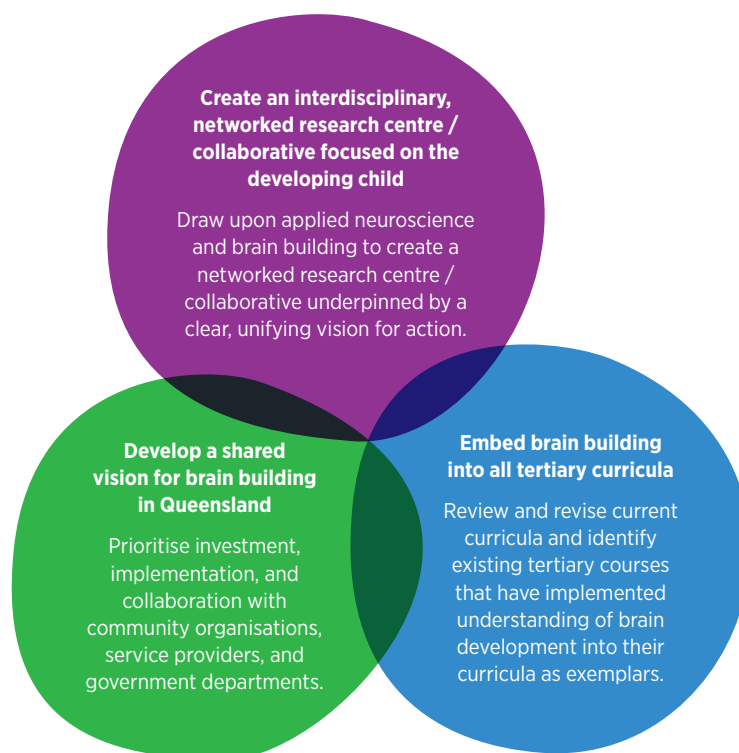
University of Southern Queensland

University of the Sunshine Coast

Queensland Children's Hospital

Working together, attendees identified, shared, and prioritised a series of actions to support R&D in Queensland, including those focused on collaborative research, community engagement and curricular review and development.

Key priorities identified during the Academic Roundtable



Actions identified by the Academic Roundtable



Develop trusting, collaborative relationships between researchers, service providers, and government departments to define an integrated child development strategy that prioritises embedding brain building into policy and service provision.



Build an integrated database to track health, educational, wellbeing, and social outcomes of children and families in Queensland, and **capabilities and infrastructure for data-matching**.



Support and advance research of cohort, place- and space-based initiatives so that all children are supported to thrive irrespective of their location and circumstances.



Integrate cross-disciplinary and cross-sectoral expertise to embed brain building into systems, organisations, and service-provision.



Use translatable research evidence to empower and support children and young people, their families, and communities, to harness their own knowledge and experience to co-define problems and co-design solutions.



Create an inclusion agenda integrating expertise from within and across workforces and sectors that takes into consideration all children and young people, including those represented in First Nations, disability, refugees, immigration, and regional and remote locations.

Brain Builders Implementation Workshop

On 25th July 2023, 90 systems change leaders from government, non-government, training, community, philanthropy, and advocacy organisations attended the workshop to identify and share key strategies, opportunities and actions for creating authorising environments for brain building within Queensland workforces, services and communities. The workshop drew on the collective expertise of leaders from health, education, social and justice sectors and identified common barriers, enablers and opportunities for implementing and embedding brain building in Queensland. These barriers, enablers and opportunities are below on p19.

This session drew on the collective expertise of leaders from health, education, social and justice sectors.

The workshop component of this event was facilitated by Helen Francis from Emerging Minds. Attendees included representatives from:

"It's amazing to see all of the expertise just woven together in that room [and] we're just so happy that the talk today is about implementation."

Jessica Rudd - CEO, The Parenthood

Act for Kids	Health and Wellbeing Queensland	TAFE Queensland
Australian Research Alliance for Children and Youth (ARACY)	James Cook University	The Academy of Organisational Neuroscience Australia
Campus Kindy	Kyabra Community Association	The Salvation Army Communities for Children
Catholic Early EdCare	Logan Together	Thriving Queensland Kids Partnership
Central Queensland University	Mercy Community	Tim Fairfax Family Foundation
Children's Health Queensland Hospital and Health Service	Office for Youth	Tropical Brain and Mind Foundation
Department of Child Safety, Seniors, and Disability Services	Outback Futures	University of Southern Queensland
Department of Children, Youth Justice and Multicultural Affairs	Pathways to Resilience	University of the Sunshine Coast
Department of Education, Early Childhood	PCYC Queensland	UQ's Child Health Research Centre
Department of Seniors and Disability Services	PeakCare Qld Inc.	UQ's Institute for Social Science Research
Department of Youth Justice, Employment, Small Business and Training	PeopleBench	UQ's Queensland Brain Institute
Dovetail	Queensland Mental Health Commission	UQ's School of Psychology
Emerging Minds	Queensland University of Technology	UQ's UQ Poche Centre for Indigenous Health
Goodstart Early Learning	REFOCUS Aboriginal & Torres Strait Islander Services	UQ's School of Human Movement and Nutrition Sciences
Griffith University	Social Ventures Australia	Yiliyapinya Indigenous Corporation
Hand Heart Pocket	State Library of Queensland	yourtown

Barriers. Before identifying opportunities and actions, it was important to first acknowledge potential barriers to embedding brain building into service delivery and practice.

Across the levels of systems, organisations, supervisors, and practices, a range of barriers were identified:

Change resistance and fatigue	Short termism	Limited access to data
Competing ideologies	Financial constraints	Lack of flexibility
Internal 'politics'	Siloing	Restricted time and resource
Poor communication	Absence of shared vision	High staff/workforce turnover
Conflicting priorities	Lack of leadership support	Lack of organisational permission/prioritisation

Opportunities and Actions. A large range of opportunities for embedding brain building within the system, organisations, supervisors, and practice were identified.

Importantly, the workshop addressed the need for a multi-faceted approach to creating the authorising and incentivising environment for innovation, development and scaffolded implementation, with explicit support, commitment and role modelling from key systems and organisational leaders.

These opportunities were synthesised and informed the development of 9 key actions to catalyse brain building in Queensland:

	Enable and amplify champions and ambassadors of brain building within and across systems, organisations and initiatives.
	Embed brain building across systems frameworks and strategies, including vision and mission statements, KPIs, accreditation, training, measures, funding, and procurement.
	Acknowledge the important role that we all play in building brains.
	Highlight existing strengths and opportunities for growth, including identifying and providing real-life examples of current practices that align with principles of brain building, including through case studies and stories.
	Develop and disseminate resources and tools to support embedding understanding of brain building within workforces, services, and communities.
	Support information and practice sharing through participation in communities of practice, learning circles, case studies, and peer-to-peer networking opportunities.
	Make research and knowledge of brain building accessible to all members of the community and across the life course.
	Create time and space for professional and organisational development, including opportunities to learn, try, and change.
	Review and revise current tertiary curricula – both through TAFE and universities – to embed key principles of brain building.
	Create a shared narrative and common language of brain building across the entire child, youth and family eco-system.

Brain Builders Summit

On 30th August 2023, the Brain Builders Summit was held at The University of Queensland and hosted by Dr Norman Swan. The Summit brought together 200 leaders from across the Queensland children and youth systems to connect, catalyse and learn. The Summit focused on applying knowledge from neuroscience to benefit Queensland's children, young people, their families and communities. The theme was We are all Brain Builders, and the objective was to encourage rich dialogue about "What should we know?" and "What should we do?" to support children and young people in Queensland to thrive.

Summit presentations were recorded and are available to watch on the [TKBBI website](#).

"Honestly, I'm just really honoured to be here and that I can speak my mind because there are so many issues that don't get picked up on."

Oliver Dobrenov, Summit Panel Member, aged 16

Keynote and expert panellists included:

Professor Jeanine Young AM

University of the Sunshine Coast,
Professor of Nursing

Professor Karen Thorpe

The University of Queensland,
ARC Laureate Professor Child Development

Professor Zoltan Sarnyai

James Cook University,
Professor of Neuroscience

Dr Dana Newcomb

Children's Health Queensland,
Medical Director Integrated Care

Jessica Rudd

The Parenthood, CEO

Dr Kate Liley

Goodstart, National Research Manager

Sheryl Batchelor

Yiliyapinya Indigenous Corporation, Director

Ishika Digurmarti

Youth Advocate

Oliver Dobrenov

Youth Advocate





Brain Builders Community of Practice

In collaboration with Children's Health Queensland and other partners TKBBI are implementing online Neuroscience Communities of Practice to establish shared knowledge, learning and supports for child and youth focused sectors in Queensland to help children and families thrive.

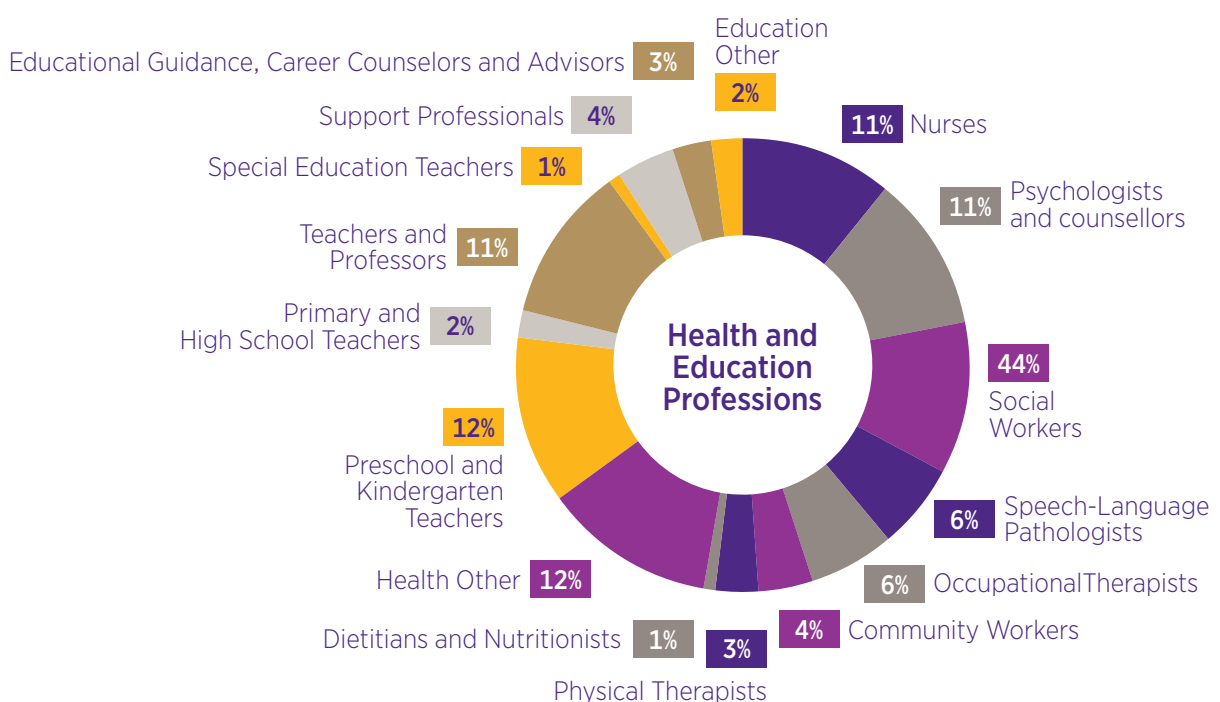
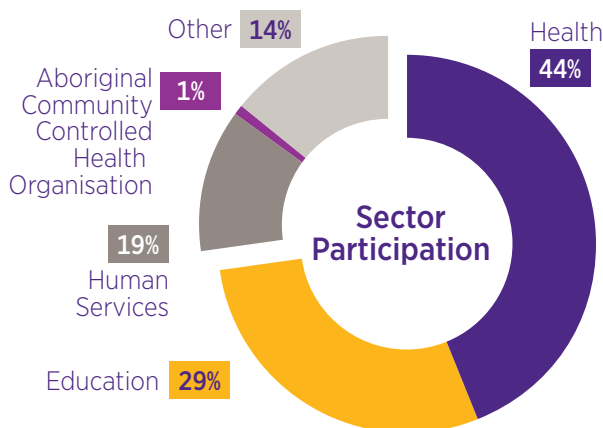
A partnership with the Children's Health Queensland iECHO project team who host multiple Communities of Practice for Queensland's health professionals has been established and the first neuroscience focused community of practice, called **Brain Builders**, commenced. The monthly Brain Builder Community of Practice focuses on the following four topic areas:

- Brains and Community
- Brains and Learning
- Brains and Health
- Brains and Behaviour

Over 370 professionals from across Human Services, Health, Education, Aboriginal Community Controlled Health Organisations (ACCHOs) and others registered their interest in the Community of Practice and the opportunity to share learnings about how to apply the principles of neuroscience to their practice. Most members are based in Queensland, but professionals from other states and countries⁹ have also signed up. A breakdown of membership sectors and professions can be seen below:

Registration numbers have exceeded any other iECHO hosted Community of Practice and as a result, two sessions instead of one commenced each month to ensure a positive participatory experience. Each session features a 15min presentation from a lived and/or learned expert on one of the above four topic areas, followed by both whole-group and break-out room discussions with time to reflect on how new knowledge could be applied in practice.

Participants have reported strong intentions to apply new methods and approaches learned in the sessions to their practices including, for example, around sensory play, communication with neurodivergent children and emotional regulation for children and themselves as practitioners. Evaluation of the Brain Building Community of Practice is being undertaken in Year 2, including key learnings from practitioners regarding the application of neuroscience into practice.



⁹ Canada, Egypt, India, Malaysia, Mexico, Pakistan and the United States.

What's Next

Year 2



In Year 2, TKBBI is continuing to work to TQKP's objectives, transitioning from research to implementation and collecting evidence to demonstrate outcomes.

Highlights include:

- **Free to download Nested Resilience Game** for use in professional development days of any workforce providing services to children, young people and their families.
- **Neuro-informed Policy and Practice Framework** and accompanying Evidence Brief explaining the 12 key knowledge bases underpinning neuro-informed policy and practice.
- **Curricular Reviews of tertiary early childhood education courses in Queensland** to examine the neuroscience underpinning current courses the early childhood development workforce engage with.
- **New eModules and resources**, for use in early childhood education courses and professional development, explaining the neuroscience underpinning the Australian Early Development Census (AEDC) domains.
- **Brain health in Queensland's schools** project to scope, co-design and co-deliver a Brain Health focused workforce development package and complementary set of resources for students in primary and secondary schools.
- **Brain Health in Education Events** in South East and North Queensland.
- **Stories of successful Brain Building efforts in Queensland**, through real stories of application and on the ground examples across workforces in Queensland.
- **Dictionary of Brain Building Words** as a glossary of common language for applying brain building across systems.

How to Get Involved

We invite you and your organisation to stay in touch and engage in the Brain Builders Collaborative, be a Brain Builders Champion and/or share your Brain Building story.



'Understanding Brain Development' learning modules

Complete the modules and share with your networks



Brain building in your organisation

How is your organisation embedding brain building within your workplaces, service delivery or practice?



Thriving Kids Brain Builders Initiative website

qbi.uq.edu.au/brain-builders



Join the Brain Building **Community of Practice** through the Project ECHO platform



Join the **Brain Builders event and mailing list**



Get engaged with **Thriving Queensland Kids Partnership**

Contact us

Queensland Brain Institute

qbi.uq.edu.au/brain-builders

E: brainbuilders@uq.edu.au

Thriving Queensland Kids Partnership

www.aracy.org.au/the-nest-in-action/thriving-queensland-kids-partnership-tqkp

E: TQKP@aracy.org.au



Acknowledgement

We would like to acknowledge the contribution of the many organisations, individuals and community members who have contributed to TKBBI in this first year. We would also specifically like to thank the TQKP team, ARACY, QBI Thorpe Lab, Yiliyapinya, Emerging Minds and the Project ECHO team at Children's Health Queensland for their leadership on this initiative.

We thank our supporters





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