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Shared Stories of Brain Building Across Workforces in Queensland

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

What is Brain Building

We are all brain builders. Every time we directly or indirectly interact—via systems and services—with a child, young person or their family, we are creating the environments that build brains. For this reason, understanding brain development is important in supporting children and young people to thrive. The term *brain building* is used throughout this document to denote the application of neuro-informed policy and practice at the individual, community and system levels, creating the positive environments that support brain health and development. 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[1] and related positive physical, social, and community outcomes. More about neuro-informed policy and practice can be found here: https://tqkp.org.au/wp-content/uploads/2024/10/QBI-NPP-Booklet-Digital.pdf.

Thriving Kids Brain Builders Initiative (TKBBI) is designed to generate, translate, and apply knowledge from neuroscience and related child and adolescent sciences for the benefit of Queensland children, young people and their families and communities. More about the TKBBI can be found here: https://qbi.uq.edu.au/brain-builders.

1 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."

Acknowledgement

We would like to sincerely thank the storytellers who have dedicated their time, not only in speaking with us, but also in applying their knowledge, wisdom and experience in service to children, young people, their families and communities. The following stories were collected at part of the Thriving Kids Brain Builder's Initiative (TKBBI) which is a collaboration between researchers at the Queensland Brain Institute (QBI) at The University of Queensland, the Thriving Queensland Kids Partnership (TQKP) and the Australian Research Alliance for Children and Youth (ARACY). We would like to sincerely thank the many philanthropic and community partners that support this work.

Why Shared Stories

On the 25 July 2023, more than 90 systems leaders from government, non-government, training, community, philanthropy, and advocacy organisations attended the inaugural Brain Builders Implementation Workshop at The University of Queensland. This workshop was co-hosted by the Queensland Brain Institute, the Thriving Queensland Kids Partnership (TQKP) and the Australian Research Alliance for Children and Youth (ARACY). The purpose of the workshop was to create a strategy for how *brain building* can be embedded within and across Queensland systems, workforces, and communities to support integrated service delivery so that *all* children, young people and their families have an opportunity to thrive.

Delegates representing a diversity of systems, workforces, and roles identified a range of enablers and strategies for implementing brain building in Queensland at individual, organisation, and system levels (see report here: TKBBI Embedding Brain Building in QLD). Three necessities identified for supporting implementation were:

1. **Shared Knowledge** of neuro-informed policy and practice, and what brain building within workforces should encompass. See the Neuro-informed Policy and Practice Framework.
2. **Shared Language** of brain building and associated concepts to support communication across the system.
3. **Shared Stories** that provide examples of how to implement brain building into policy and practices across workforces.

The following stories are in response to this third identified necessity.

Collecting and Sharing Stories

Shared stories of Brain Building Across Workforces in Queensland aims to document the ways in which those working with and for children, young people and their families in Queensland have discovered, learned about, shared and implemented brain building into their everyday practices. These stories exemplify the growing application of brain building across workforces in Queensland and beyond.

The key purpose of these stories is to provide examples and guidance for actions that can move us *from the knowing to the doing*.

Our Storytellers

Our storytellers were identified across Queensland through brain building events in 2023 and 2024 and through word of mouth. Storytellers included:

- Frontline workers and workforce trainers applying brain building knowledge with children, families and communities.
- Tertiary educators embedding brain building knowledge into curricular and professional training.
- Public servants applying brain building knowledge across government systems.

These storytellers volunteered their time, aspiring to inspire brain building and learning in others.

Our Methods

Storytellers shared their stories during 1-hour interviews with the research team. Throughout each interview, our storytellers shared how and why they:

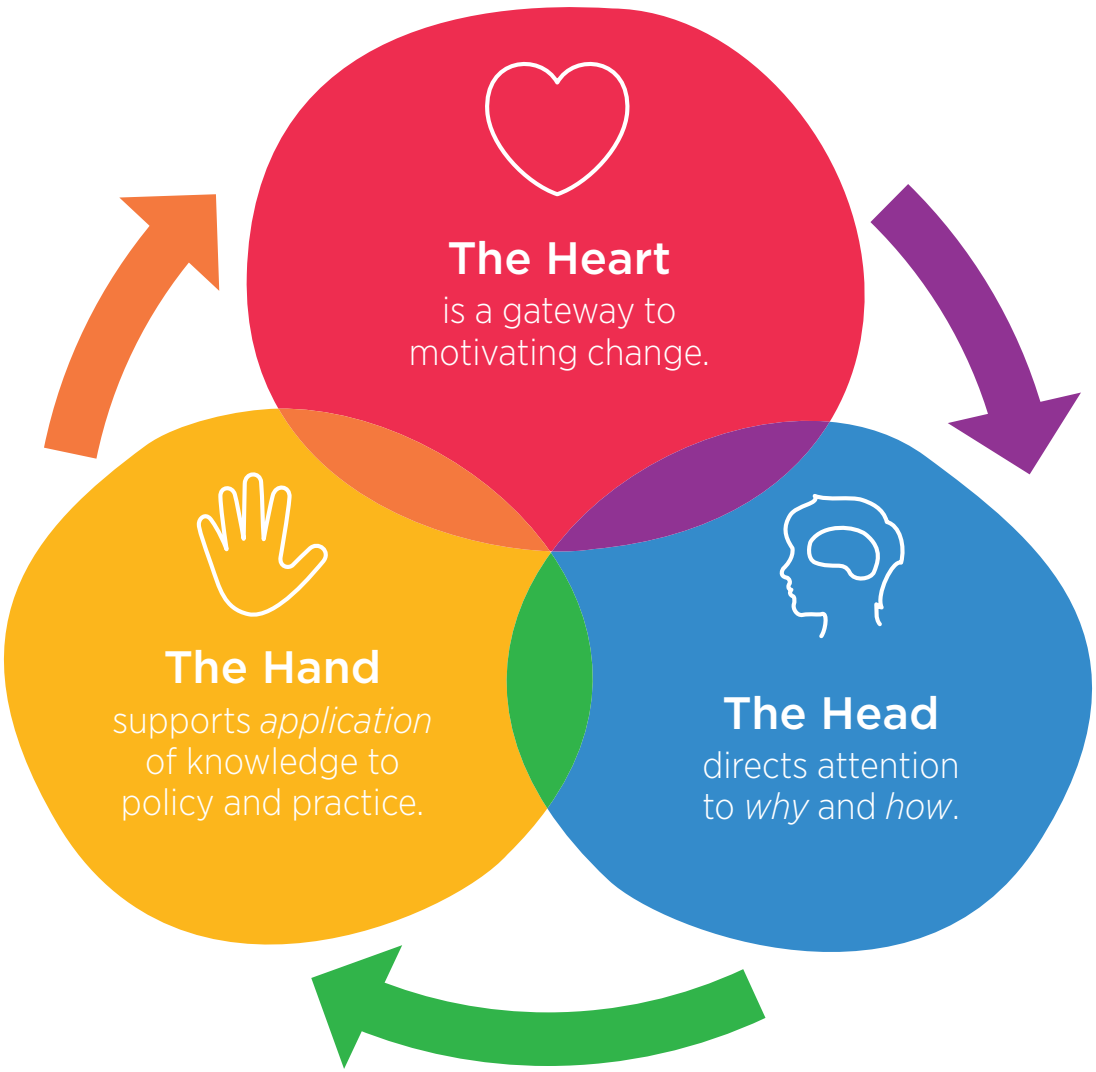
- were motivated to embed brain building into policy and practice actions,
- gained knowledge and helped others to learn about brain building,
- embedded brain building strategies and actions in everyday practice and real-world interactions with children and their families.

Each storytelling interview was recorded, transcribed and analysed for key themes. The collective wisdom, insights and learnings shared through these stories are distilled to highlight the universality of key messages and learning with the aim of supporting others along their brain building journey. These key messages are communicated in the following sections using the *Heart, Head, Hand* process for transformative and sustainable learning (Sipos *et a*l, 2008). Names are removed to protect the identity of our storytellers and their organisations and to emphasise the universality of messages and learnings that emerged.

Stories can be powerful tools for change. It is our hope that these stories will indeed help support ongoing change, and that through storytelling we can open "ears, eyes, minds, and maybe, maybe even hearts" (Mackinlay, 2019, p.218).

Heart, Head, Hand: A holistic approach to learning and leading

To provide a framework for communicating the stories shared with us, we took inspiration from Sipos and colleagues' (2008) *Heart, Head, Hand* process for transformative and sustainable learning. The *Heart, Head, Hand* process directs focus to the different elements required for embedding knowledge into practice. Within the collected stories, exemplars were identified that mapped onto the **Heart** (i.e. how motivation is inspired by feelings); **Head** (i.e. how knowing supports doing); and **Hand** (i.e. how environments empower action).



Heart: Motivating Change

The *Heart* represents the ways in which knowledge about brain building is connected to emotions and serves as a motivation for embedding brain building principles into policy and practice actions. Such experiences are felt deeply on an emotional level and can motivate life-long learning. As one storyteller poignantly shared:

> *"If you change hearts, you'll change minds"*

The Personal is Powerful

Personal experiences can support a deep understanding of the importance of brain building. Our storytellers told us how a personal connection to brain building can move individuals to engage with, and motivate application of, knowledge within their day-to-day practice. For example, one storyteller described how their own journey of becoming a parent motivated learning about neuroscience and brain development. Understanding the importance of children's attachment to adults and the positive impact of creating a felt sense of safety for children helped this storyteller understand how parent-child connection supports positive child behavioural and wellbeing outcomes:

> *"It's all around that idea of when a child has some big feelings and their limbic system is overwhelmed with that, they're not thinking completely clearly. They need for their prefrontal cortex to come back fully into capacity. They need to feel a sense of safety and a sense of connection. So that concept was what I based my early parenting on"*

This lived experience informed their current practice, integrating neuroscience into the early childhood education curriculum to help future teachers of young children understand brain development and its impact on learning and behaviour.

Another storyteller described the profound experience of seeing and hearing children's own responses to understanding how their brain worked. Seeing how children respond to this knowledge motivated them to be a champion for brain building:

> *"...children saying things like '[people] have called me really stupid. But I'm not stupid cause I've got a brain'...[I]t's through that neuroscience lens that we started to talk more about the brain. And so that child, their confidence just changed through that teacher taking on board those neuroscience principles... I had another talk...about how neuroscience principles and practices informed a youth development program... and these kids said 'do you mean I'm not a dumb ******* ****!'... That was life changing for that child at 15, to suddenly go 'You know, there's potential here for me to actually make some changes in the way I think... My brain has plasticity'. So, I say to people I'm coming back as a neuroscientist because it's really, really important."*

Our Own Brain Stories Guide Us

Our ability to respond to others empathetically is influenced by our own personal histories, including upbringing, experiences, emotional triggers, and traumas. Our storytellers told us how developing an understanding of our own experiences can help foster healthy relationships with children, young people, their families. Recognising how an individual's background shapes interactions can support the development of more effective strategies that promote adult-child attachment. As one storyteller described:

> *"We all have different capacities to respond to children in an empathetic, attachment-based way. We have so much that we bring to that relationship: how we were parented, what our experiences were, what our triggers are, our responses, our preconceived ideas. All of that can sometimes need a bit of unpacking with a neuroscience informed approach as well"*

Putting the Child in Context

Brain building directs attention to the impact of a child's context on their development and behaviour. Our storytellers told us how being able to see a child or young person as connected to, or in the context of, their family, community and history enabled a deeper understanding of the influence of a child's environment on their brain health and development. As one storyteller shared:

> *"…once they're able to…identify and understand the child as a whole within the context of the family, within the context of the community, it all falls into place and makes sense"*

Brain building also directs attention to the role of all adults who interact with children in any capacity, and for any length of time, in providing safety, security, and positive experiences. As one storyteller eloquently described:

> *"…your little bit that feels really tiny could still be one of the things that's slowly shifting [a child] from chronic stress to wellbeing and surviving and positivity. You're not solely responsible for their whole story… and for fixing everything. But… even having that one moment of safety in that week is one more moment of safety that that person's brain and nervous system has experienced"*

Our storytellers also underscored how brain building highlighted for them the importance of creating spaces that can support children, young people and their families. As one storyteller, who works within a tertiary health (ICU) setting, explained:

> *"I use the brain building stuff as a lens through which I view the mechanisms of poor recovery. So [bringing in concepts of] adversity, parent-child connection, those sorts of things… I'm trying to… work in what we know and we understand about building healthy brains into how we manage children post-ICU in terms of a model of care… Just trying to impress upon people that admission to hospital, critical illness, chronic illness in itself, in addition to children who have underlying disabilities and comorbidities, is a form of trauma and adversity"*

A Ripple Effect

Brain building is not something that is done to children but is something that children can participate in, influence and enact with others. Our storytellers told us of the ripple effect when children and families understand brain development and engage with brain building activities in communities. Sharing brain building principles—enabling children to have agency over their own brains—democratises knowledge and supports child agency within their own lives. As one storyteller explained:

> *"…the kids would go home and tell their parents… [T]hat was really important… not just offering the neuroscience training to the educators but offering it to parents as well…. The parents actually formed a support group with each other to know more so that they could best support their children, which was really, really lovely. They just saw that has been really important for the social fabric of the community in which they lived"*

Considering the child in context also means considering the impact that knowledge and understandings of brain building can have on families and communities. Our storytellers shared how parents sought knowledge and guidance on brain building to support their child's learning and development. For example, this storyteller shared how several parents of children who were experiencing developmental delay were moved by learning about brain building, and had wished for an opportunity to learn this knowledge sooner:

> *"…they had tears in their eyes, [saying] 'Why didn't someone tell me about this [sooner]?'"*

Head: Gaining Knowledge and Understanding

The *Head* is cerebral; it signifies gaining a deep understanding of what brain building entails. The Head directs focus to why and how everyday interactions impact children and families and underscores the significance of the workforce for ensuring children and their families can thrive. As one storyteller conveyed:

> *"So if everyone interacting with children… knew this stuff, then… what would they do differently? Then if they did that differently… What would we see? And then if we saw that, we would expect children to be uplifting in their outcomes"*

Know the why

Knowing the why supports successful implementation of brain building into policy and practice actions. Our storytellers emphasised the importance of having access to brain building knowledge (*the why*) and an opportunity to make deep and personal connections to this knowledge within their practice:

> *"…we can tell people strategies until we're blue in the face. But I think until they understand the why, it doesn't click as much. Early brain development explains the why for so many of the other topics that we talk about… Nearly all of the topics [we talk about in our practice] have underlying links back to early brain development"*

A knowledge of brain building helps workforces understand what happens inside a child's brain. It inspires curiosity and connection. Brain building supports an approach to interacting with children where, at its foundation, is the knowledge that:

> *"…all behaviour is communication… try and understand where distress comes from."*

A more accurate and evidence-based understanding of children's behaviour can shift existing approaches or mindsets around working with children. As this storyteller explained:

> *"We've heard from undergrad students going out on their professional placement and realising that the only way that they 'get through to a child'… is by understanding what might be happening in their brain and by connecting with them and taking that relational approach: 'connection before correction' or 'connection before curriculum' has been really life changing for them and their practise"*

A knowledge of brain building also helps workforces understand what happens in children's worlds beyond a child's brain. One storyteller explained how linking neuroscience with practice in training programs reinforced the potential for profound positive impacts of brain building within children's lives:

> *"[it] made a whole lot more sense to them because they could see that neuroscience was linked to that sense of well-being, that sense of identity, the connection to the world, the ability to communicate and the ability to be a learner. And so that deeper understanding of neuroscience principles really changed the way in which they practiced. And how simple was that?"*

To learn the why, teach and do

Peer-to-peer teaching helps us to reinforce the why. Our storytellers shared the value of teaching brain building to colleagues and peers. As this storyteller described, the process of peer-to-peer teaching was one important way to integrate brain building research into practice:

> *"[Students] have to do a presentation for an assignment to their colleagues… like they've gone to an in-service and they have to convince their colleagues about how important it is… So that's pretty exciting because now [they] are getting that beautiful content, but integrated with neuroscience research."*

Putting brain building in practice—or *doing* brain building—was also an important part of learning for many of our storytellers. One described how experiencing brain building helps them to integrate learnings:

> *"[Brain building] started off being just bookish knowledge in terms of attachment or attunement or whatever it might be. But the way that I can embody that is to create or to experience that myself….I don't think you can just read something or do an online course or a module or whatever, and then get it. You need to actually have that felt sense, and that experience of attunement yourself to be able then to embody that and be that for someone else if they need it."*

A way of supporting those who work with children to 'know the why' is to embed opportunities for reflection into professional development or course delivery. One storyteller described their approach:

> *I have these little 5-minute introductions to each week… I set the scene for why this topic is important. And at that point, immediately link it to the impact it has [on brain development]. So, they develop a really strong backbone appreciation for the importance of their role… in terms of supporting children."*

Make Science Accessible: Messages, Metaphors, and Resources

Demystifying the science of brain building involves translating complex scientific concepts into accessible knowledge and language. Our storytellers highlighted the importance of breaking down knowledge and language barriers and making understanding accessible to all. As one storyteller expressed:

> *"…there's the minutiae and the pathophysiology of neuroscience that people may not access again. You know those videos with all the brain neurons – unless you're working in that space all the time and using that language and terminology, you're never gonna be able to pull back on that [in day-to-day interactions]… [P]rofessionals and consumers should all talk the same language… If I used some fancy neuroscience word, they'd all look at me a little bit like I had two heads and a horn."*

Our storytellers highlighted the importance of incorporating both scientifically accurate *and* accessible messages and metaphors of brain development into everyday language and communication. For example, one storyteller described:

> *"I think the more that something is easy to pick up, is scientifically accurate but accessible, it tends to be readily absorbed. Especially if it's not something that people feel like they have to be perfect at."*

A guide for framing how we talk about childrens development is available here.

Our storytellers shared with us a range of evidence-informed resources and approaches that can and are being used across Queensland to support, communicate, and share brain building knowledge. These messages and metaphors are readily available, accessed quickly, and embedded within professional development and practice actions at low or no cost. These resources are being used within training programs, professional development and with children, young people and families. A selection of resources mapped to key brain building knowledge bases can be accessed here.

Hand: Brain Building in Action

The Hand is practical. The Hand is the action that is performed within a supportive space that embeds the felt knowledge (heart) and learned knowledge (head) into everyday moments of connection. Hands are action-oriented strategies that are the translation and application of complex principles from neuroscience into everyday practice and real-world interactions with children and their families.

> *"If you want to actually transform your practice, if you want to feel better around how you work, this is really worth doing. I have not come across anybody who hasn't said 'ohh It's made a difference to me'"*

Adapt and Share: Messages, Metaphors and Resources

Translation of knowledge to practice application requires tailoring of the universal to meet the needs of the individual. Our storytellers described the importance of creating, adapting and sharing messages, metaphors and resources to meet different community, family and workforce contexts. For example, this storyteller highlighted how they have adapted and shared core brain building messages into learning and practice for different sectors:

> *"We have started [a special interest] group for people who are interested in health promotion across different sectors. So, health, youth, justice, education, private practice. And we have tried to do some learning around that and early brain development… one [key message] is take time to connect. So, a lot of the messaging that we're putting within that is around early brain development and why that connection and bonding and attachment is really important for children to feel safe to learn. So we're using the language around that for families, but also for those in that group who it's just not part of what they would normally learn about regarding early brain development science as opposed to the medical model or intervention-style of thinking."*

Storytellers also shared how they combined different resources and approaches to help link knowledge to practice. For example:

> *"The other thing that I've done is I love doing the Brain Architecture Game[2] with the students… it's very hands on and they like giving their brains a name and personalities…they have to use what they've learned in the Emerging Minds modules [3]to explain what might be going on for this child based on their brain architecture."*

> *"Once I heard about the Resilience Scale[4] … all of a sudden, the lights went on and for a lot of people they're like, 'Finally. OK, I get it now. I get it'"*

> *"You know, we've got… places where we can impact this child and this family; how can we change that? And it was about understanding what was currently going on….Because if you don't know…then you can't change anything. And so, once they're able to sort of see that and identify and understand the child as a whole within the context of the family within the context of the community it all fell into place and made sense."*

Other storytellers describe how they use metaphors and messages within their practice to help parents consider small things they can themselves implement to support their child. As this storyteller described:

> *"I have a little seesaw thing with a whole lot of stuff on one end. It has sleep, it has relationships, it has all the ACES [Adverse Childhood Experiences] on it. A vulnerable brain in the triangle and then [I talk to parents about] how do we achieve the balance? … It's just a little diagram that I often use to explain to parents [the things] that all load on the developing [child's] brain…"*

2 The Brain Architecture game is a hands-on activity that helps learners understand the core concepts of brain development. Available here: https://dev.thebrainarchitecturegame.com/

3 Understanding Brain Development Modules are an online e-learning course. Available here: https://qbi.uq.edu.au/brain-builders/tkbbi-elements/brain-builders-modules

4 The Resilience Scale identifies the challenges, positive experiences, genetics, skills, and abilities that contribute to resilience. More information is available here: https://tqkp.org.au/resources/what-surrounds-us-shapes-us-a-framework-for-building-childrens-resilience-to-thrive-in-life/

Share a common knowledge and language

A common knowledge and language of brain building can support successful collaboration across organisations and workforces and is a cornerstone of systems change. Without a common language, it can be difficult for systems to communicate, collaborate and work together to support children, young people and families. Our storytellers provided multiple examples of the importance and impact of a shared knowledge and language. For example:

> *"I had a group that said, 'I can't understand how we can work together'. But when we did some of the neuroscience discussions they went, 'Oh my gosh, now I get it'. …. it gave people a common language to actually talk about their practice [with each other]."*

> *"I think it's about becoming really familiar… You're taking on this idea of the core story and you've gotta have that common language. So I think that's a real start. Then people will take that on and synthesize that into their organisation."*

Our storytellers shared examples of how a common language and knowledge is vital for consistent messaging and collaboration across sectors, within organisations, and within the community. As the following storyteller explained, when workforces are managing tight deadlines, complex child and family contexts, and intensifying workloads and expectations, stress can likewise intensify. A common understanding and language of brain building can support compassion and collaboration:

> *"In terms of colleagues, [knowledge of neuroscience] gives me a really good understanding of how the brain can be affected by stress. I mean, we work in a busy, often stressful environment and there might be people that are feeling that more acutely than others. And so I've always put on that neuroscience lens, and just view people through that. It's just like, Ok well, they're probably feeling quite overwhelmed right now, and so they're not thinking completely rationally and it's not a reflection of them at their core; it's just the circumstance."*

Create Authorising Environments

Creating an authorising environment means co-creating a space that enables workforces to engage, learn, reflect and incorporate knowledge into their work with children and families. This space is necessary to move from *the why* to *the how* of brain building in ways that reflect the unique individual, community, and system contexts.

Our storytellers conveyed how environments that support brain building are essential for workforces to embed knowledge in practice. As this storyteller conveyed:

> *"…it's not a top-down approach; it's not a bottom-up approach. It's a meeting of both. It is the larger systemic issues [that] play a role in how we can translate this [knowledge] effectively [in practice] because of that nervous system."*

Brain building requires individuals to feel safe within their workplace and their teams. As one storyteller described:

> *"When we're stressed or when we're at or beyond capacity, we're overworked or where the supports aren't in place, [there's no] time with colleagues just to process things or talk about the neuroscience concepts. There's no space to be able to think about: 'OK, how can we incorporate this in a meaningful way in our context?'"*

This safety can support brain health in the workforce, enabling workforces to provide these supports for children. One storyteller described their own experience participating in emotionally safe environments:

> *"So as part of that early parenting support that I got, we did something called listening partnership where we worked with another parent in small groups to really get an embodied sense of being heard and being held and being listened to and accepted… And then over time, as you do that process… it's having a safe place to just vent all your frustrations… If you want to get sciencey here, it's offloading all of those upset feelings out of the limbic system so our prefrontal cortex can come into that rational thinking, 'upstairs brain'…. So having a felt sense of that process myself over and over and over again… allowed such a sense of space within me to then be able to… hold that space for…children when they needed to cry or tantrum or rage or whatever…"*

Make Moments Matter

Brain building underscores the importance of making time to reflect and connect with children, young people, and families. Importantly, a knowledge of brain building supports workforces to empower children, young people, and their families to consider and embed moments of connection and safety within their everyday lives. One storyteller shared with us how supporting families and workforces to make simple moments matter, means identifying the strengths and supports that surround children and young people, and helps families thrive.

> *"...some of what I've been doing... where it feels impossible because they just have so many current threats in their environment, is I really lean into that scheduling of safety. So really trying to work reflectively with the family, with the school, with whoever around "What moment of joy can we talk about? In which bit of the day? There's gotta be something where you're like, 'man, this kid's hilarious' or 'this bit's working'. And it might be on your way somewhere. It might be so tiny it could be listening to a song in the car. It could be when you're all watching TV, sharing an experience, even if you're like watching a show together or eating a particular food, or whatever it might be."*

Stories of Brain Building in Queensland: To Be Continued...

Brain building is ongoing, iterative, and vital. The stories of brain building have clear beginnings—origin stories that tell us about the power of feeling, of a personal connection, of children's contexts. Yet while these stories describe beginnings, their impacts extend beyond the end of the interaction, intervention, or a child's formal education. Indeed, there is no ending to any of these stories.

Our storytellers provided deep insights into how they incorporate knowledge of brain building into their everyday lives and professional practice. They reveal to us that:

The Heart

is a gateway to motivating change.

Their stories tell us that: we can achieve buy-in across systems and workforces when we (1) make personal connection to the knowledges, (2) see the child in their context, and (3) understand the ripple effect of our interactions on children and their communities.

The Head

directs attention to why brain building is important and how interactions impact children's development and wellbeing.

Their stories tell us that: we can support knowledge acquisition of brain building principles, when we (1) know why brain building is crucial for children, young people, and families to thrive, and (2) distil complex scientific concepts in ways that are accurate and accessible to all.

The Hand

supports application of knowledge of brain building principles within day-to-day interactions with children and families.

Their stories tell us that: we can achieve brain building in practice when we (1) adapt and share common knowledge and language through messages, metaphors and resources, (2) create authorising and supportive environments, (3) make time to embed brain building principles into everyday moments and interactions.

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

Access the **Enabling Workforces Toolkit** for a range of brain building resources and tools

Get engaged with **Thriving Queensland Kids Partnership**

Contact us

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