

# Authentic Mixed Method Assessment (AMMA):

*Measuring Human Return in  
Education Systems*

**GOOD AT LEARNING. GOOD AT LIFE.**

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## **ACKNOWLEDGEMENTS**

My deepest thanks go to the educators, leaders, learners, and communities who continue to shape and refine AMMA through their courage and insight. The pioneering schools of Aotearoa New Zealand, the visionary partners across Australia, and the dedicated teams in the United States have shown that evidence can honour humanity. To my colleagues at The Learner First and Kia Kotahi Ako, thank you for standing in the space where purpose meets proof.

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## Executive Summary

Authentic Mixed Method Assessment (AMMA) stands at the meeting point of ancient wisdom and modern evidence. It restores to education what Indigenous and relational cultures have always known — that the measure of learning is not how much we know, but how much we give. Rooted in Māori knowledge traditions and contemporary educational research, AMMA measures learning's human return, which is the growth in self-understanding, connection, competency, and knowledge that enables individuals to add to their world. Developed through The Learner First and refined in collaboration with educators across Aotearoa New Zealand, Australia, and the United States, AMMA bridges the gap between data and meaning. It transforms assessment from a tool of accountability into a process of understanding and improvement. This paper outlines the origins of AMMA, its theoretical lineage from Deep Learning and Contributive Learning, its methodological framework, and emerging findings from implementation. The central message is simple: when we measure what adds to life, we see the full value of education.

# Introduction: The Unfinished Story of Measurement



*Joanne (Jojo) McEachen (Kāi Tahu, Kāti Māmoe, Waitaha) is an award-winning author, keynote speaker, and global education leader with over 35 years of experience.*

*She began her career as a teacher and principal in Aotearoa New Zealand before leading systemic reform with the Ministry of Education. In 2012, Jojo founded The Learner First in the USA, advancing approaches that integrate academic and social-emotional learning worldwide. She co-founded New Pedagogies for Deep Learning (NPDL), a global movement fostering creativity, critical thinking, and collaboration, and later established Kia Kotahi Ako Charitable Trust to address education and sustainability challenges.*

*Recognized as an ISC Research Edruptor (2022) and KEA World Class New Zealand Citizen (2023), Jojo continues to champion learning that honors every learner's aspirations. In 2025, she returned to study at Harvard in pursuit of earning a degree in International Education Policy to deepen her impact on global education.*

I stand in two worlds that have always been one.

As Ngāi Tahu, I was raised to believe that learning is an act of contribution, that knowledge gains its power only when it strengthens the people around you. As an education leader within Aotearoa New Zealand's Ministry of Education, I learned how systems translate that sacred process into policy, programmes, and numbers. Both worlds taught me the same truth from different sides. We cannot improve what we do not understand, and we cannot understand what we refuse to measure.

In the late 2000s and early 2010s, I was leading four national portfolios that defined how we supported and evaluated learning across the country: the redesign of Professional Learning and Development (PLD) Phase Two, Programmes for Learners, Networks for Schools, and the Student Achievement Function (SAF). These initiatives carried the promise of equity and effectiveness. We built new infrastructures for data use, professional capability, and school improvement.

But as I travelled from community to community, sitting with principals, teachers, and whānau, I began to hear a dissonance. The numbers looked better, yet the people behind them felt unseen. Schools were improving by the system's definitions, and achievement curves were bending upward, but the stories I heard in staffrooms and marae told a more complex truth. Learners were succeeding on paper while feeling increasingly disconnected from purpose, culture, and one another.

That contradiction became impossible to ignore. As a Māori woman working within the machinery of state reform, I could feel both the strength and the limitation of the tools we were using. They were built to track performance, not transformation. They could capture achievement but not contribution. They could map outcomes but not meaning.

When the second phase of the PLD redesign was complete, I left the Ministry carrying a conviction and a question. The conviction was that evidence matters because it keeps systems honest and learners visible. The question was: what if our evidence could speak not only of achievement but of humanity?

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That question became the seed of The Learner First, which I founded in 2012. Its purpose was clear: to make the important measurable without reducing the important to what is easily counted. Working alongside educators, researchers, and communities across Aotearoa and then around the world, we began to explore what it would take to measure learning's human return, the growth in self-understanding, connection, competency, and knowledge that allows each person to add to the world.

Over time, that exploration crystallized into a methodology called Authentic Mixed Method Assessment (AMMA). AMMA emerged from the recognition that quantitative data alone could not reveal learning's whole story, but that story without data could not change systems. It is the methodological bridge between two truths I learned early: the analytical precision of system reform and the relational depth of Māori wisdom.

## **Authentic Mixed Method Assessment (AMMA)**

*The specific indicators, evidence, and learning experiences that, together provide the complete picture of performance used to inform the measurement of learning, along with the process of gathering that evidence. Assessment lies always underneath the process of measurement, forming the diverse and expansive evidence base without which meaningful measurement is impossible.*

*McEachen & Kane. 2018*

AMMA is built on a simple premise. Learning is evidence of connection. When learning is strong, relationships strengthen, and when relationships strengthen, achievement follows. To measure learning, therefore, we must measure belonging, trust, and contribution with the same rigor that we measure reading, writing, or numeracy.

# From Human Capital to Human Return

For more than half a century, education has been framed as an investment in human capital, a way to build economic growth through individual skill. That framing helped justify funding and reform, but it narrowed the lens of value. It taught us to count what could be monetized and to ignore what could not.

In *Measuring Human Return* (McEachen & Kane, 2018), I argued that education's true purpose is not the accumulation of capital but the cultivation of capability for contribution. The measure of a system is not how many students it graduates, but how many lives those graduates enrich. The return we seek is human.

AMMA gives that principle empirical form. It evaluates learning through four interdependent outcomes derived from the Contributive Learning Framework.



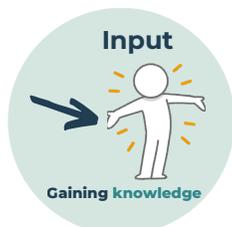
**Self-Understanding:** knowing who you are and why you learn. Grounded in Durie's (1998) holistic model of wellbeing and echoed in Bishop's (2019) relationship-based pedagogy, this outcome recognises identity as both starting point and measure of success.



**Connection:** building relationships of trust and empathy. Informed by Bryk and Schneider's (2002) research on relational trust and Noddings' (2005) ethic of care, Connection measures belonging as an educational achievement in its own right.



**Competency:** developing the knowledge and skills to contribute meaningfully. This aligns with the OECD's Learning Compass 2030 (2019) and Hattie's (2012) evidence on visible learning, situating capability within contribution.



**Knowledge:** applying learning to improve collective wellbeing. Here knowledge becomes living, contextual, and ethical, consistent with Freire's (1970) call for learning that transforms reality.

Together these outcomes create an integrated picture of human return. They connect the moral and the measurable, showing that wellbeing and achievement are not competing priorities but two sides of the same truth.

# Theoretical Lineage: From Deep Learning to Contributive Learning to AMMA

Education systems have long equated quality with academic attainment. By the early 2010s, evidence (Hattie, 2012; Darling-Hammond, 2010) showed that while academic mastery mattered, it did not guarantee capability for complex, civic, or moral life. The field needed a framework expansive enough to encompass the cognitive, social, and emotional dimensions of learning yet still rigorous enough to guide improvement. That impulse produced Deep Learning (Fullan, Quinn, & McEachen, 2018).

## Deep Learning: Broadening the Purpose of Education

Deep Learning sought to break the academic hold on education by redefining excellence through six global competencies: character, citizenship, collaboration, communication, creativity, and critical thinking. These competencies positioned learning as a lever for agency and social contribution rather than an end in itself. Yet even as systems embraced these competencies, two limitations remained. Implementation often reduced “competency” to checklists detached from context, and assessment practices lagged behind pedagogy. Systems could teach for Deep Learning but still measure for shallow recall.

## Contributive Learning™: Restoring Purpose to Performance

Contributive Learning (CL) evolved to fill that conceptual gap. Drawing from Indigenous and relational epistemologies (Bishop, 2019; Smith, 2021) and informed by Deep Learning’s global competencies, CL re-centred education around a single question: how does learning add to the world? It reframed outcomes through four interdependent dimensions—Self-Understanding, Connection, Competency, and Knowledge—articulated in *Measuring Human Return* (2018) and *The Depthvale Detectives* (2020).

### Contributive Learning develops

#### Self-Understanding

Understand who you are, how you fit into the world, your potential for success, and how you can contribute.

#### Connection

Connect with others, your environments, your learning, and the world.

#### Knowledge

Gain the knowledge you need to find meaning and fulfillment.

#### Competency

Develop the character, collaboration, communication, creativity, and critical thinking needed to put your learning to use.

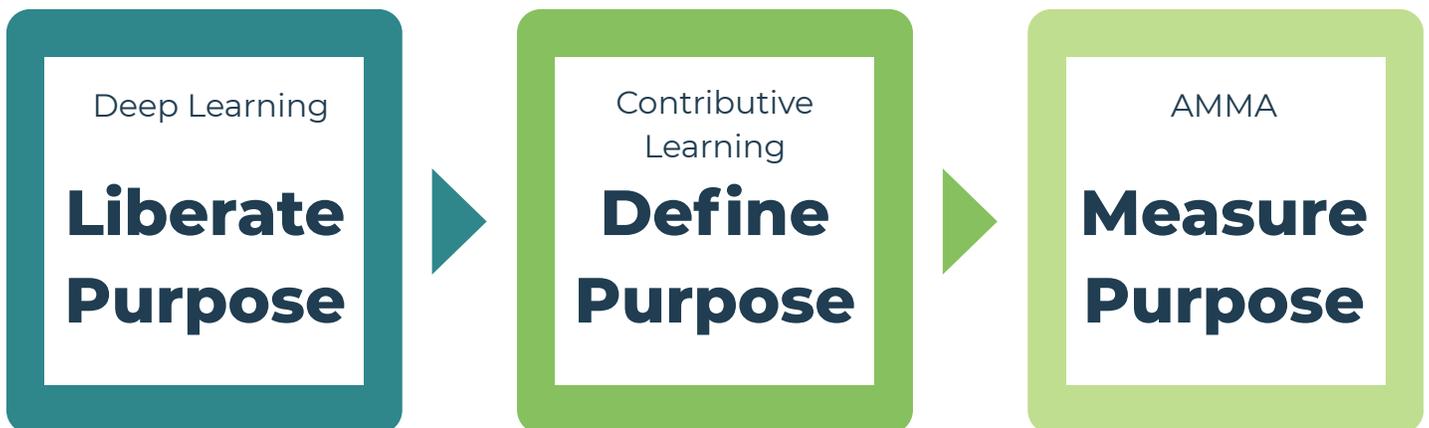
Where Deep Learning broadened the what of education, Contributive Learning clarified the why. It posited that true achievement occurs when learners use their knowledge and competencies in ways that strengthen community wellbeing and planetary sustainability. This conception aligns with UNESCO's (2021) call for a new social contract for education grounded in solidarity and care.

CL also introduced Human Return, the measurable impact of learning on personal and collective flourishing. Human Return connects directly to Durie's (1998) holistic model of wellbeing and Bryk and Schneider's (2002) demonstration that relational trust predicts organisational improvement. In this synthesis, learning is simultaneously cognitive, relational, and moral.

### **From Contributive Learning to AMMA: Operationalising Human Return**

While CL articulated the philosophy of contribution, it required an empirical mechanism. Systems needed a way to demonstrate with rigour that human outcomes could be measured alongside academic ones. Authentic Mixed Method Assessment (AMMA) emerged as that mechanism. It integrates three traditions: formative assessment (Black & William, 1998; Shepard, 2000), mixed-method inquiry (Creswell & Plano Clark, 2017; Greene, 2007), and relational validity (Messick, 1989; Kane, 2013; Bishop, 2019).

Through these converging lines, AMMA transforms CL's moral proposition into an evidence system capable of guiding practice and policy. It completes a progression: Deep Learning liberated purpose, Contributive Learning defined purpose, and AMMA measures purpose.



# Methodology: The Architecture of AMMA

AMMA is a convergent mixed-method design that combines quantitative precision with qualitative authenticity to produce a holistic picture of learning's impact.

## Design Principles

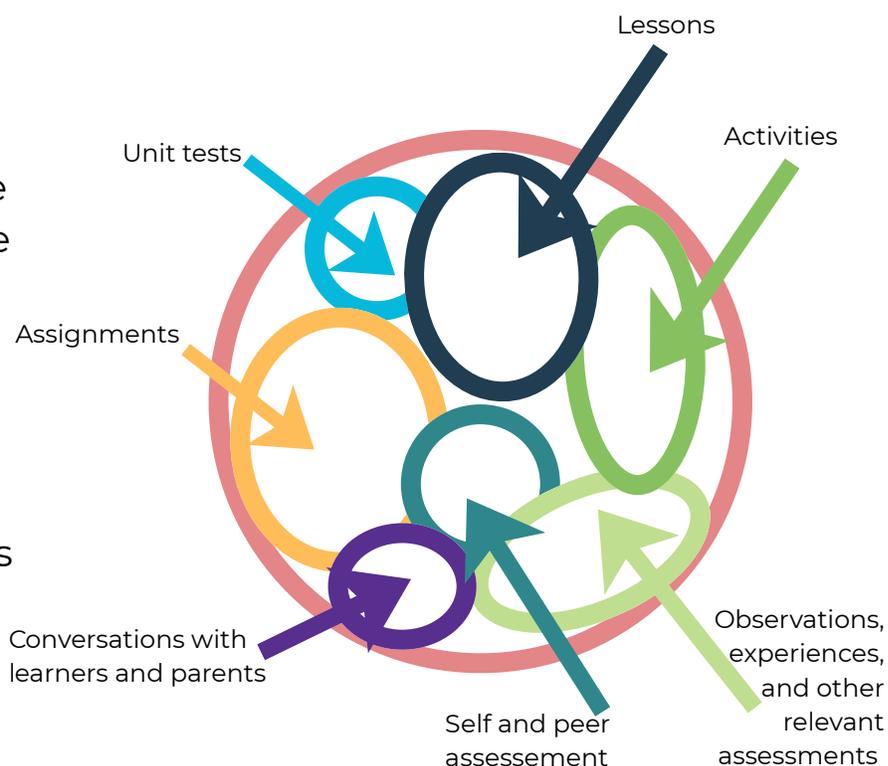
Authenticity requires that evidence arise from real learning contexts such as projects, reflections, and community interactions rather than contrived testing environments. Convergence ensures that quantitative and qualitative streams are collected in parallel and merged for interpretive synthesis. Relational validity requires that data be co-interpreted by educators, learners, and communities to ensure cultural and contextual integrity. Consequential validity holds that the worth of AMMA is judged by its effects on trust, belonging, and agency (Messick, 1989). Transparency is achieved when results are shared through Reciprocity Reports, which blend statistics with story.

## The Data Streams

Each stream is analysed independently and then integrated through convergent triangulation (Creswell & Plano Clark, 2017). Alignment or divergence between data types prompts collective inquiry rather than judgment.

### Authentic Mixed Method Assessment

include the process of gathering the full range of evidence – qualitative and quantitative, required to arrive at a fully informed understanding (measurement) of overall levels of progress and development.



## Validity and Reliability

AMMA maintains psychometric integrity through reliability testing of quantitative instruments and inter-rater reliability for qualitative coding. Its design enhances construct validity by ensuring that data measure intended outcomes and consequential validity by confirming that the process itself promotes engagement and trust (Kane, 2013). The approach aligns with Indigenous and relational paradigms where truth emerges through shared interpretation (Smith, 2021).

## Findings: Early Patterns and Practice-Based Evidence

Across pilot sites in Aotearoa (New Zealand), Australia, and the United States, early AMMA data show three consistent patterns. The following examples from Australia and the United States illustrate how AMMA supports three key results:

**1 First, belonging and achievement rise together. Schools reporting significant growth in students' sense of belonging also show steady or improved academic outcomes. Connection does not compete with performance; it sustains it.**

At Coorparoo Secondary College in Brisbane, belonging and academic success are not competing priorities, they reinforce each other. Over 85% of students report feeling safe, receiving useful feedback, and engaging in meaningful learning. The school's science faculty redesigned a unit from studying the distant Great Barrier Reef to exploring Norman Creek, a local waterway behind the school. This shift brought learning closer to students' lived experiences, deepening engagement and understanding.

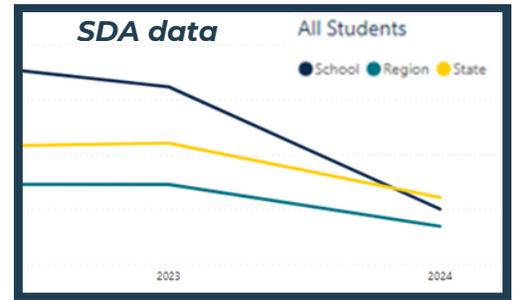
Director of Learning, Culture, and Connection, Melissa Badruck, explains:

*"Assessment really isn't one final product at the end. It encompasses checkpoints, observations, and authentic sharing with the community."*

Student Ayla, a Year 11 captain (2025), shared:

*"I used to be so anxious every day. Now I love school so much I find myself saying I can't wait to go back. They helped me find my community and what I love to do."*

At Mitchelton High School, also in Queensland, academic performance was strong—but suspension rates and disengagement signaled deeper issues. After adopting Contributive Learning, the school saw a transformation. The 2024 school review praised the “Mitchie Experience” for engaging minds and connecting hearts. Suspension rates dropped, and students reported feeling heard and valued.



Mitchelton State High School SDA data for 2024 shows a drastic decrease in suspensions.

In the U.S., a Goldendale School District in Washington State used AMMA to guide district-wide improvement. In one year, Grade 4 students showed over 75% growth, with many making 1.5 years of progress in mathematics. Self-assessment data revealed that 65% of high school students grew in at least one Contributive Learning outcome—self-understanding, connection, or competency.

## 2 Second, teacher retention and relational trust increase. Teachers involved in AMMA moderation panels report deeper professional collaboration and reduced burnout, echoing Bryk and Schneider’s (2002) findings that trust predicts organisational improvement.

At Coorparoo, 100% of staff report enjoying their work and feeling supported. Collaboration with The Learner First and AMMA moderation panels foster deep professional learning and shared purpose.

Mitchelton’s middle leaders expressed appreciation for support from their line managers, and teachers described a shift toward authentic learning design. One teacher shared: *“Embedding Contributive Learning principles has greatly improved engagement in my classes.”*

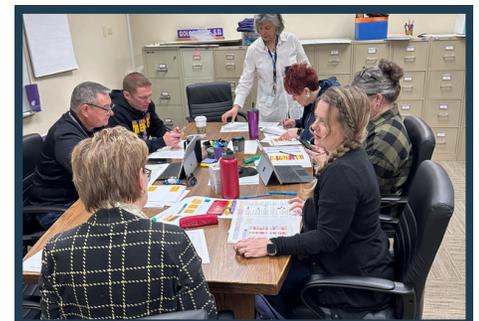
Goldendale’s educators engaged in inquiry cycles and reflective tools to assess confidence and instructional growth. Professional learning focused on integrating AMMA into mathematics instruction led to increased teacher confidence and engagement.



Mitchelton State High School leaders (2024) with Joanne McEachen.



Coorparoo staff engaging in professional learning



Goldendale leaders engaging in a “data dive.”

**3** Third, learners demonstrate stronger agency. When students participate in self and peer assessment through AMMA protocols, engagement metrics improve and behavioural referrals decline. Self assessment represents the purest form of evaluation because, as we grow into adulthood, the only enduring voice that tells us we are truly enough is our own. It is therefore essential that education helps learners develop this skill — the ability to recognise their own growth, affirm their worth, and hold themselves accountable for contributing to others and to the world around them.

Coorparoo’s Norman Creek project empowered students to connect learning with their community and environment. Students now understand the importance of caring for local wildlife —not just in theory, but through lived experience.

At Mitchelton, students reported stronger interest and ownership in learning. One student shared: *“One-on-one discussions with my teacher helped me gain a stronger interest in the subject. It showed me that student voices are appreciated and cared for.”*

Goldendale saw a district-wide increase in student agency. Students demonstrated improved collaboration, problem-solving, and self-confidence. Staff noted a reduction in behavioral challenges and a more stable learning environment.



Students in Goldendale engaging in Mathematics with joy.



In 2024, Mitchelton State High School hosted regional and global TLF partner school leaders to learn, collaborate, and contribute as a network. Here, students shared their culture and identity with the group.

These schools show that AMMA is more than an assessment tool, it’s a catalyst for cultural and systemic transformation. When students are empowered to assess their own growth, when teachers collaborate deeply, and when schools prioritize connection alongside achievement, the results speak for themselves. Qualitative evidence reinforces these trends. Learners speak of “feeling seen,” teachers describe rediscovering “why we teach,” and families report a renewed partnership with schools. Quantitative data confirm that wellbeing and achievement can be co-measured and co-improved.

Contributive Learning helps students recognize their worth, affirm their growth, and hold themselves accountable, not just for academic success, but for contributing to others and the world around them.

## Discussion: Evidence, Ethics, and the Politics of Measurement

AMMA demonstrates that evidence and empathy are not opposites but allies. By merging data and dialogue, it provides a credible pathway between technocratic and humanistic paradigms.

In conventional assessment, validity is statistical. In AMMA, validity is relational. This does not dilute rigor; it expands it. Reliability remains essential, but it is joined by reciprocity. Each data point represents a relationship between teacher and student, school and community, knowledge and life.

AMMA appeals across ideological divides. To reformers demanding accountability, it offers reliable evidence. To advocates of wellbeing and equity, it offers measurable proof of care. It bridges policy worlds because it treats human outcomes as data, not sentiment.

Embedding AMMA within school networks creates continuous improvement cycles grounded in trust. At scale, it can transform accountability frameworks from external compliance to internal coherence. Systems that measure belonging and contribution alongside achievement generate cultures of evidence rooted in humanity.

## Conclusion: Measuring What Adds to Life

Education stands at a crossroads between precision and purpose. AMMA shows that we can have both.

Born from Māori understandings of relationship and refined through global research, AMMA restores meaning to measurement. It turns data into dialogue and assessment into stewardship. By quantifying connection, competency, self-understanding, and knowledge, it reveals that learning's greatest return is not economic but human.

The next step is collective: building a Global Covenant of Contribution, a commitment by schools, systems, and nations to measure what adds to life.

When we do, the story of education changes. We stop asking only how much students learn and begin asking what their learning gives back. That is the question AMMA was born to answer.

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