

Why holistic learning and why now?

Findings from the AISSA's *Innovative Models
for the Recognition of Holistic Learning Project*

Michael Bunce

with Charles Leadbeater and Valerie Hannon

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Above all, this research reflects the collaborative engagement of a remarkable group of teachers and school leaders. The ideas presented here emerged from a genuinely open, emergent and participatory research process. We extend our deepest gratitude to the schools that remained involved over the full three-year duration of the project – their commitment, insight and generosity were fundamental to its success. It must be acknowledged that this work honours the complexity of learning and the role of educators as researchers in their own contexts. A comprehensive list of all teams involved through to the project's conclusion is provided in the appendix.



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Introduction: Project overview

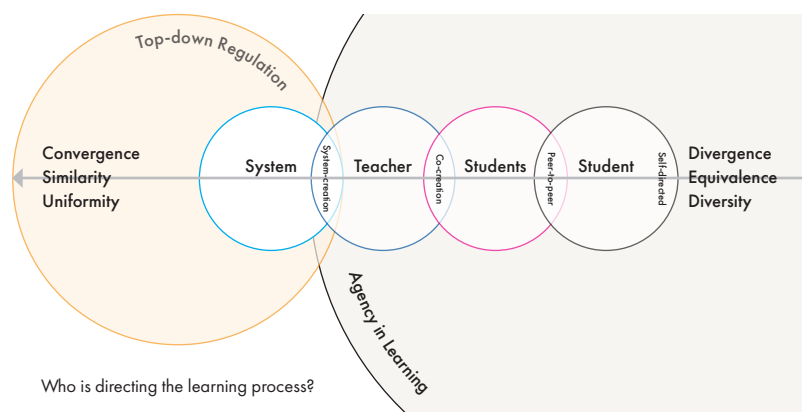
Inspired by an approach taken by Learning Creates Australia, we began our project in South Australia as a social research lab, tasked with investigating and developing ‘innovative models for the recognition of holistic learning’. A lengthy project proposal title quickly found a shorter more immediate version, as nicknames often will in practice, and so, the ‘Learning Impact Project’ was brought into being.

The project was launched at the Learning Impact Symposium in May 2022, which also celebrated two previous projects that began in 2019: the MetaPraxis Project, led by Michael Bunce, and the Student Agency Lab (ALab) led by Charles Leadbeater.

In parallel, these projects investigated and explored the design and leadership of interdisciplinary learning and curriculum projects that promoted student agency. The work of these projects was detailed and evaluated in the following two papers, published by the Centre for Strategic Education in 2022, which form the foundations of the vision and philosophy of the Learning Impact Project.

- *Learning in a floating world of disciplines: Reflections on the MetaPraxis Project*
Michael Bunce
- *Learning on purpose: Ten lessons in placing student agency at the heart of schools*
Charles Leadbeater

Figure 1. Who is directing the learning process?



It was in these projects that we identified a shift in emphasis towards greater levels of agency in the direction of the learning process (see Figure 1), recognising the opportunity for self-directed learning, and consequent move away from uniformity to equivalence in learning, curriculum and assessment – which raised broader questions about ways to evaluate and recognise student learning that can encompass the whole learner. This characterised our concept of ‘holistic learning’.

It is now widely accepted that, given the impact of generative AI and the diversity of disciplinary and transdisciplinary skills and knowledge required in the workplace context of Industry 4.0 (Schwab, 2016), alternative approaches to assessment and recognition of learning are needed to capture the inherent complexity of learning and its impact and potential.

Both projects forged new patterns for learning, curriculum and leadership, affecting the organisational reality of schools in varied ways, enabling

... holistic approaches to learning that focus on developing complimentary hard and soft intelligences (Ravenscroft et al, 2022), and transversal skills, providing opportunities for transfer across a range of contexts to nurture students and teachers as agile agents with strong reflexive, collaborative, adaptive and cognitive capability.

(Bunce, 2022)

Likewise, the outcomes and products of these projects were multiple and diverse, as can often be the case in disciplinary, multidisciplinary, interdisciplinary and student-led project-based learning. An impetus to further adapt the processes of assessment and recognition of learning, to accommodate this diversity, was recognised among project schools and subsequently incorporated as a line of research inquiry.

While Charles Leadbeater’s ALab project focused predominantly on student agency, and Michael Bunce’s project focused on dynamic capability through interdisciplinary learning, another aspect of student experience had also emerged as an increasingly prominent consideration for education sectors, schools, teachers and, most importantly, for students’ wellbeing.

Given this context, the Learning Impact Project has sought to investigate and research the extent to which agency, dynamic capability and wellbeing are mutually enabling (see Figure 2), and the ways in which learners may enact this through their learning, and also be recognised for the uniquely personal diversity of resulting achievements and outcomes.

Figure 2. Mutual enabling of agency, dynamic capability and wellbeing



The project also identified impact as a multidimensional mode for evaluating the products, outcomes, scope and potential of learning, inheriting this practice in part, from impact-based evaluation frameworks in higher education and industry, for example – an approach previously established in the MetaPraxis Project. Likewise, narration of learning through reflective journaling and digital storytelling was also incorporated as one of five key design pillars.

Design pillars

Working definitions for design pillars were established to guide our inquiry and design process, as follows.

Pillar 1. Dynamic Capability and Transfer (Knowing)

Learners can intentionally, independently and dynamically apply and adapt a broad range of skills and knowledge, across diverse contexts. Learners can respond positively to both explicit teaching and self-directed inquiry, knowing when and how to access or develop knowledge and skills.

Pillar 2. Student Agency (Being)

Learners can direct their learning and respond to direction from others. Learners can determine and respond to conditions for successful learning: how, when and where learning can occur, with positive impact for themselves and others.

Pillar 3. Wellbeing (Quality of Being)

Learners and teachers can practise self-direction, self-regulation or self-optimisation, and self-efficacy in their lives, learning and work, to enable them to thrive and flourish, supporting their wellbeing and that of others, relative to the needs of each individual and context.¹

Pillar 4. Learning Impact (Valuing)

Impact-oriented [evaluation and] recognition of learning is an open, non-hierarchical and inclusive process, through which students reflect upon the quantifiable components and qualitative effects of their learning across multiple domains: [disciplinary], social, creative, emotional, technological, physiological, environmental, psychological, cultural, etc.

(Bunce, 2022)

Pillar 5. Narration of Learning and Portfolios of Impact (Testimony)

Learners can narrate their learning journey through journaling and metacognitive reflection, incorporating artefacts of learning in multimodal portfolios, as appropriate to their level of capability. Artefacts may be components, products or effects of a learning process. Narration is a form of testimony, through which learners are enabled to communicate the inherent **truth** of their learning experience.

Our project ambition has been to nurture a new philosophy of learning and develop levers for change in education

School teams as researchers

School teams of teachers, leaders and students are positioned as cross-institutional collaborative researchers, designing project research inquiries to

- investigate the relationship between agency, transfer and wellbeing, and the potential impact for recognition within the context of personalised learning
- design and test new models that could recognise and evaluate holistic learning impact for individuals and collectives, and
- contribute to new models of recognition that develop student and staff capability to narrate and map learning impact.

Our project ambition has been to nurture a new philosophy of learning and develop levers for change in education to establish

- new purpose
- new values, and
- new patterns, structures and practices.

Partnerships

In this work, we recognise and celebrate alignment with organisations following a parallel process of transformation, with which the project has collaborated, in different ways. Notably, these include the South Australian Certificate of Education (SACE) Board, the Department for Education SA, and Learning Creates Australia, as indicated below.

- Collaboration with the **SACE Board**² has included transformational projects to lead subject renewal, develop capabilities and learner profiles, and work to recognise aboriginal cultural knowledge and learning. Notably their drivers for change have been: Student Agency, Deep Authentic Learning, Metacognition and Natural Evidencing of Learning.
- There has been alignment with the **South Australian Department for Education's** Learn and Thrive strategy,³ which establishes
 - Areas of Impact: Wellbeing, Learner Agency, Effective Learners, and Equity and Excellence
 - Levers of Impact: Partnering with Families and Communities, Effective Teaching, Empowered Leadership, Engaging Children and Young People, Improvement and Responsibility, Resourcing and Investment, and Strengthening Supports, and
 - Guiding Principles: Collective Responsibility, Learning System, Evaluate for Impact, Tight and Flexible, Trust and Verify.
- As a design partner with **Learning Creates Australia (LCA)**,⁴ the project has involved close collaboration and sharing of ideas and findings, particularly with LCA and the SACE Board at the *We Are More* event in Adelaide, in 2023.

Subsequent connections have included collaborating through the *Power of Recognising More*, a three-year participatory action-research study (2023–2025) designed to explore how broader recognition of learning success can support the equitable transformation of education in Australia.

The key research questions driving this study, which are aligned to our own, are

- *impact on young people: What impact does broader recognition of learning have on the educational experience of young people, and on their pathways to further learning and work?*
- *school arrangements: What arrangements need to be in place to enable equitable broader learning recognition approaches?*
- *system enablers and barriers: What conditions in the learning system are enabling (or preventing) broader learning recognition?*

Notes from the Field, Learning Creates Australia, 2025⁵

Likewise, we recognise similar alignment with the goals to establish rigorous methods to assess and recognise complex competencies, in the New Metrics project, led by Professor Sandra Milligan from Melbourne Metrics at the University of Melbourne.

In all cases, there are alignment and shared ambitions, which resonate strongly with the aims and processes of the Learning Impact Project.

Advisory group

To support our process of research inquiry, an advisory group of experts was established. Each member contributed to the project with provocations, seminars, workshops or presentations – to stimulate and nurture creative and critical thinking, to challenge assumptions and, most importantly, to reinforce the urgency for education to change, to transform to enable holistic and inclusive approaches to learning, assessment and recognition of learning; to repeatedly spell out the imperative purpose and establish ways and means to enable our journey.

We are indebted and extremely grateful to the members of the advisory group for their advice, support and contributions, which are documented on the project website.⁶

- **Anthony Mackay AM:** Co-chair, Learning Creates Australia, Board Co-chair NCEE, Washington DC, Expert Adviser OECD
- **Valerie Hannon:** Co-founder Innovation Unit and GELP, Senior Adviser OECD
- **Professor Yong Zhao:** Foundation Distinguished Professor, School of Education, University of Kansas
- **Charles Fadel:** Center for Curriculum Redesign, Boston
- **Louka Parry:** Founder, Learning Futures
- **Nick Conigrave:** Consultant, 6 Team Conditions
- **Jan Owen AM:** Co-chair, Learning Creates Australia

So, why holistic learning and why now?

From here on, this paper will provide pointers, signals, indicators, ideas, concepts, accounts of practice, narrative reflections from students and teachers, and evidence of impact, as I endeavour to arrive at a coherent response to this question, cognisant of the reality that ‘the why’ is a dynamic and changeable phenomenon.

There is no language to define the spiralling processes of the vast context we are participants in. We do not have names for the patterns of interdependency. To lock down the delicate filagree of life in explanation is to lose it, but not to see it is disastrous. Words are what we have. The why, of why we do anything at all, matters.

(Bateson, 2016, p 15)

We must constantly check our purpose, our means, our tools and our capacity, adapting relative to changing circumstances and conditions, rather than landing, perhaps reductively, on a fixed definition. Instead, we might characterise our view, updating a concept of holistic learning as it evolves, thereby intentionally anticipating change and emergence.

For now, we can say that this view of holistic learning is grounded in a concept of the ‘whole learner’ as a dynamic transcontextual being – not only the learner as student inside school, but the perpetual lifelong learner within and across a multiplicity of contexts: places and times. This is a concept of the whole learner that embraces components of learning we can quantify **and** the effects we can qualify: wholes **and** parts; quantitative **and** qualitative; past **and** future; reflection **and** prospection.

We are concerned with a concept of the whole learner **and** the component parts that compose that whole across multiple domains: academic, cognitive, ethical, psychological, physical, social-emotional. These domains (to which we would add the cultural contextual domain) are examined and mapped by Darling-Hammond et al (2019), in a synthesis of the science of learning and development literature, identifying key levers to support social, emotional and cognitive development. These are

1. a supportive environment
2. productive instructional strategies (including metacognition)
3. a system of supports to enable healthy development, and
4. social and emotional development.

We seek to develop this concept in terms of our five design pillars, and set out our philosophy and the journey of learning we have traversed together with schools, teachers, learners and research partners in the following sections.

- The Imperative Purpose: Education for Human Flourishing, by Valerie Hannon⁷
- Liberate and Learn, by Charles Leadbeater⁸
- Manifesto of Being, Knowing and Valuing, by Michael Bunce
- Learning Impact Mapping and Narration: Holistic Evaluation and Recognition of Learning, by Michael Bunce⁹

The imperative purpose: Education for human flourishing

Valerie Hannon

Why bother?

The AISSA Learning Impact Project has taken place during a remarkable period in human history. The Chinese proverb sees it as a curse to be living in ‘interesting times’ – and that we do – in some contrast to the peaceful, apparently steady upward trajectory of ‘progress’ and peace for the boomer generation. In contrast, our learners face a cocktail of urgent challenges, both external and internal, which have the potential to destabilise the foundations of liveable lives on this planet. The climate crisis and associated destruction of biodiversity of course stand out: they are multidimensional crises of planetary boundaries.

However, there is a wider set that are interconnected and equally threatening. They might be grouped as

- **the technological challenges and opportunities:** AI, job disruption by robotics and automation, the implications for the fourth industrial revolution, and
- **humanity’s dilemmas:** genetic engineering and our potential fusion with digital technology; growing inequality, violence and conflict; post-truth and the contestation of knowledge; democracy in retreat; and the existential crisis of loss of meaning.

Also, all of the above challenges – emerging for a decade – have suddenly been amplified by the sudden explosion, in 2025, of disruption that has upended both the accepted economic order of globalisation and the post-WW II world order of strategic international alliances.

Taken together, these developments create an urgent imperative to re-examine how we are going about preparing young people for them: the very foundation and purpose of our systems of learning.

The evolving nature of education can be described as ‘educational climate change’ reflecting the need for adaptation and growth in schooling to the environmental changes required to thrive in a new era. This metaphor underscores the importance for us to evolve and embrace a new way of learning, ensuring we are prepared to succeed in an ever-changing world.

(Project School)

The new purpose of learning

It would be extraordinarily easy to fall into complete despair about the prospects for our species, after contemplating the developments touched on above. Such an option is not available to educators: we have a moral imperative to strive to our utmost to create the condition where our learners, and the generations after them, can thrive; in short, to be ‘good ancestors’. There are good reasons to adopt an optimistic stance in any case. The technologies we have created (notwithstanding the risks) may hold the power to solve some of the problems we ourselves have created. Hannah Ritchie in *Not the End of the World* (Ritchie, 2024) argues that we **are** seeing some progress and that we **are** developing solutions: it’s just that we lose focus on progress made, and catastrophising is easy to fall into. She believes that humanity is in a unique position to build a sustainable world. Humans’ phenomenal capacity to learn is our best hope. Thus, it is that learning must be liberated, extended and amplified.

What the Learning Impact Project has drawn attention to is the interior as well as the external dimensions of our task. This is not just a question of making a better world. The pre-condition for achieving that is transformed inner lives: improving the *quality of being*. Sometimes ‘wellbeing’ is used as shorthand for the intrapersonal and interpersonal aspects of thriving – as if it were a clear-cut entity, easily understood. Human flourishing, however, is more complex than that. We require nothing less than a regeneration of the human spirit – for as a species we have lost our way. There are many dimensions to this regeneration, but it entails, at a minimum, enabling people to discover

- a sense of identity and belonging
- meaning and purpose in life in the context of a moral frame
- sources of joy and beauty, and
- the power of shifting from ‘Ego to Eco; from I to We’.

Ultimately, our goal is to develop good people. Education should foster a sense of purpose, adaptability and values that carry students beyond the classroom. By broadening the ways we recognise learning, we can ensure that students leave school not just with knowledge, but with the capacity to thrive and contribute in an uncertain world.

(Project School)

A transformational paradigm shift

Only a transformed education can achieve this shift, and the good news is that educators across the world are working on it. It is a tough ask: such educators need to know they are part of a community, a movement that is laying down its foundations. Some are further ahead than others, but they share the understanding that nothing meaningful will be achieved unless the **purpose** of education is genuinely debated and reset. The current purposes are not debated – just taken as common sense, seen as atheoretical and non-ideological.

However, the current purposes **are** theoretically based – it’s human capital theory, just pretending to be ‘common sense’. They are individualistic, economistic and competitive. We have been locked in an over-arching economic theory that has long outlived its usefulness (see Table 1).

Today we have economies that need to grow, whether or not they make us thrive. What we need are economies that make us thrive, whether or not they grow.

(Raworth, 2019)

In education, as in economics, we are in the midst of a shift from one paradigm to another. What we need is no less than a cultural pivot, a turn comparable with the previous agricultural and the industrial transitions.

Table 1. 20th and 21st century paradigms

C20th Paradigm	C21st Paradigm
• Education’s purpose is economic growth and individual advancement • Its function is to transfer knowledge and sort/sift individuals into tracks • Its means are teacher-centric, academics-focused, terminal assessment	• Education’s purpose is thriving people, places and planet • Its function is to empower learners and release human creativity • Its means are personalised, competency-based, real-world

We need to unlearn expansionist practices of our ancestors for millennia; and we need to unlearn habits of mind that suppress and disfigure our spirit.

As with all paradigm shifts, this one is attracting the classic reactions. Whether one looks at the Copernican Revolution, the shift from Newtonian physics to relativity and quantum mechanics, or Darwin's theory of evolution; all were mocked and evoked anger as well as rejection. The stress that educators experience derives in part from the experience of trying to inhabit two paradigms, as we struggle to move from one to the other.

As models become more developed, however, and as evidence starts to accrue, a shift is surely taking place. In part this derives from the fact that some unlikely partnerships are being forged. Ironically, though the overweening negative influence of economics has been noted, it is the business world that has stepped up to advocate for a different balance between, for example, knowledge and skills. Employers and future-focused companies want different kinds of talent nurtured in a world of automation and AI: the old system cannot produce it. The World Economic Forum at Davos, for example, has been forceful in its argument for an 'Education 4.0'. Its vision may not fully encompass the notion of education for human flourishing, but all policy advocacy support should be welcomed at this juncture. In the same way, schools shifting to the new paradigm are weaving new eco-systems of learning at the local level, involving many new partners and players in the learning game.

The stress that educators experience derives in part from the experience of trying to inhabit two paradigms, as we struggle to move from one to the other.

New forms of evidence of impact

One issue those engaged in the learning transformation need to face is how to create evidence of impact. There is now a wealth of innovation in the assessment (or recognition) of learning. The breadth of outcomes or impact that we are now looking for should perhaps include some of the following.

- The global competence of learners on graduation.
- Application of knowledge and skills in real-world situations, as well as in tests.
- Learner performance in internships or work-based learning.
- Entrepreneurial skill and achievement evidenced by real-world products or in social innovation.
- Effective engagement in community programs directed at improving collective quality of life and local environment.
- Contributions to the school as a thriving micro-community with positive caring relationships.
- Evidenced application of knowledge of healthy lifestyles.
- Strong learner agency, evidenced by initiation and leadership of learning.

Our community event marked a significant turning point where the school recognized students as creators capable of thriving when given the opportunity. As one student reflected, 'this opportunity encouraged me to continue having brilliance, inventiveness, inspiration, wisdom and excellence in things I enjoy and love'.

(Project School)

Transforming the workforce for a transformed system

As the momentum of the movement for change grows, and as more and more schools set out on the journey, it becomes clearer that a critical precondition for success is the quality of the workforce and its leadership. Moreover, our understanding of a 'quality' workforce is evolving too, driven on by the numbers of innovative schools that feel the conventional pathways of teacher training and development have failed them; and so they have taken the matter into their own hands, setting up their own graduate training programs, or institutes – seeking out innovators in the universities who can support this new direction of travel.

What we see are new emphases on the kinds of competencies that leaders and classroom practitioners now need in this world. Of course there are important continuities: the foundational competencies remain. The sophisticated mix of competencies that a workforce committed to human flourishing now needs cannot just be a set of extra burdens. This is a tough case to promote, in a context where many systems face acute problems in terms of teacher recruitment and retention; and where burnout and sheer fatigue dissuade many from seeking leadership positions. However, the questions should perhaps be: 'What is causing these phenomena?' and 'What would make the profession a more profoundly attractive one to potential candidates?'

The OECD project of *Education for Human Flourishing* (EHF) which has been working with the highest performing systems globally (including the IB network) has endorsed the following set of new competencies for system and school leaders.

- Re-booting educational purpose through narrative – the capacity to bring the new vision to life through story.

- Championing equity – in the renewed sense of celebrating diversity and practising inclusivity.
- Orchestrating learning ecosystems – building new nets of partnerships to support the vibrant, relevant curricula that engage all learners.
- Systems-thinking – managing dynamic complexity.
- Leading and managing innovation – not just 'managing change'.
- Developing agency in others and in self.

As the momentum of the movement for change grows, and as more and more schools set out on the journey, it becomes clearer that a critical precondition for success is the quality of the workforce and its leadership.

Of course, refreshed leadership is not enough. We need a workforce that can bring the vision to life in classrooms and beyond. The members of the EHF project have agreed that the critical competencies for teachers who are focused on the goal of human flourishing need to include the following.

- Facilitating deep learning – by this is meant the capacity to select from a wide range of evidence-supported pedagogies to deliver our expanded ambitions for young people.
- Curriculum co-design – expanding on a (reduced) mandated curriculum to work with students and others to create relevant and engaging learning experiences.
- Assessment choreography – drawing from innovation in assessment to incorporate new tools and approaches that are more adequate to the task of recognising learning.
- Digital literacy – the capability of deploying AI tools, as well as empowering young learners to navigate and critique them.

When teachers can combine the elements of complex capabilities, they develop a more comprehensive and powerful approach to learning. Students are then better equipped to embrace challenges, more engaged as experiences are meaningful and stimulating which results in having a deeper understanding of the world around them and the characteristics and skills required to be successful. We need to provide the opportunities for students to be brave and formulate a vision and strategies on how they will embrace their future to make a positive impact on our world.

(Project School)

In various ways and in different combinations, the schools involved in the Learning Impact Project have been modelling these competencies and demonstrating their power.

The need for transformation has been evident for decades, but recent global shifts – including rapid technological advancements and societal challenges – have accelerated its urgency. Employers increasingly value adaptability, collaboration, and innovation over rote learning, and our education system must evolve to meet these expectations. Additionally, research underscores the necessity of integrating wellbeing and capability development into schooling, ensuring students are equipped to navigate complex social, emotional and intellectual landscapes.

(Project School)

Liberate and learn

Charles Leadbeater

When we started work on this project more than six years ago my focus was on how learning could develop students' capacity for agency by learning how to make a difference to the world that mattered to them. It closes with an interest in the kind of leadership it takes to generate that kind of learning, a form of leadership we have come to see as generative.

When we started with student agency, we understood it as students being able to learn on and for a purpose upon which they reflected and for which they took responsibility. We mapped out a system in which students learned how to develop a holistic sense of agency – the power to make a difference that matters, in the economic, creative, moral and governance spheres of life – as individuals, collaboratively and collectively.

In closing, my interest is in the kind of leadership needed to cultivate agency, for students and teachers, both separately and together, as they lead learning. One of the things we found out early, in schools that were systematically promoting student agency, is that students can only really become agents if teachers are too – able to use their judgement and initiative. Students acquire a sense of purpose only in places and institutions which are themselves rich in purpose, where leaders are asking questions about what their purpose is.

What does this different kind of leadership of systems and schools look like? What models do we have to offer? And how does the leadership of education systems relate to wider trends in the search for effective leadership?

The world is in a permanent state of emergency, brought on by interconnected crises stemming from deep roots in inequality and migration; conflict over basic resources, such as water; pandemics; floods and fires; financial meltdowns; technological disruptions; and economic dislocation.

Crisis can bring out the best in us: a willingness to sacrifice for the greater good and to adapt to keep going. Yet persistent crises can breed fatalism and powerlessness as people feel they are going under. We see that reflected in a declining faith that democratic institutions, and the public systems they govern, are really helping people create the lives they want. Tinkering offers no solution as frustration mounts with the status quo. That applies to schools and education as much as it does to other public systems. All over the world, people are looking for leadership that will respond to this rising sense of crisis.

Students acquire a sense of purpose only in places and institutions which are themselves rich in purpose, where leaders are asking questions about what their purpose is.

One direction people have turned is towards charismatic leaders who offer to protect people from a complex, threatening world with simple, decisive solutions that will restore order. Education too has had its fair share of charismatic leaders – super heads that would transform failing schools single handedly. We should know that if that works it does not last long and sustained change, systemic, deeply rooted, widely shared change, never comes from a single individual.

Another leadership recipe is New Public Management which emerged in the 1990s with a prescription to drive efficiency in public services by deploying a series of quantifiable targets overseen from the centre, involving league tables of performance and contracting out to providers who had to compete with one another.

New Public Management offered to make public systems more efficient by making them more mechanistic, breaking down problems into their constituent parts to find effective solutions. Both the goals and the means to achieve those solutions must be tightly prescribed, with little room for deviation. Leaders are conceived of as professional, demanding, independent, managerial and technically adept. We can all recognise the influence of this kind of approach in schools and education systems.

Purpose is not decided before change happens, like a destination; it emerges in a school as part of a process of collective experimentation, learning and meaning-making.

The danger is that you can hit the target and miss the point. New Public Management has modernised and rationalised public services without making them less paternalistic or distant. New Public Management has become a recipe for running faster on the spot. It uses lots of energy to generate very little. Instead, we need a leadership which can generate a lot from a little by

- working with current systems while developing alternatives from within and outside them
- turning problems into possibility in the form of visible attractors and practical demonstrators of alternatives
- convening, catalysing and orchestrating communities of actors to bring about change they did not think was possible, and

- generating new purpose, power and relationships to reconfigure the resources available to create more effective ways to learn.

The worst systems are extractive and exploitative. So are the worst leaders. The best systems are dynamic and generative. So are the best leaders. They are generative too.

Generative leaders do not treat systems as the enemy: immovable, recalcitrant objects which must be pushed by an assertive, directive centre. Generative leaders see systems change as an emergent process of experimentation, learning, adaptation and growth from within. Generative leaders do not write off teachers and pupils dispirited by current systems as unwilling or unable to change. They seek to re-connect and re-energise demotivated students and teachers to a renewed sense of purpose.

Ultimately, generative leadership is about creating a space where students, teachers and leaders grow together, continuously shaping a future of co-creation and discovery.

(Project School)

Generative leaders overcome resource constraints that bedevil conventional, siloed approaches. They see resources as emergent rather than fixed, an asset-based approach finding resources within and outside schools in the community that are often discounted and overlooked.

Generative leaders help people make sense of their shared purpose in the context of change, not as a precondition for it. Purpose is not decided before change happens, like a destination; it emerges in a school as part of a process of collective experimentation, learning and meaning-making. Purpose is more than a vision of the future: it combines a sense of identity (who we are, where we have come from, what we stand for); intention (what difference we want to make); and improvisation (what we can do now in the real

world to step forwards). Generative leadership generates purpose within a school or system through a dialogic process of meaning-making.

Generative leaders are highly attuned to the different dimensions of power, including their own positions within conventional hierarchies. They do not see power as finite or transactional. They do not merely direct conventional, insider power to different ends, nor simply share and distribute that power so it becomes more decentralised. They help teachers, students and parents to make judgements, take the initiative, exercise agency and work together.

Generative leaders create the relational architectures in which systems can create a sense of thriving and flourishing, care and learning. You cannot create highly relational systems designed to support a full sense of flourishing through directive instructions issued from on high by managers and consultants.

Generative leadership looks both ways at the same time, avoiding false binaries and instead looking for productive tensions. This capacity to combine different trajectories of change, resisting shabby compromises and simplistic solutions, is critical to leading effectively in conditions of confusion, uncertainty and ambiguity.

They see schools and systems as places shaped by a combination of intention and structure, but also by emergence and adaptation, in which everything does not go to plan because students grow in unforeseen ways.

System change requires **intention**. Generative leadership helps people to shape the future with agency and purpose. It helps steer direction and orchestrate energy around shared missions, demanding of us that we reach for new possibilities and be purposeful in our actions. It calls on us to stand up for what we believe in, to be intentional in how we design for new systems and away from

those that no longer serve us. Generative leaders invite people into this shared intent, to see their work as part of a larger change with a deeper purpose.

*Systems change is not all motherhood and apple pie: an endless series of cosy self-selecting multi-stakeholder convenings in which everyone agrees and nothing changes. Systems change necessarily involves **conflict** as much as it requires collaboration.*

Yet system change also requires leaders who are attuned to **emergence**. Change in complex situations cannot be fully planned, no matter how comprehensive the theory of change. Change gathers momentum as it spreads and grows with its own sense of coherence and consistency: purpose grows, relationships deepen, people commit more resources to the shared effort. Leaders bring out the latent, often overlooked and disregarded potential for change in people and communities.

With these shifts, it became clear that leadership also needed to evolve. Traditional, top-down models were insufficient for this fluid, emergent learning landscape. Generative leadership became our guiding compass – a leadership style that sparks new possibilities from within, embracing iteration, co-creation and adaptability.

(Project School)

Deep and lasting change never comes from a single point. System change requires **collaboration** among these many different players. Generative leaders create the conditions and culture for collaboration to thrive.

Systems change is not all motherhood and apple pie: an endless series of cosy self-selecting multi-stakeholder convenings in which everyone agrees and nothing changes. Systems change necessarily involves **conflict** as much as it requires collaboration.

That conflict also puts people at odds, which can make collaborative change difficult. Generative leaders are skilled at working with and through conflict to make it productive. They embrace conflict as an opportunity to build trust, to understand different points of view and create the energy for change.

Emergence is not all good. Opposition to change is also emergent, often appearing below the surface as scepticism and reluctance. Efforts at system change are rarely defeated in a big set-piece battle. More often they are deflected and stalled by a thousand little compromises that revert us back to the status quo almost without realising it. To avoid that you have to hold true to the principles of an alternative you seek – intention – as you navigate day-to-day challenges and opportunities – emergence.

Trying to make the transition to new systems in one giant leap, through a sweeping change in policy frameworks, institutions and values, generally does not work. Successful transitions unfold in ways that allow people time to fail, adapt and learn; to build up momentum and support; to assemble coalitions and complementary innovations. Leading this kind of transition requires a mixture of clarity of purpose and adaptation to circumstances, urgency and patience, and an awareness of how small changes can become part of a bigger story.

Generative leaders deploy strategies to turn conflict into cooperation, sometimes calling conflict out into the open to address it directly, sometimes choosing more oblique, indirect and stealthy strategies to insinuate change into systems without provoking hostilities. The one thing they do not do is pretend that conflict does not exist or does not matter. As Olli-Pekka Heinonen, the former director general of the Finnish education system, put it,

The balance of conflict and cooperation is the key to enabling sustainable change. I often think of conflict or disruption and cooperation as elements enabling each other. You need to be able to create a trusting atmosphere and basis for disruptive ideas to dare to emerge from inside the system. In addition, taking care of the process, not the content, those disruptive ideas can grow into internal commitment to change. The wisdom of a convening leader is in their ability to sense the softer spots where there is room for change, identifying the already half-cooked decisions to be formalised into understandable next steps. With a solid and visible process from the very beginning, even those who have differing views can accept the outcomes when the process is honoured all the way through.

Generative leaders are grounded in context, respecting its particularity and understanding its history. They know where their students come from. Real change has to be from the ground up to be truly embedded in people, practices and places. Leaders see **context** as a constraint that must be respected and also as a source of potential: they look for assets, skills and knowledge in places and people. They know that social contexts are often messy and do not conform to neat linear models of service delivery. Generative leaders work with what is there.

To keep us moving forward, leaders balanced structure with flexibility. Our students effortlessly stepped in to a leadership space in this project as soon as they were invited. Their clarity, creativity and willingness to speak candidly with the research team became invaluable features of leadership within this project. They were far from mere passengers on our journey but quickly became co-drivers on our 'intergalactic mission'. Their leadership highlighted the significance of doing this challenging work so that we can address their hopes and needs better than we currently do.

(Project School)

Yet at the same time generative leaders engage the **imagination** to help students and teachers to put themselves in the future, the not-yet world students want to create. They respect context but they also understand the power of imagination to cast us forward, beyond our current context, to inhabit alternative futures that might work for all over.

Generative leadership weaves together elements that can seem at odds – intention and emergence, collaboration and conflict, context and imagination – using the tensions, adhesions and frictions between them to give change shape and energy.

Generative leaders do not offer neat and simple, heroic and inspirational stories of justice triumphing decisively for all time over evil. All the generative leaders we have worked with say their work is incomplete, always fighting for its own survival. They tend to make collective stories of trial and error, mistakes and setbacks, struggle and confusion, chance encounters and a sense of destiny, in which, eventually, a clearer path to the future emerges from the work in hand. As a result, people find it in themselves to put conflict behind them and to bring together formerly opposing forces, insiders and outsiders, challengers and cooperators, to create

a burgeoning sense of shared intent. They create narratives that invite people to be part of a bigger change.

You can only learn your way through the big transitions we are in the midst of. Leading is not directing. Leading is learning. Generative leaders liberate students and teachers to learn and grow.

We deliberately moved beyond a purely deterministic approach to leadership – one where all decisions are handed down from the top – in favour of an adaptive and generative style. Rather than dictating a singular blueprint, senior leaders created the conditions for teachers to take ownership of embedding critical thinking in their contexts. They encouraged a heuristic mindset by providing space for experimentation, reflection and shared learning. In doing so, leadership and teacher teams signalled that deeper, more integrated learning was a shared priority – shaped by collective purpose rather than prescriptive directives – leading to fostering ongoing innovation and co-creation across the school.

(Project School)

Also see Table 2.

Table 2. From now to next

Now Respond to the urgencies of today	Next Work to a longer-term perspective
Speed up Create practical impact and progress	Slow down Nurture conditions and transforming
Direction Provide unifying visions and missions	Openness Encourage plurality, uncertainty and ambiguity
Conserving Uphold and protect values and ideals	Renewing Let go, hospice and hold space for possibility
Agreement Find common ground and consensus	Conflict Surface, disrupt and engage with conflict
Head Think criticality and act rationally	Heart Sense, feel and embrace emotionality and embodied experience

Generative leadership: some rules-of-thumb for generative leaders

- Lay down stepping stones. Feel your way. Each step depends on the one before. Don't try to go all the way in one bound.
- Change never comes from a single point. Help to build a transformational coalition of actors committed to deeper change. Offer generosity and empathy. Understand what motivates others. Don't try to do everything yourself.
- It takes more than one go to find the path forward. That requires patience and resilience, and someone who will have your back when you fail, as you will. Don't give up at the first or even second setback.
- Much of the landscape you will need to traverse lies beyond the horizon. You can only make the map by treading the path. Make maps as you go. Be ready to discard the one you started with. Don't try to map everything in advance.
- Reuse as much as you can by repurposing it to work for a different goal in a different setting and different pairs of hands. Don't try to remake everything from scratch.
- Develop collective principles to guide everyday action in the right direction. Set three hard lines you will stick to. System change is defeated by a thousand small compromises. Don't compromise on fundamentals at the core of your alternative.
- Often you'll need to tack sideways against the headwinds; sometimes they will blow you backwards. Don't imagine progress will be in a straight line. Nor that it will always be beautiful. Often it might be slightly ugly.
- Systems have many facets and so also potential points of change. Those points can only be discovered by listening to all kinds of voices, including especially ones that are traditionally discounted. Listening to those voices requires empathy and curiosity, respect for all views. Don't get trapped seeing the world from a single point of view; don't listen to only one group; don't respect only one kind of knowledge or history.
- It's not all about what you do; it's about the power of the wave of social change that you catch. You're part of it. Be open to what the world outside is telling you. Be prepared to learn and adjust.
- Context is more powerful than action. The power to set the context where the action takes place is usually greater than the power to act itself. You need both: new actions will depend on new contexts that allow it.

A manifesto of being, knowing and valuing

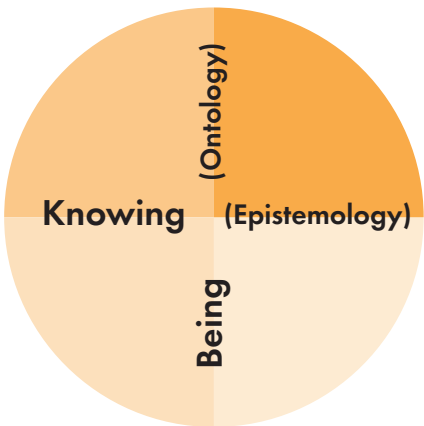
Michael Bunce

In establishing our manifesto, we recognise that ‘our way of seeing and perceiving is conditioned by the system we are seeing or perceiving’ (Bateson, 2016, p 152), and so our perspective is inevitably shaped by our experience and the many contexts we inhabit as a population of project participants, each with their own subjective view.

Yet, we also recognise the opportunity to act as a collective among collectives (some of which we identified in the first chapter) to explore a new philosophy of learning together, to reconsider the purpose of education, what is to be valued, and what kinds of new patterns, structures and practices we can establish and embed that may indeed contribute to regenerating the education and planetary system, to *see* whole learners, and enable each one to flourish together in education, the workplace, and in their lives.

We need to reimagine what it means to de-centralise student pathways, remove artificial boundaries to learning, and celebrate the whole learning journey at all of its stages.

(Project School)



Learning ecology

For a logic of future coexistence

In this way, we, as learners, teachers and leaders, have sought to establish a ‘*logic for future coexistence*’, which inherits ecological interrelations and dynamics, as a mediation between selves and world (Morton, 2016).

Echoing Valerie Hannon’s earlier recognition of the *power of shifting from ‘Ego to Eco; from I to We’*, we draw on the concept of *Ecosophy* (Guattari, 1989): how we as subjects interact with each other and the environment, and how we may act and learn in ways that promote regenerative rather than derivative or extractive practices. Guattari established three ecological *registers* to this philosophy: Human Subjectivity, Social Relations and Environment, which we see correlating with three further models that consider the relationship between self and world (see Table 3).

Table 3. Ecological registers

	Self	World		
Aunio et al ¹⁰	Subject	Environment		
Hannon and Mackay ¹¹	Intra	Inter	Societal	Planetary
Guattari ¹²	Human Subjectivity	Social Relations		Environment
Cajete ¹³	Individuation	Community		Land

Gestalt theory

In this *ecosophical* framing of dynamic contexts for learning and teaching, we draw on gestalt theory, which ‘seeks to effect a global consideration of the complexity of experience, neglecting nothing, and accepting and amplifying all that emerges. The fundamental objective of this approach is the creative adaptation of each individual within the Organism-Environment Field... [stimulating] learning as experience and experience as a source of learning’.

(Polito, 2014)

The learning economy

Filtering for purpose

The model shown in Figure 3 was established to enable schools to filter for purpose, to consider which current practice we value and will maintain, and which is redundant, and – through experimentation, exploration and innovation – what we might seek to include in future practice. This is a process of nudging and adjusting to establish and value new practice that resonates with purpose. (See also Figure 3, which illustrates filtering for purpose.)

What do we value?

We value the learning process over knowledge processing, as an ultimately empowering perspective, especially in the context of generative AI and its impact on society.

We prioritise the dynamic use-value of capabilities over the exchange-value of information, particularly critical thinking.

We value agency and co-agency, and agentic ways to represent learning, skills, knowledge and understanding that empower students to showcase themselves authentically.

We argue that the wider economy might itself *learn to adapt* by valuing the transformative and regenerative potential of diverse learning and education, rather than only prioritising subjects that lead to short-term economic gains, at the expense of long-term regeneration of the planet.

Figure 3. Filtering for purpose

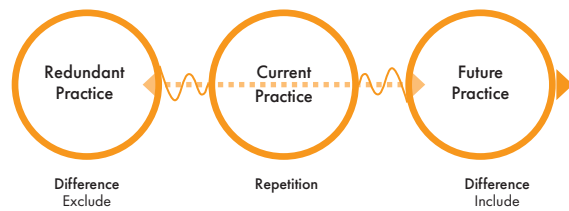
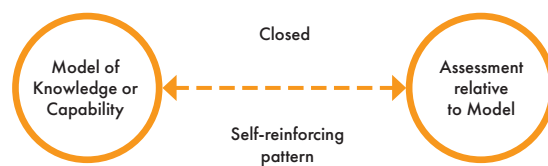


Figure 4. Static model of knowledge or capability



From this *ecosophical* perspective, we ask: which kinds of capital can support regenerative approaches to learning?

Static vs dynamic adaptive models of learning and assessment

Conventionally, a knowledge-content focus to learning and assessment results in a closed-loop, self-reinforcing process, reflecting a static model of knowledge or capability, driving the development of disciplinary expertise (see Figure 4).

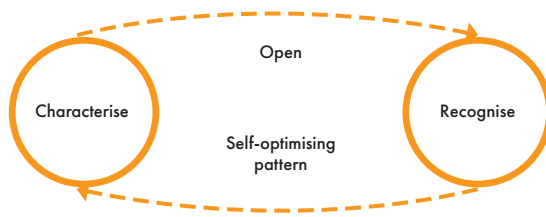
Optimising for evolution

In the Learning Impact Project, we have embraced the dynamic and adaptive nature of learning, through which ‘knowledge is conceived as a continuous organisation and rearrangement of information in accordance with needs, purposes and meanings’.

(Polito, 2014)

As such, conventional approaches to learning and assessment that often prioritise static content, contexts and capabilities, and which rely on and reinforce strict definitions, cannot effectively account for or evaluate dynamic processes of learning and its products, which are often open ended, exploratory and emergent.

Figure 5. Open-loop self-optimising process



So, in this project we adopted an open-loop self-optimising process (as opposed to a self-regulating process) relative to context and conditions, which can optimise for evolutionary and revolutionary value and impact (see Figure 5).

This process seeks to **characterise** rather than **define** learning and its outcomes, instead to **recognise** learning as an open, dynamic and complex process, uniquely patterned for each individual learner. Following an adaptive self-optimising pattern, each recognition leads to new characterisations. In the following section of this paper we show how schools followed a process of characterising Agency, Dynamic Capability and the Quality of Being (Wellbeing).

We need new maps

We need to recognise the landscape **and** weather of learning (see Figure 6), recognising knowledge content as foundational, fundamental to our learning experiences, but also championing the limitless power of skills, competencies and capabilities, and the tools of interpretation that enable and empower us to experience and process those experiences to derive meaning for ourselves and others, transcontextually, and in a way that is content-independent.

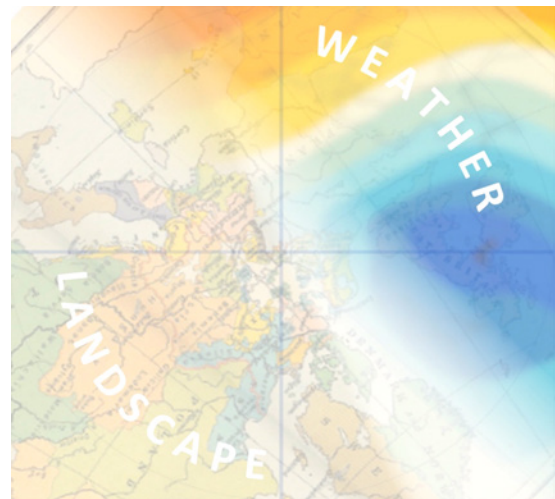
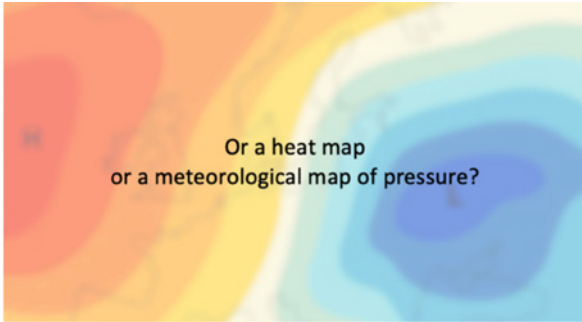


Figure 6. Weather of learning

 Is learning like a map of a geographical territory...	 Or a heat map or a meteorological map of pressure?
Maps based on knowledge-content and its properties have defining limits and boundaries. Their properties are finite and can be listed. They are extensive. Like a map of a geographical territory... ...or a disciplinary curriculum	Maps based on learning capabilities are not bounded or limited. They are not extensive. Their capacities are infinite and cannot be listed. They are intensive. They are based on the power of their potential effect. Like heat maps or meteorological maps of pressure

Critical thinking is one pertinent example of such a complex capability: a superpower with infinite potential.

When teachers combine the elements of complex capabilities, they are able to develop a more comprehensive and powerful approach to learning. Students are then better equipped to embrace challenges, more engaged as experiences are meaningful and stimulating, which results in having a deeper understanding of the world around them and the characteristics and skills required to be successful. We need to provide the opportunities for students to be brave and formulate a vision and strategies on how they will embrace their future to make a positive impact on our world.

(Project School)

Agency, dynamic capability and the quality of being

The influence of the conveyor belt model is gaining ground, with increasingly young children tested and age-normed. The severe mental health consequences of the limitations and restrictions of this approach and the pressure to constantly 'perform' are well documented.

(McLellan et al, 2022, p 6)

Agency, co-agency and dynamic capability

The kind of attention we bring to bear on the world changes the nature of the world we attend to.

(McGilchrist, 2009, p 28)

How we **see** the world recasts it, according to the quality of our attention and the values, experiences and contexts that influence our view.

For example, colour is not a property of objects or materials in the world, but an effect produced in our eyes and brains, based on different wavelengths of reflected

light, producing a kaleidoscope of varying viewpoints and possible disagreements about the **true** colour of an object.

Agency correlates with the level of our awareness and consciousness, the strength of our intention, and the quality of our attention. Agency can be characterised as a variable of our experience, subject to change and external influence, and a parameter that determines the depth of our transformative and generative capacity and action: the effect of the world upon us and the way we affect the world.

*How we **see** the world recasts it, according to the quality of our attention and the values, experiences and contexts that influence our view.*

Attending to our **effect** and our capacity to **affect** is fundamental to co-agency, or collaborative partnership within communities, directly influencing the collective quality of being, and our capacity to develop skills, behaviours, practices and knowledge in learning communities.

This we define as a mutually enabling dynamic capability, a spectrum of experience, intention, action, interaction and interrelation.

Ways of knowing

A mountain that is a landmark to a navigator, a source of wealth to a prospector, a many-textured form to a painter or to another the dwelling place of the gods, is changed by the attention given to it. There is no 'real' mountain which can be distinguished from these, no one way of thinking which reveals the true mountain.

(McGilchrist, 2009, p 28)

Acknowledging the diversity of experience and interpretation illustrated by McGilchrist, our project has celebrated the richness and diversity of ways of knowing and being to embrace a plurality of modes that exist across

cultures, placing significant emphasis on First Nations peoples' ways of knowing and being.

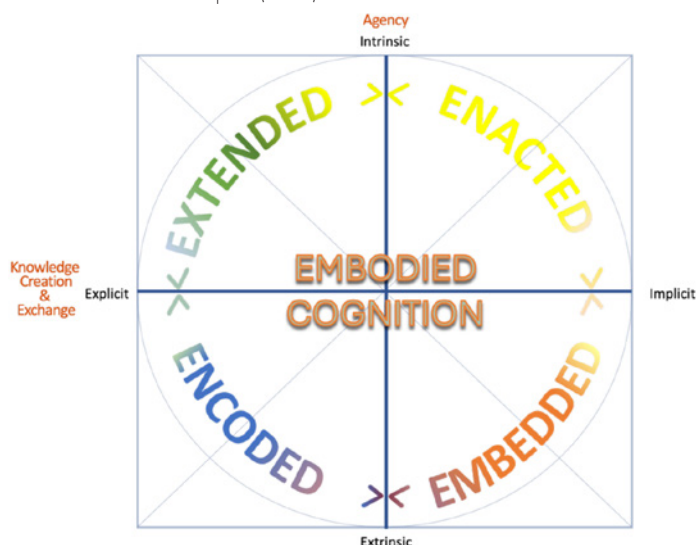
We have recognised the importance of learners and learning collectives representing each unique learning journey in ways that communicate the richness and depth of who they are, and who they can become.

Over time, influenced by the Learning Impact Project, the purpose of the badges has become clearer: to support students in developing dynamic capabilities, allowing their agency to shape how those capabilities are expressed, while also addressing their overall wellbeing. These three elements – agency, dynamic capabilities, and wellbeing – are deeply interconnected, and the Learning Badges serve as a model that integrates them into learning (Project School)

We have worked with visual artists to explore personalised ways of representing learning and knowledge, including schools, teachers and learners exploring metaphor to develop ways to authentically represent themselves and their learning through visual arts practice. Students have designed visual maps of their learning, exploring indigenous concepts of the visual representation of diverse knowledge over generations.

Figure 7. Mapping concepts of embodied cognition on the Learning Impact Map

(See: Varela, Thompson and Rosch (1991); Clark (2016); and Thompson (2007))



Fundamental to our approach has been to acknowledge a full spectrum of learning and cognition, from encoded to embodied, as a way to dynamically and inclusively evaluate and recognise the diversity of learners and their ways of knowing (see Figure 7).

Narration of learning

*“The business of stories is not enchantment.
The business of stories is not escape.
The business of stories is waking up.
Bad storytellers make spells.
Great storytellers break them.”*

(Shaw, 2020, p 3–4)

- What kinds of stories can we tell about ourselves?
- As learners, how do we make connections between learning experiences?
- How do we trace our journeys or landscapes of learning with words as well as imagery?
- How do we conceptualise, connect and communicate our learning experience to others?
- How can we use words to characterise our prior learning experiences and opportunities for future learning?

Narration of learning is a key aspect of the Learning Impact Mapping framework, in which students write reflective and prospective summaries of their learning, connected to artefacts and evidence as a form of digital storytelling. This we have explored in more detail, in developing concepts of representation, metaphor and enactive collective storytelling with LEGO.

There is a way in which this multidimensional narration of learning is a sharing of personal truth, a testimony of learning.

Pathways to truth

In *The Matter with Things*, McGilchrist (2021) describes four ways to truth, in a chapter about epistemology. These begin with science and reason, but also happily include intuition and imagination, qualifying filmmaker Werner Herzog's view that **the accountant's truth produces facts, and the poet's truth illuminates**. (Herzog, 1999)

We see all pathways as relevant, representing a holistic hybrid mode of quantitative and qualitative methods, aligned to the SACE Board's approach to natural evidencing of learning, described earlier. We argue that this range of methods enables the holistic evaluation of a fuller spectrum of learning.

Explicit knowledge and skills are appropriately coded, described, defined and preserved in language, itself an essential form of coded knowledge. How then to convey the nature of implicit knowledge, that which is embedded in the context of the learner, inherent to their nature, and which may emerge into consciousness unpredictably and diversely?

Language-based, coded descriptions, representations, or even characterisations, begin to pull this implicit, unconscious experience towards the explicit. Which natural forms can therefore express implicit knowledge, skills and learning, authentically?

Can a painting count as an embodied artefact, or music as a transient expression in sound, just as an essay may capture explicit coded knowledge and understanding, or a reflection may account for a learning process?

Can we attribute equivalent value to these forms?

Impact: Evaluation and evidence

To break away from the bricklaying of evidence-based strategic solutions is a huge risk. The loose threads of golden flexibility are a pirate's booty of unproven and mock-able guesses.

(Bateson, 2016, p 16)

The accountant's *brick laying* truth **and** the *golden flexibility* of the poet's truth both have meaning and value but, as Bateson suggests, there is greater trust in the former within the current system, so it is important that explorations and experiments, prototypes and wild ideas are imagined, dreamt up, brought to life and nurtured, as our project has been by so many external partners and colleagues.

Bateson's provocation is to take the risk, make a leap, putting trust in *warm data*¹⁴ as a natural evidence base for the imagination and intuition, as well as for science and reason.

Learning Impact Mapping is a way of coordinating this type of *warm data*. In addition to multiple plots that quantify the learning process relative to agency and knowledge exchange spectrums, reflections and prospectations qualify the experience: how learning feels to individuals and collectives, and their intuitive sense of its value, for themselves and others, now and for the future.

Crucially, it is the interrelation of these elements, rather than the objects being related (*relata*) that is significant: not the individual score, mark, product of learning, but instead the dynamic process that led to them. It is not only a set of scores or grades and learning artefacts but the relations between them and, ultimately, **how** a learner is able to describe these relations and characterise and qualify their impact and potential. This I define as a metapraxial capability.

The quality of being and knowing

We have previously proposed that Wellbeing be reframed as the *Quality of Being*, as a dynamic spectrum of experience, rather than as an absolute permanent state of ultimate positivity (which does not seem a realistic proposition). Instead, we seek to recognise and represent the *Quality of Being* in all its inevitable variability, inherently prone to change and fluctuation relative to individuals and their context, and to reposition our focus to consider the interplay of enabling and constraining contributory factors.

Our project inquiry has examined how we as individuals and collectives may be empowered by new purposes, values and structures in learning and education to develop dynamic awareness to support ourselves and one another with strategies derived through self and contextual understanding over time.

This framing seeks to avoid a generic binary view, of well/unwell, problem/solution, or a medical view of symptom/cure, promoting instead adaptive awareness of the complexity of this spectrum of experience, unique to each individual.

This approach does not disregard or trivialise physical, psychological or mental health challenges, which, in a very real sense, constitute significant inhibiting factors for individuals, requiring specific and targeted interventions that could be categorised as enabling factors. Nor does this framing discount social, emotional or developmental factors that may contribute to an experience of hardship or struggle. On the contrary, the *Quality of Being* is an inherently inclusive framing of the dynamic diversity of enabling or inhibiting factors that we all experience over the course of our human lives, and specifically for learners and teachers in schools.

It is in this specific context where the quality of being for learners may be degraded and inhibited, through over-emphasis on routinised practices in teaching, learning

and assessment, or enhanced and enabled by emphasising and nurturing the capacity for individuals to thrive and flourish.

Positive education in Australia is valued for two key reasons. The first is the high prevalence of youth mental health disorders. The second is the narrowing of curricula to core subjects 'at the expense of holistic learning' as a result of standardised testing and global ranking systems (Slemp et al, 2017, p 102).

(McLellan et al, 2022, p 120)

Being happens in classrooms, in predefined structures, in set spaces. In education, as in wider society, our patterns of being are often formalised, with limits, properties, rules and conditions. Yet, being is also a continuous, immersive, fluid and unbounded experience. It is pervasive, always happening uniquely for each individual, within a multiplicity of entangled experiential pathways.

Much like knowledge, being is often defined, coded, structured and regulated, **but also**, much like learning, it is an experiential *energy-flow* that is dynamic, amorphous, transient and inherently complex. How we navigate these concurrent realities intersubjectively, as a mediation between self, others and the world, is fundamental to the quality of our co-existence, our experience of living in the world as self-generating beings.

The mobilisations of wellbeing and allied agendas rely upon and are frequently legitimated through their own tests, surveys and reporting mechanisms that mimic the logic of achievement informing testing regimes. In turn, this can inadvertently render wellbeing a policy checklist item.

(McLellan et al, 2022, p 121)

When wellbeing is a defined *thing* – an object with listable properties, a program with outcomes, a set structured activity, a solution to a defined problem, a form of regulation – it may provide strategies to support healthy

development and growth, but, by definition, it will not engage with the full depth of experience, or all dimensions of a learner as a whole person.

When wellbeing considers the full spectrum of the *quality of being*, and the dynamic intensity of *transcontextual* experience, it may develop greater capacity in learners to optimise their interrelations with others and relative to those contexts.

Practicing mindfulness to develop deeper awareness of self, others and context may provide such capacity in individuals and communities of students. Likewise for schools, leaders and teachers to recognise the dynamics of interaction between these elements, may also reveal a range of enabling and constraining conditions or factors influencing these dynamics, which are embedded in the socio-cultural context of the school.

When strategies are established as

... antidote[s] to narrow forms of schooling that focus on test results or achievement ratings at the expense of addressing the social and emotional needs of the child; [they may represent] a continuation of fundamental concerns that go to the heart of humanist and progressive debates about the purposes of education.

(McLellan et al, 2022, p 121)

Yet, schools must remain cognisant of pre-existing socio-cultural and teaching and learning dynamics, to avoid simultaneously advancing

... the same logics of testing culture and evidence-based interventions that have come to dominate schooling in Australia, making it more of the same in the guise of making a difference.

(McLellan et al, 2022, p 121)

Characterising agency, dynamic capability and the quality of being

In the Learning Impact Project, schools spent time characterising agency, dynamic capability and the quality of being as spectrums of experience rather than working with fixed definitions to capture the full depth of experiential dynamics in their school contexts, and to represent the diversity of experience for individuals within their learning activity systems (see Figures 8, 9 and 10).

The limits of this spectrum for the Quality of Being characterise how a learner may mediate the degree of self-determined experience and context-determined experience, or how a school may characterise the experience of planned learning activities, identifying enabling and inhibiting factors or effects, and forms of evidence for recognition.

As a way to push back against the perpetual motion of the closed loop of the ‘conveyor belt model’, we suggest the need to de-regulate **for** learners in the following ways.

- Reduce structures of compliance to liberate the impetus to learn.
- Delimit the scope of possibility to enculturate creativity through generative rather than derivative or reductive learning practices.
- Reconfigure and reinforce systems of support to meet the diversity of needs.
- Embed life-affirming values, practices and behaviours within a supportive environment.
- Equip learners with the skills, knowledge, understanding, metacognitive capability and contextual awareness to enable them to self-determine the scope and impact of their learning.

Ultimately, we should enable learners to self-optimize for evolution, mediating the dynamic interplay between self and world, subject and environment, in a time of increasing complexity, challenge and uncertainty.

Each day of Amplify was unique and allowed our creative minds to flourish. The stark difference in the tasks appointed compared to everyday school challenges, had our minds working. We were encouraged to consider real life problems and movements, then apply our

own personal ideas to build possible solutions. This effectively introduced us as students, to a new and interactive way of thinking about the world we live in.

(Project School)

Figure 8. Agency



Figure 9. Dynamic capability

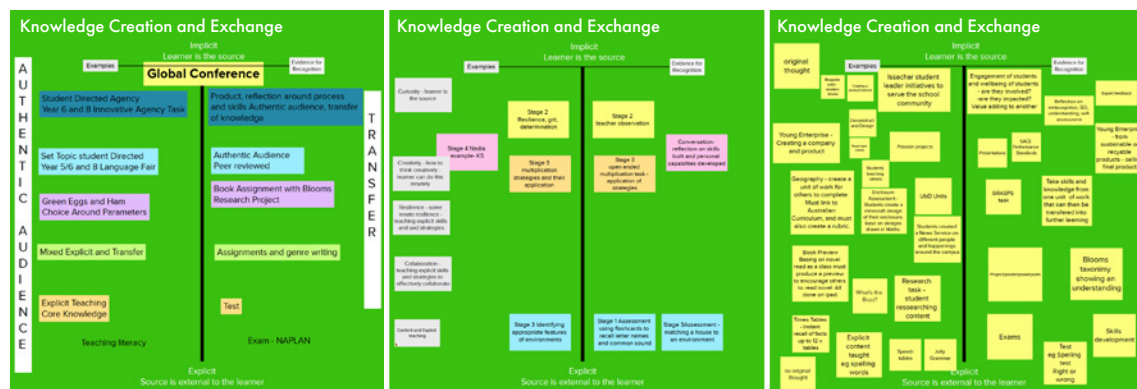


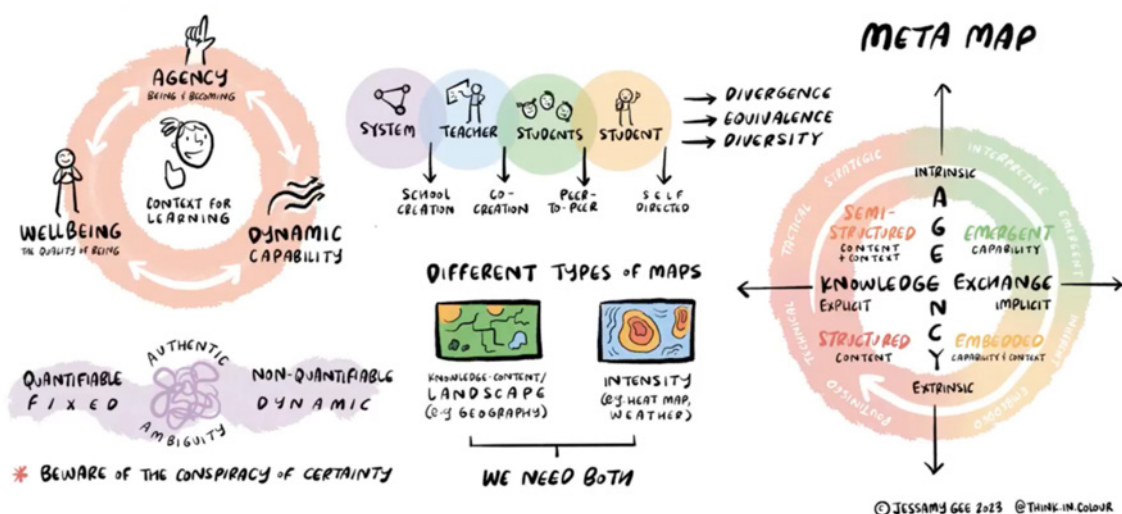
Figure 10. Quality of being



Learning impact mapping and narration: Holistic evaluation and recognition of learning

Michael Bunce

Figure 11. The learning impact mapping framework



Learning Impact Mapping is a dynamic learning design framework and evaluation methodology that enables learners, teachers and leaders to profile the multidimensional impact of learning. The Learning Impact Mapping model was first introduced during the MetaPraxis Project in 2020, and an introduction to this model is set out in the related paper, *Learning in a floating world of disciplines: Reflections on the MetaPraxis Project*, published by the Centre for Strategic Education in 2022.¹⁵

The map (see Figure 12) is coordinated by two spectrums: the vertical axis relates to agency as a spectrum in learning, defining who is directing the learning process; the horizontal axis relates to the spectrum of knowledge creation and exchange, defining who or what is the source of knowledge, skills, behaviours and practices.

The agency spectrum

Low levels of agency indicate that a learner is not directing the learning process (agency is extrinsic to the learner), whereas high levels of agency indicate that a learner is fully directing the learning process (agency is intrinsic to the learner). This spectrum also correlates with consciousness and awareness, and ultimately maps ontology, or our experience of *being* and *becoming* in the world, and the extent to which we can self-actualise.

The knowledge creation and exchange spectrum

Likewise, when the source of knowledge and skills is external to a learner, it is explicitly imparted to them (characterised by instructional teaching, for example), whereas, when the learner is the source of new knowledge and

skills, it is implicitly derived by the learner or from their experience (characterised by exploratory, inquiry-led, emergent or embedded learning processes). This spectrum also maps epistemology, or our experience of knowing in the world, and the extent to which we can consume, apply, transfer and generate knowledge and skills.

Taken together, the intersection of these spectrums is intended to establish a **meta map** (see Figure 11), which can dynamically and inclusively map disciplinary knowledge and skills, and multi, inter and transdisciplinary knowledge and skills. In this way, the map represents a post-disciplinary perspective, placing greatest emphasis on the **learning process** itself. Hence the mapper (learner) becomes the domain for the integration, hybridisation, emergence, enacting, extension, embodiment and embedding of skills, knowledge, behaviours and practices, as component processes in their learning and development.

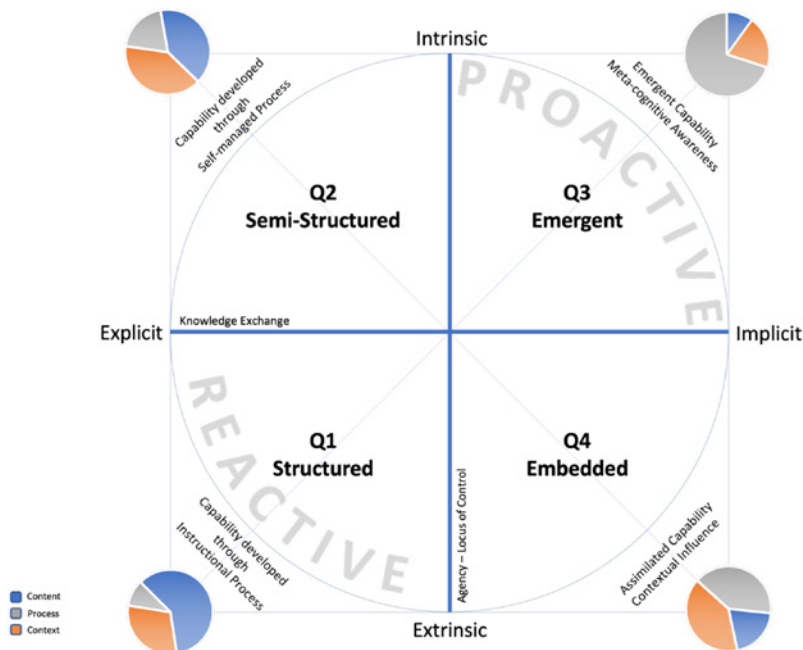
The impact mapping model

Impact mapping is designed to recognise the dynamic complexity of learning and its artefacts. It has been applied in different ways by schools, teachers and learners.

For some, mapping has been a way of unpacking the components and effects of complex capabilities, such as critical and creative thinking, or mapping taxonomies or models of learning progression, or skills acquisition. For others, it has been a reflective process of planning for emergence in learning and teaching. Schools have also begun to establish self-directed mapping by students as an alternative to traditional assessment methods.

Impact mapping recognises a learning ecology that values and promotes inclusive, non-linear, distributed modes of transaction and interaction, which can reflect the inherently organic and rhizomatic nature of learning, in highly personalised ways (see Figure 12).

Figure 12. Impact mapping quadrants



The quadrants

In Figure 12, Q1 is characterised by low levels of learner agency or control and explicit teaching, which results in capability developed through a structured instructional process. The predominant emphasis in this quadrant will be content-driven learning, such as within a discipline, where structured and predominantly static or sequential relationships between the content, context and modes or processes of learning are established.

As levels of agency increase, within an explicit model of teaching, capabilities may be developed through a self-managed or facilitated semi-structured process, with continued emphasis on defined content and contexts in learning (Q2).

In Q3, where agency levels are high and knowledge exchange/creation is implicit to the learner, capability is emergent through exploration and experimentation, featuring high levels of reflection and meta-cognition. Where autonomous, reflexive and dynamic leveraging of skills for diverse contexts and content is the predominant mode, this is a metadisciplinary approach, where metacognitive awareness plays an important role in coordinating these dimensions.

In Q4, where there are lower levels of self-awareness, and where knowledge, understanding and skills are implicit to the learner, capability may be assimilated from a learner's embedded contexts – such as current and previous learning experience, the contextual dimensions of a school, and wider social, cultural, ethical, religious or economic contexts and their associated value systems.

With increasing levels of self-direction in learning, applying skills or modes more dynamically relative to the content and the context of learning, we move through potentially multidisciplinary, interdisciplinary and transdisciplinary spaces, to arrive at high levels of agency and high levels of transfer.

Another distinction between the poles of Q1 and Q3 (see Figure 13) is a transition from predominantly static to predominantly dynamic approaches to teaching and learning, aligned to the distribution of static, sequential and increasingly dynamic patterns in learning. This also correlates with convergent and divergent processes in learning.

We can also see that static and convergent teaching and learning processes result from stimulus or input in a model of explicit teaching (Q1), contrasting with dynamic

Figure 13. Transition in approaches to learning

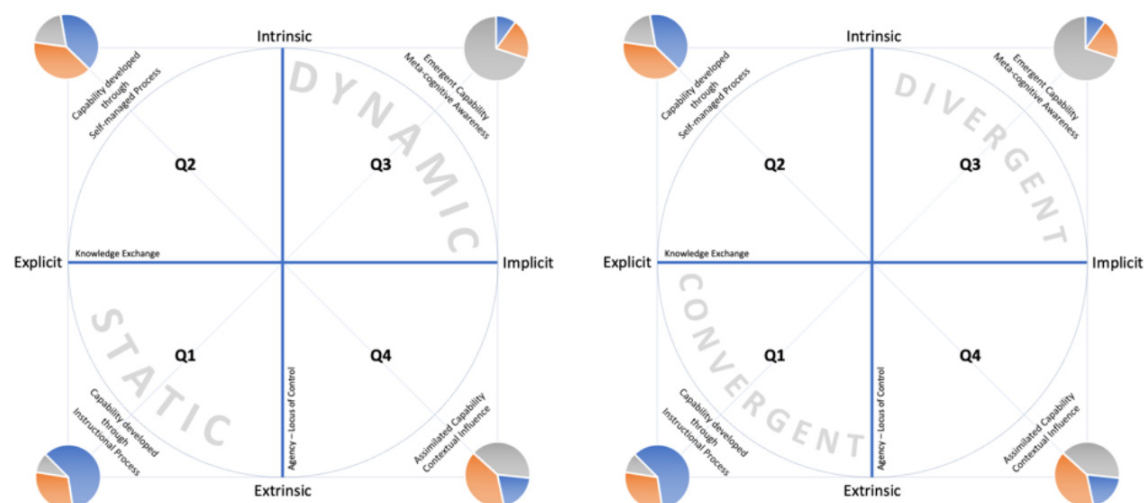
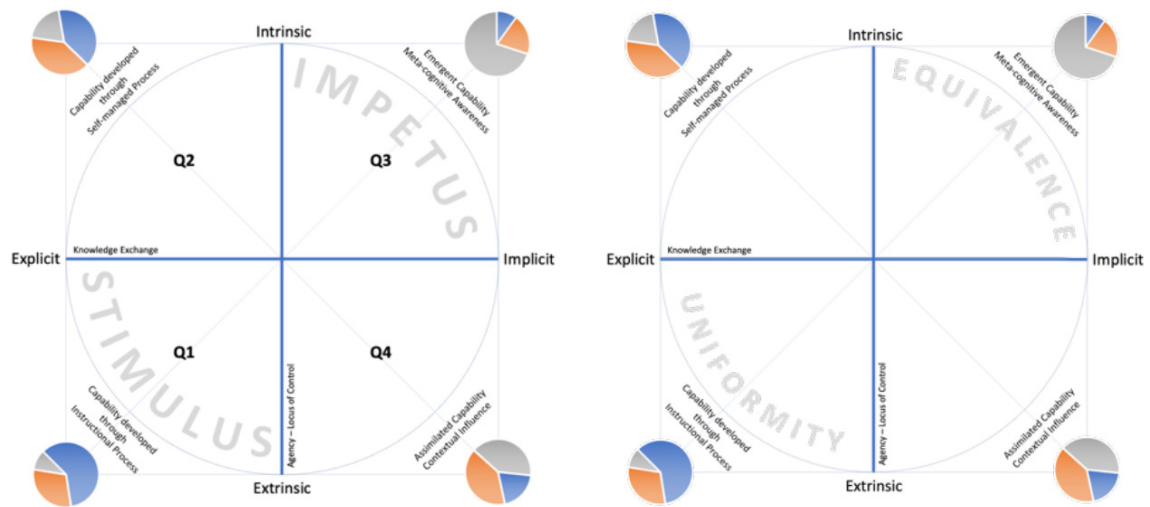


Figure 14. Recognition of learning

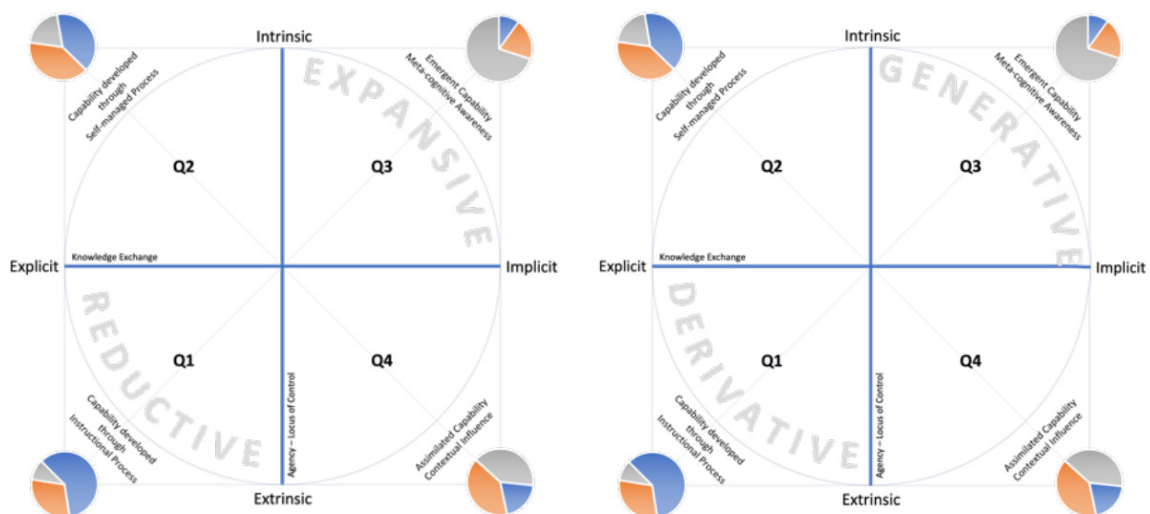


and divergent learning processes arising from self-directed learning processes with impetus.

From the perspective of recognition of learning, in Q1, uniform learning processes and products will be identified, whereas in Q3, equivalent learning processes and products will be recognised (see Figure 14).

Likewise, approaches that promote self-directed dynamic learning for students, transform learning from reductive approaches which often produce derivative products, to expansive approaches that are inherently generative (see Figure 15).

Figure 15. Promoting self-directed learning



Complementary patterns of learning, teaching and leadership

In comparing the maps shown in Figure 16, we can find the following complementary patterns in quadrants and segments.

- Q1: Concrete skills may be developed through instructional teaching in a learning process that is didactic or differentiated.
- Q2: Synthesised skills may be developed through facilitative teaching in a learning process that is scaffolded or modular.
- Q3: Emergent skills may be elicited through teaching that enables a learning process that is exploratory or emergent.
- Q4: Embedded skills may be elicited through teaching that assimilates embedded or inherent learning processes or experience.

To provide a deeper level of detail in the planning and mapping of learning experiences by teachers and students, quadrants are

subdivided into eight segments. These descriptions use a meta-language to frame types of processes and outcomes, which is intended to be translated into stage-appropriate terms by teachers, for learners. Segments also provide a framework to map the component parts of complex capabilities, such as creativity or collaboration, or to map behaviours and practices that support the quality of being, or to profile the impact effects of learning experiences for students.

The transfer and control spectrum shows how the transfer of skills, knowledge, behaviours and practices develops from transmission-based and transactional processes that lead to derivative outcomes for students, towards generative outcomes based on translation and transposition across contexts, and creative transfer that embraces and leverages emergent possibilities.

Figure 16. Complementary patterns in quadrants and segments



The Learning Impact Mapping framework recognises that no single quadrant or segment is paramount. The profile of metapraxial learning at all levels is non-hierarchical, based on a balance of emphasis relative to the individual and context, self and world, over time. Learners and teachers may oscillate between static and dynamic or convergent and divergent processes, through stimulus or impetus, resulting in learning impact that is equivalent to that of their co-emergent collaborators.

Mapping in practice: Exploring the theory and philosophy through metaphor

School examples

LEGO Garden

In May 2023, teachers and students explored the theory and philosophy of the framework through metaphor, by creating LEGO gardens that characterised each of the four quadrants.

Visit learningmap.education/legogardens.html to watch the videos of this workshop, which include teacher gardens and student gardens.

Identity maps and imaginary islands

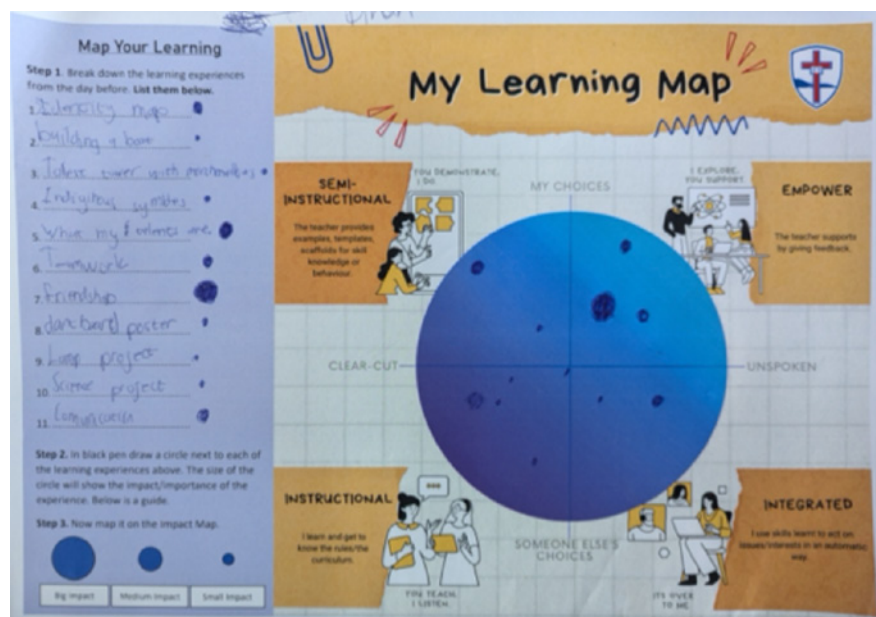
Southern Vales Christian College (SVCC) engaged Renee Watego, an indigenous artist, who had also delivered workshops to the whole project group, exploring authentic representation. She engaged students in a discussion about identity and its layers, through the lens of her indigenous heritage, to start creating visual representations of themselves, using indigenous symbolism. SVCC also introduced their own version of the impact map for students to use, as did Bethany Christian School (see Figure 17).

Bethany Christian School also introduced impact maps, using the metaphor of the playground to characterise what learning might look and feel like in each quadrant (see Figure 18).

Learning playground

‘A Learning Playground as a metaphor for a Student Agency Learning Map visualises how students navigate different modes of learning. It reinforces the idea that learning is not just linear or confined to a single approach – it involves structured and unstructured learning, intrinsic and extrinsic motivations, and social and individual exploration.

Figure 17. A sample personal learning map



This metaphor invites our educators to design environments that balance guidance with freedom, structure with creativity, and motivation with autonomy.’ (Bethany Christian School)

The learning impact mapping tool

Using a custom digital tool (see Figure 19), the components and effects of learning as part of structured, semi-structured, embedded, or emergent processes are mapped and evidenced. Learners, teachers and leaders can create plans for learning, retrospectively map and reflect upon the impact of learning, or prospectively map considering its potential.

Each plot represents an individual instance or episode of learning, plotted on the map relative to the agency and knowledge exchange spectrums, guided by teacher developed references or plans for learning. For each plot, a description and reflection are written by the learner (perhaps in

dialogue with a teacher), and a description of a qualifying piece of evidence or learning artefact is given.

For each plot, a learner intuitively selects a size to represent the scale of impact that learning experience represents to them – low, medium or high impact. Multiple instances are plotted within the same map, which could be a term-long project or an individual lesson, for example, producing a distribution of learning impact.

As we continue this journey, we remain committed to building new maps for learning and leadership – ones that empower all of us to explore, innovate and thrive.

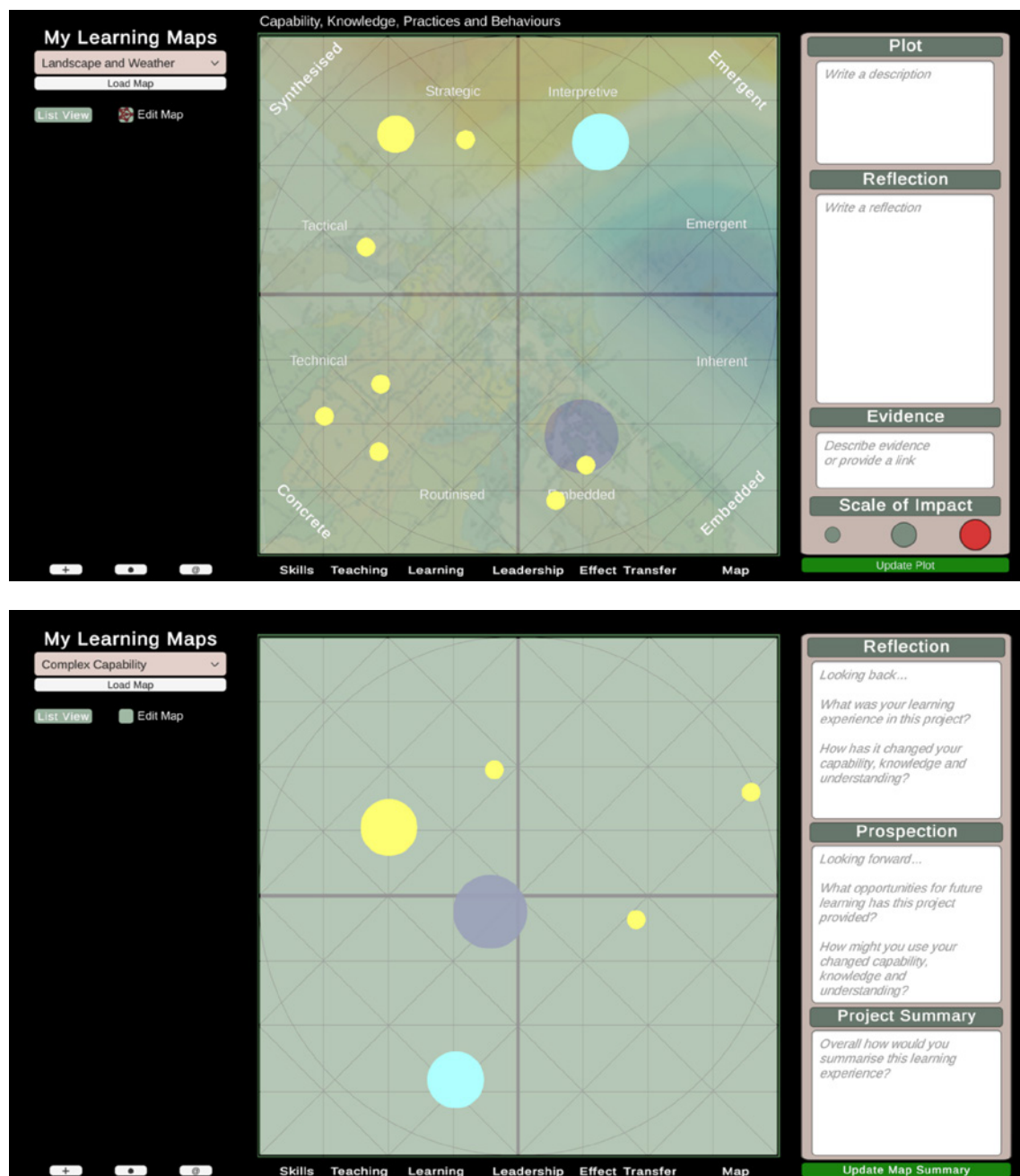
(Project School)

As a proxy for all plots on a map, a core plot is automatically generated and located on the map to represent the average x and y coordinates of all plots, also considering their impact weighting, derived from their size.

Figure 18. The learning playground



Figure 19. The learning impact mapping tool



For the core plot, a learner writes an overall summary of the whole map and its learning impact, which not only includes a reflection on the learning experience that occurred, but also a prospection considering how that learning may have impact in the future.

For more information about the Learning Impact Mapping framework, please visit: learningmap.education/framework.html

Where next?

We have transformed our educational philosophy, equipping us to create systems that foster human flourishing in a rapidly evolving world.

(Project School)

Key outcomes for schools

The Learning Impact Project has demonstrated a collective commitment to transforming education in response to global changes, with a long-term goal of cultivating systems that promote human flourishing, adaptability and lifelong learning.

1. Reimagining structures for flourishing

- Schools are redesigning systems and documentation to support **agency-driven curricula** and **student-centred learning**.
- Holistic learning, encompassing achievement, effort, service and participation, is gaining equal value in both classroom and reporting practices.

2. Creating and sustaining a shared vision

- A growing number of schools feel they are moving toward a ‘preferred future’, where **students and staff co-create learning environments** built on shared values, foundational beliefs and reflective practices.
- The process has cultivated a **philosophy of collective agency**, inspiring deeper stakeholder engagement and an evolving culture of innovation.

3. Enhancing tools and teacher capacity

- Tools like the **Mapping Tool** and **Impact Map** are enabling teachers and students to visualise, document and reflect on learning in more meaningful ways.
- Professional learning efforts focus on **metacognition, complex capabilities** and **adaptive leadership**, helping educators work confidently in unpredictable learning spaces.

4. Embedding innovation while balancing tradition

- Schools are seeking a balance between **structured frameworks** and **teacher autonomy**, ensuring consistency without stifling creativity.
- New initiatives, such as **interdisciplinary units** and **student learning showcases**, are gradually being integrated, while navigating traditional curriculum and reporting demands.

5. Recognising challenges and mitigating barriers

- Key challenges include leadership turnover, limited resources, resistance to change, and the pressures of existing educational mandates.
- Time for collaboration, ongoing professional learning and leadership support are identified as essential enablers for sustaining momentum.

6. Impact on educational philosophy

- The research has significantly deepened understanding of **change leadership, student and teacher agency, and the importance of identity, wellbeing and belonging** in learning.
- Schools are increasingly adopting **regenerative, iterative practices**, using reflective tools to make abstract concepts tangible and actionable.

Michael Bunce will continue to develop the Learning Impact Mapping Framework and mapping tool, which will be applied in a new phase of independent research during 2025. This will lead to a review of findings, and to an evaluation of the efficacy of the framework as an evaluation and recognition framework for complex holistic learning.

Follow the continuing journey here:

learningmap.education

Endnotes

1. A note on Wellbeing: In our collective work, we have viewed both Agency (Being) and Dynamic Capability (Knowing) as inclusive spectrums of experience in learning, subject to change and fluctuation relative to the individual and their context, which may have both enabling and inhibiting factors. Likewise, we propose that *Wellbeing* is reframed as the *Quality of Being*, a dynamic spectrum that recognises and can represent the diversity and variability of experience for each individual. For further discussion, see this paper's section headed A Manifesto of Being, Knowing and Valuing.
2. South Australian Certificate of Education Board. www.sace.sa.edu.au/innovating
3. discover.education.sa.gov.au/our-strategy/
4. www.learningcreates.org.au
5. www.learningcreates.org.au/wp-content/uploads/2025/03/2025_03_Notes-From-The-Field.pdf
6. learningimpact.org/advisory/
7. See also: 'Towards an education workforce dedicated to human flourishing' CSE 2024. www.learningcreates.org.au/wp-content/uploads/2024/12/2024_03_Towards-an-education-workforce-dedicated-to-human-flourishing.pdf
8. See also: 'Learning on purpose: Ten lessons in placing student agency at the heart of schools', CSE 2022. www.learningcreates.org.au/wp-content/uploads/2024/11/2022_06_Learning-on-Purpose.pdf
9. See also: 'Learning in a floating world of disciplines: Reflections on the MetaPraxis Project' CSE 2022. www.learningcreates.org.au/wp-content/uploads/2024/11/2022_07_Learning-in-a-Floating-World-of-Disciplines.pdf
10. As referred to in Aunio et al, 2010.
11. As referred to in Hannon and Mackay, 2021.
12. As referred to in Guattari 1989.
13. As referred to in Cajete, 2015.
14. 'Warm Data are contextual and relational information about complex systems. In other words, warm data involve transcontextual information about the interrelationships that integrate a complex system, as well as interwoven complex systems.' (batesoninstitute.org/warm-data-labs/)
15. www.learningcreates.org.au/wp-content/uploads/2024/11/2022_07_Learning-in-a-Floating-World-of-Disciplines.pdf

Appendix

Innovative Models of Learning Recognition Project Schools

Bethany Christian School

- Wendy Matear – Principal
- Jeremy Graetz
- Nathan Grierson
- Aaron Mabikafola
- Melissa Taylor
- Simon Traeger
- Ashleigh Squire

Mount Barker Waldorf School

- Liam Waterford – Principal
- Cathy Burnard
- Rose Duggan
- Eleanor Waterford

Pulteney Grammar School

- Greg Atterton – Principal
- Katherine Adnett
- Richard Austin
- Cameron Bachelor (previous Principal)
- Carrie Phillis
- Daniel Polkinghorne

Southern Vales Christian College

- Adam Dunt – Principal
- Jonathon Camac
- Stephen Gardner
- Jenny Nelson (previous Principal)
- Christabel Phillipson
- Joey Quiniones
- Jessica Richards
- Heidi Scriven

St John's Grammar School

- Richard Anderson – Principal
- Catherine Emmerson
- Joyanne Gardner
- Nick Raimondo

Trinity College, Gawler River

- Rick Jarman – Principal
- Natalie Bent
- Anthony Cini

Trinity College, North

- David Kolpak – Principal
- Melanie Krueger
- Katharine Malone
- Sasha Loveday
- Ian Ward

For more detail on the work of each of the schools involved please visit:

learningimpact.org/schools/

For more information about the Learning Impact Mapping framework, please visit:

learningmap.education/framework.html

To listen to a podcast in which Michael Bunce explains the Learning Impact framework, please visit:

podcasts.apple.com/au/podcast/michael-bunce-redux/id1798194701?i=1000704246776

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- Concordia College
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- Investigator College
- Pembroke School
- Southern Montessori School
- Westminster School
- Wilderness School
- Woodcroft College
- Youth Inc

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L–R:
Michael Bunce,
Charles Leadbeater,
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About the authors

Michael Bunce is an educator and interdisciplinary artist whose work is located at the intersection of learning design and innovation, interdisciplinary arts practice, and technological innovation.

Michael is a lecturer and researcher at Flinders University, and previously, course leader of the Masters in Global Learning Futures and the Masters in Sound and Music at the University of East London.

Michael has taught, presented and performed for arts and education organisations in the UK and Europe, North and South America, and Australia, as well as working as a Music Director for the National Youth Theatre, as a Creative Designer and Project Lead for the National Trust, as Senior Tutor for the Drake Music Project, and as an independent composer, music producer and interdisciplinary artist.

Since 2019, Michael has led interdisciplinary learning innovation research projects inspired by interdisciplinary arts practice, working in partnership with education and innovation experts, Charles Leadbeater and Valerie Hannon, and 30 schools in South Australia. Michael leads the Learning Impact Mapping Project (learningmap.education), an innovative approach to the holistic evaluation and recognition of learning.

Charles Leadbeater is an internationally renowned author and advisor on innovation, including to the OECD's 2030 framework. He is co-lead of System Shift which focuses on developing practical strategies to transform large-scale public systems by addressing their underlying structures, purposes and power dynamics.

Valerie Hannon is a global thought leader, inspiring systems to re-think what 'success' will mean in the 21st century, and the implications for education. Valerie is co-founder of both Innovation Unit and of the Global Education Leaders Partnership. Valerie has served as a senior adviser to the OECD's Education 2030 project.

About the paper

The authors explore findings from the AISSA project, previously shared at a development stage by Charles Leadbeater and Michael Bunce in CSE papers in 2022. They describe design pillars that have guided the project, note the partnerships involved, and comment on the work on approaches to holistic learning. Michael Bunce, principal author is joined by Valerie Hannon and Charles Leadbeater who provide commentary from their advisory perspectives. The paper also includes discussion of emerging rules-of-thumb for generative leadership, and illustrates new forms of mapping of learning in practice. The paper concludes with a number of long-term goals based on the project team's commitment to transforming education in response to global changes.

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