# BUILDING A CULTURE OF LEARNING AT SCALE

# LEARNING NETWORKS FOR SYSTEMS CHANGE

## A SCOPING PAPER
## OCTOBER 2021
## FIONA MCKENZIE

## CITATION

**McKenzie, F., 2021. Building a culture of learning at scale: learning networks for systems change. Prepared by Orange Compass for the Paul Ramsay Foundation.**

## ACKNOWLEGEMENTS

# CONTENTS

# INTRODUCTION

This scoping paper explores the question 'what would it take to build a culture of learning at scale?'. It focuses on systems-wide learning that can help to inform systems change efforts in complex contexts.

To answer this question, literature was reviewed from across diverse disciplines and the realms of education, innovation systems, systems thinking and knowledge management. This inquiry was also supported by in-depth interviews with numerous specialists from the for-purpose sector and the examination of several case studies of learning across systems. The goal was to derive common patterns to inform a 'learning for systems change' framework.

Learning for systems change is critical when working with complexity. The dynamic nature of complex adaptive systems requires an ability to continually sense and learn from the system and adapt accordingly. This is because the nature of the challenge and 'what works' to meet the challenge is continually shifting (Lowe and Plimmer, 2019). This requires an ongoing process of iterative inquiry that draws upon wisdom and insights from across the system. Such learning challenges traditional siloes of expertise and organisational boundaries (Clarke et al., 2019). Learning is not simply a nice to have. It is critical for greater impact and improved outcomes, particularly in mission-driven organisations and initiatives (Price et al., 2019).

In this paper, a 'learning networks' approach is proposed, one that draws upon individual, group and systems-wide learning to build capacity and resilience for systems change in uncertain environments. This fills a gap in the literature where the focus is largely on learning within organisations. Instead, the focus here is on what is required to support learning to occur across scales and boundaries - from the individual to system-wide.

A simple meta-framework for developing learning networks is proposed that includes high level guidance on the enabling conditions - the mindsets, relationships, processes and structures - that would enable learning networks to flourish.

# WHAT IS LEARNING?

## DEFINING LEARNING

**Before we move to any frameworks, it is important to first define what is meant by learning.**

The Cambridge Dictionary defines learning as "the activity of getting knowledge". This sounds simple enough until one begins to explore what the activity of getting knowledge entails. Like many fields of inquiry, the topic of learning has been explored through a raft of theories and frameworks. Everything from transformational learning through to experiential, organisational and adult learning theories can be found in the literature. To properly summarise these types of learning would take a book, but what can be said is that, while diverse, these frameworks typically define at least three types of approaches to the 'activity of getting knowledge':

- **Tacit learning** – which means acquiring "knowledge that is unarticulated and tied to the senses, movement skills, physical experiences, intuition, or implicit rules of thumb"

- **Explicit learning** – which means the acquisition of formalised, visible and clearly articulated knowledge, such as those from written information and formalised procedures – often designed specifically for broad scale and consistent dissemination across an organization

- **Dynamic learning** – which is the process of "learning through doing" or learning that arises from active interaction between an individual and the internal and external environment of the organization. This includes features of both explicit and tacit types of knowledge (Swift and Hwang, 2013).

In learning for systems change, the features of dynamic learning are of particular interest. In this context, creators and consumers of knowledge can be one and the same.

## DEFINING KNOWLEDGE

**Given the relationship between learning and knowledge, it is also worth defining what is meant by the term knowledge.**

In the widest sense, knowledge can mean any understanding - whether this is phrased in language as formalised, visible, clearly articulated knowledge or informal forms such as imagery in the absence of language. Knowledge can include perceptions, implicit understandings, unconscious motivations and behavioural habits. It also includes tacit knowledge - knowledge we know but cannot necessarily or easily communicate – such as the practices and traditions we inherit, the values that are implied and the judgements we may not even be aware that we make (Polanyi, 1966).

"When we ask whether some particular thing is possible we are asking about our own state of knowledge and thought" (Shackle, 1974).

Importantly, it is increasingly being realised that different types of knowledge, and different ways of knowing, all have equal validity. The knowing of someone with lived experience of a challenge is as valid and valuable as the formal knowledge contained in a journal paper or expressed by an academic. Indeed, the westernised concept of 'the expert' is increasingly being challenged in systems change work. Expertise is not always held by one person, nor is the 'expert' always the one to know best. In many First Nations cultures, it is recognised that someone may be both a teacher and a student at different times. Nobody is always one or the other.

# THE GETTING OF KNOWLEDGE

## Just as there are different types of knowledge, there are different approaches to "the activity of getting knowledge".

Knowledge is actually pretty stubborn and hard to move. In academic terms, it is what is referred to as a relatively "immobile resource". This is true for several reasons.

1.  First and foremost, knowledge is not the same as information. For knowledge to be 'gained' it has to be subject to interpretation and then integrated in to our own embedded personal knowledge system (Midgley, 2000, Breschi and Malerba, 2001). This interpretation is influenced by perspective. Most of us hold more than one perspective at any given time, but may dedicate only one perspective to any particular subject (MacDonald, 1998). Changing perspectives can require unlearning what we previously thought we knew - or letting go of a particular world view. Or, as Starbuck (1996) described it, **"often, before they can learn something new, people have to unlearn what they think they already know. That is, they may have to discover that they should no longer rely on their current beliefs and methods"** (Starbuck, 1996 p. 725).

2.  The second reason for its immobility is that knowledge transfer requires the conversion of both implicit (tacit) knowledge and explicit knowledge. Tacit knowledge is unarticulated and can require "learning through doing" rather than finding that knowledge written down (explicit) anywhere.

3.  The third reason is that genuine knowledge exchange requires a combination of capabilities that includes knowledge creation, organisation, storage, exchange and application. In particular, knowledge application is critical as it means learning is occurring, not just information transfer (Jaaron and Backhouse, 2017). Without application there is no adaptation. Application is determined by one's ability to recognise the value of new knowledge and the capability to acquire, assimilate, transform and apply it (Dooley and Gubbins, 2019, Ferreira et al., 2020). These processes and capabilities are typically referred to as knowledge management, which is distinct from learning, but it is essential the "scaffolding" for knowledge building and individual and collective wisdom (Gan and Zhu, 2007, Biloslavo, 2005).

4.  The fourth reason that the "getting of knowledge" is not easy is that knowledge is actually socially constructed and contextually dependent (Winterton et al., 2014). What this means is that knowledge doesn't exist in a vacuum. It can't just be magically transferred. Knowledge is not simply a 'product' (Ferreira et al., 2020). From a systems perspective, knowledge is both an entity and a process that combines information with experience, diverse contexts, interpretation and reflection (Balle et al., 2019).

What all of this points to is that the activity of getting knowledge is a social process. Which means learning is also a social process. It requires socially constructed processes that:

*   enable cognitive learning (related to understanding and using new concepts)

*   enable behavioural learning (related to the physical ability to act) (Winterton et al., 2014).

Learning for systems change requires more than the exchange of existing knowledge or the latest and best practices. It must involve critical reflection as well as action in an experimental context which allows for continuous learning, new application, and adaptation (Reese, 2020, Hsu and Lamb, 2020).

If learning is a socially enabled processes, then the emphasis must be on the creation of spaces for such processes to unfold.

# WHAT IS LEARNING?

## SCALES OF LEARNING

**Before we move on to how to create spaces for learning as a social process, it is worth taking a moment to remember that, just as knowledge exists at different scales, so too does learning occur at different scales.**

Consideration of these different scales of learning can be helpful in framing an understanding of learning cultures. For the purposes of this paper, levels of learning are considered at individual, group (e.g. team, organisation) and system scales.

## 1. Individual scale

When it comes to the learning of individuals, there are many theories that reflect different assumptions about how humans learn and develop understandings of complex phenomena. These range from traditional theories of learning through to more contemporary, constructivist theories. Adherence to a particular theory is often reflected in different educational paradigms. Without going in to too much detail, what can be ascertained from these approaches are some common threads. These include that individuals can pursue and construct knowledge through a range of means, ranging from tenacity and intuition through to rationalism and science (Lawrence et al., 2007). Key traits for individual learners include the ability to be (Biloslavo, 2005):

- **Flexible** - to be capable of thinking outside mainstream frameworks to solve non-routine problems

- **Reflective** - the capacity to recognise and reconsider one's own mental models

- **Adaptable** - to be aware of changes in the outside world that are going on now or will happen in the future and to be willing and prepared to deal with them.

- **Connected** - to be able to build and sustain a network of colleagues and professional acquaintances that supports knowledge creation and sharing

- **Aware** - knowing one's learning style and what, how and where to learn best

## 2. Group scale

At the group scale, the focus is on groups that "come together to learn", to quote Senge's fifth discipline (Senge, 1990). Group learning can refer to clusters such as teams or even organisational wide learning. In reality, knowledge exchange occurs at various levels of an organisation, for example: between individuals; between individuals and groups; and between groups and an organisation. Individual and group learning are linked in that the knowledge creation process is a dynamic interaction or 'generative dance' between individual and group level learning, with insights generated at one level fuelling learning at the other through socially enabled learning cycles (Biloslavo, 2005).

The organisational learning literature tends to focus on means of learning and then how learning is translated in to practice to improve an organisation's performance (Yeung et al., 1999). The reality is that the performance benefits flow in both directions. Examples of processes and methods to support group learning are many and varied. Well known examples include (Gill, 2010):

- Action learning

- Double and triple loop learning

- Generative dialogue

- Critical reflection

- Appreciative inquiry

- Continuous measurement and improvement

Organisational culture plays an important role in group learning as it can determine the kinds of knowledge sought and nurtured. Three major sub-factors of organisation culture that can influence group learning are (Biloslavo, 2005):

- Readiness for risk-taking - where risk and failures are recognised as opportunities for organisational and individual learning.

- Willingness to collaborate inside the organisation - with a clear understanding of the mutual benefit that can be achieved by a climate of openness and trust

- Outward orientation and focus - looking beyond the organisation's existing resources and processes, based on the recognition that the organisation works within a complex adaptive system beyond its control and needs to learn from context

It is important to note that, just as organisations develop learning capabilities, they also suffer from certain learning disabilities (Yeung et al., 1999). There are many barriers to a learning culture. These can include a resistance to change, the need for control, and a focus on short-term simplistic solutions (Gill, 2010).

# 3. Systems scale

At the system level, learning takes on another level of importance. The dynamic nature of complex adaptive systems requires an ability to continually sense and learn from the system and adapting accordingly. This requires an ongoing process of iterative inquiry that draws upon wisdom and insights from diverse actors across the system. As mentioned above, such learning challenges traditional expertise and organisational siloes because it requires continuous learning across existing boundaries.

While the literature has less to say about system scale learning, insights can be derived from a range of frameworks and perspectives that relate to innovation systems, knowledge networks and collaborative learning. In particular, innovation systems theory offers a lot of guidance, as it arose out of systems theory and evolutionary economics.

Innovation systems are essentially envisaged as learning platforms, where communication, knowledge management and collective learning all play important roles (Ramirez, 1995). In this context, innovation arises through interactive processes and networked systems that span organisational boundaries to draw on diverse sources of knowledge, experience and capabilities to achieve objectives (Dooley and Gubbins, 2019).

Put another way, systems scale learning is about 'collective wisdom' as defined by the capacity of 'communities' or 'networks' to cooperate intellectually in knowledge creation, innovation and invention (Gan and Zhu, 2007). The network enables shared learning and cohesive problem solving.

When it comes to learning at a systems scale, long-term orientation matters. One distinction between individual and systems scale learning is the proximity in time and place to cause and effect. Although learning can be quick for the individual, the learning process at a systems level can take much longer because the results may not manifest themselves equally or fully across the many parts of the system (Reese, 2020). This can mean the benefits of investing in systems scale learning are not always immediately apparent. And yet it is the scale and, in some senses, the slowness, of systems learning that gives it power.

"The combination of fast and slow components makes the system resilient, along with the way the differently paced parts affect each other. Fast learns, slow remembers...Fast gets all our attention, slow has all the power" (Brand, 1999).
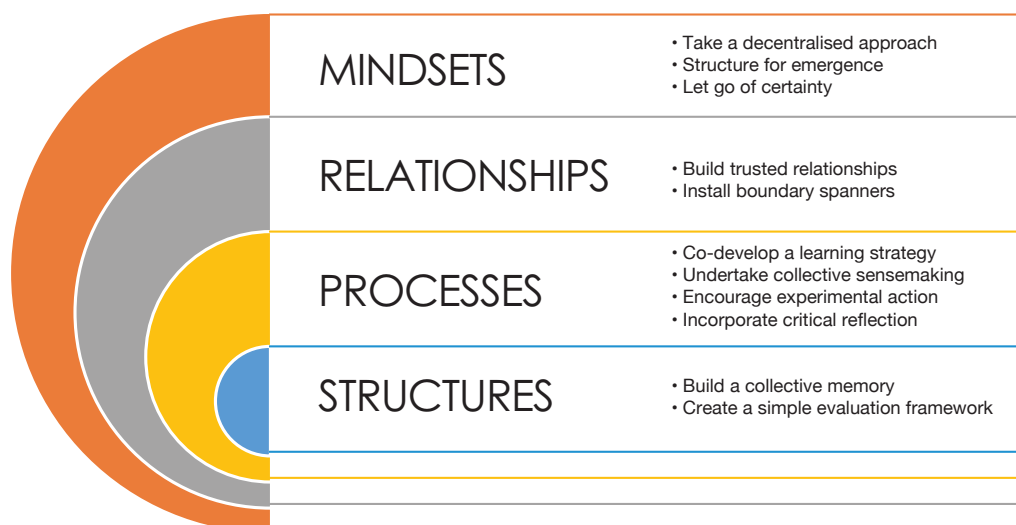
# LEARNING NETWORKS FOR SYSTEMS CHANGE

While individual and group learning are critical, here the goal is to address a gap in the literature on enabling systems scale learning. To this end, the approach below is offered as a simple framework for the building of collective wisdom at a systems scale through learning networks.

It places an emphasis on learning as a social process and captures insights from both theory and practice as well as individual, group and systems-wide learning characteristics. It blends insights from existing knowledge networks and community of practice approaches – both of which seek to encourage knowledge exchange and peer to peer learning across traditional boundaries or fault lines.

This fills a gap in the literature where the focus is largely on learning within organisations. Instead, the focus here is on what is required to support learning that builds capacity and resilience for systems change in uncertain environments and across scales and boundaries. It is offered with humility and with the recognition that the framework will benefit from further learning and iteration.

Learning is an emergent process with uncontrollable and unpredictable dimensions. A learning network approach is not about a centrally designed or controlled learning agenda. Instead, it is about providing the "scaffolding" to enable learning networks to self-organise and flourish. This scaffolding includes the building of specific capabilities, resources and infrastructure to enable learning as a social process (Milway and Saxton, 2011). The following framework provides high level guidance on necessary enabling conditions – categorised under the headings: mindsets; relationships; processes; and structures.

**MINDSETS**
- Take a decentralised approach
- Structure for emergence
- Let go of certainty

**RELATIONSHIPS**
- Build trusted relationships
- Install boundary spanners

**PROCESSES**
- Co-develop a learning strategy
- Undertake collective sensemaking
- Encourage experimental action
- Incorporate critical reflection

**STRUCTURES**
- Build a collective memory
- Create a simple evaluation framework

# MINDSETS

## 1. Take a decentralised approach

Approaching learning through the concept of a decentralised network is important as it challenges hierarchical approaches to knowledge management and specialisation. Traditional approaches frame knowledge and authority as 'cascading down' from senior specialists through to the lay person. Information access is often exclusive and limited to particular roles or disciplines, while knowledge management is typically predicated on control.

In contrast, a network is without hierarchy or rigidly defined boundaries. From a governance perspective, a network is made up of 'autonomous nodes' that share common values or interests and which are linked together in interdependent relationships (Gross Stein and Stren, 2001). Because a learning network lacks hierarchy, it has greater flexibility. All network members should be authorised to actively participate in the creation of learning and feedback processes to enable cross-functional learning, collaboration and connection (Deloitte, 2016).

Learning networks are a different way of engaging because they imply a partnership with shared accountability rather than a top-down educational experience. They are not created through an implementation plan but forged through repetitive interaction between participating members. Any learning network will have elements of emergence and self-organisation as properties. They do not need to be formally designed and organised - although a degree of 'backbone support' and a co-developed learning strategy are recommended, as described below (Carrillo-Hermosilla et al., 2009). Any support should be about creating the space for interaction between diverse system actors, rather than attempting to dictate network members actions.

In a network, the distance between network members is much more equal (compared to a hierarchy).

**A hierarchy compared to a network**
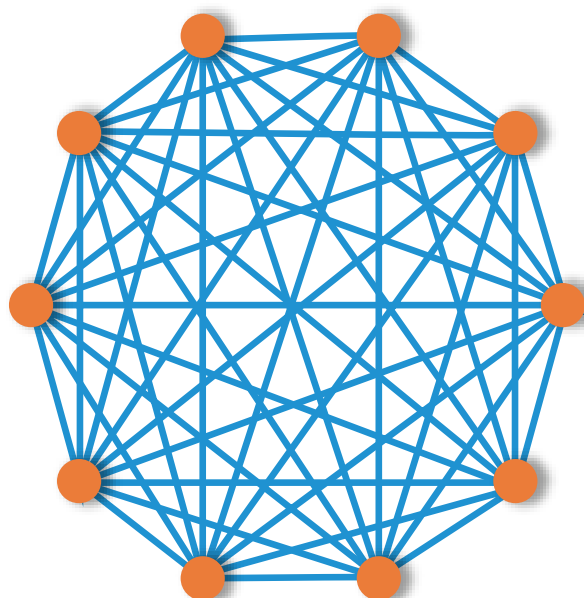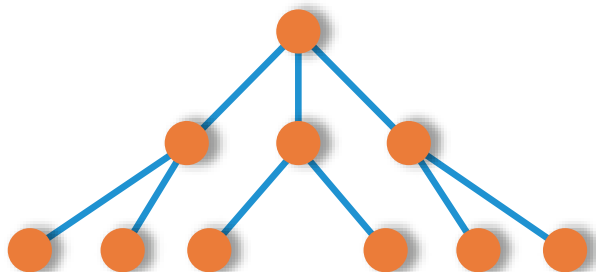
# 2. Structure for emergence

As mentioned above, learning networks should have a degree of self-organisation. Where governance and coordination is required, this should be focused on relational rather than structural governance. This means rejecting the structural perspective that views individuals as opportunistic in nature and requiring their behaviour to be controlled by structural design and explicit documentation (e.g. a contract). In contrast, the relational perspective views a network as dynamically evolving through multiple transactions; its partners as trustworthy; and on-going relational management as essential. Participating in a learning network means accepting that you are not 'in charge' in a traditional sense.

Instead, relational governance arises through social relationship exchanges, based on implicit understandings rather than formalised positions (Dooley and Gubbins, 2019). This is not to discount the importance of contractual agreements and structural routines, but to also emphasise the critical role of organic relationship practices in effective knowledge networks. This is not to say everyone will agree all the time. There will be tensions that arise in a network (such as differences between network and organisational agendas) that cannot be resolved, only balanced (Dooley and Gubbins, 2019). Governance mechanisms should be designed to help navigate such tensions and manage the complexity of the inter-organisational relationships (Dooley and Gubbins, 2019). Likewise, it will be important to ensure safe spaces and processes are created for those who bring lived experience and different voices to the table. Without the incorporation of greater diversity of perspectives and different ways of knowing, a learning network will just replicate existing system patterns instead of disrupting them.

To emphasise, governance should be primarily about facilitating the interconnections between members, not the management of knowledge, rules and procedures (Flood, 2019). As a network matures, it may be important to also engage in 'knowledge nurture'. This is a phase of "evaluate-support-re-innovate" which relates to how the network maintains and enhances advantageous knowledge exchange within the network for the mutual benefit of all partners (Dooley and Gubbins, 2019).

# 3. Let go of certainty

Learning is something we can choose to resist or embrace. Perhaps ironically, learning is enabled by a willingness to unlearn. As mentioned earlier, the process of knowledge creation and learning can depend on the capability of an individual or group to 'unlearn' current approaches in order to learn new ones (Biloslavo, 2005). This is because knowledge is dependent on interpretation (Breschi and Malerba, 2001). Interpretation is in turn influenced by perspective. Changing perspectives can require unlearning what we previously thought we knew or letting go of a particular world view. This can be uncomfortable as it can mean discovering current beliefs and methods are inadequate (Starbuck, 1996). A willingness to be uncomfortable and sit with uncertainty is critical. This will be supported by a mindset that sees learning as a strength rather than a threat. Helping a group to 'loosen its certainties' and explore new possibilities is a key role for any learning facilitator.

# RELATIONSHIPS

## 4. Build trusted relationships

Relationships are one of the most critical enablers for building a culture of learning across systems. This is because interpersonal relationships enable knowledge sharing. Knowledge sharing is an inherently social process and as such occurs within the context of social networks (Seitz and Misra, 2020). While social networks are important, it is critical to note that the social relationships referred to here do not necessarily mean a friendship network.

Transformational change can require far-reaching information and knowledge network connections. In contrast to ties to friends and family, these are looser ties that help to facilitate action that differs from established social norms, particularly in the context of resistance to change (Dowd et al., 2014). Where strong social ties can impose conformity, looser ties can enable innovation, when balanced with strong access to knowledge. However, these ties must still be based on mutual respect, shared values, perceived competency of partners and – most importantly - trust (Swift and Hwang, 2013).

One conceptualization of trust is that it includes two types: affective (emotional) trust and cognitive (rational) trust. Within an organisation, cognitive trust is more important.  Interestingly, research has found that knowledge sharing between individuals across different organisations is more reliant on affective (emotional) trust than cognitive trust (Swift and Hwang, 2013). There are a range of ways to increase trust within groups.  This can include skilled facilitation of dialogue and social processes (see for example Theory U and Art of Hosting techniques).

Not all individuals or organisations are open to knowledge sharing. There can be rational (and irrational) drivers to hoard and protect information, particularly when there is perceived competition (Balle et al., 2019). Neither is all systems scale learning altruistic.

The use of inter-organisational alliances, partnering and collaborations is an increasingly common way of learning and achieving organisational innovation objectives (Dooley and Gubbins, 2019). In particular, organisations can seek to harness external resources specifically to address gaps in internal knowledge. That being said, knowledge protection (and exploitation) is more likely in the context of market and hierarchical inter-organisational relationships, which can view knowledge more as an asset to be controlled. A network perspective differs in that knowledge is viewed as the output of the interactive social process (Dooley and Gubbins, 2019). In this context, relational capital (e.g. trust, norms and group identification) are critical to learning (Han et al., 2020). Where possible, removing any perceived or actual competition between organisations can also be helpful in increasing trust (Lowe and Plimmer, 2019).

'Psychological safety' is also critical, with theory suggesting that psychological safety is a key factor in facilitating learning behaviours such as knowledge sharing (Yin et al., 2020). Put simply, peers are more likely to share knowledge with others if they believe that they will not be rejected or embarrassed by others and that their standing will not be threatened when knowledge is shared (Yin et al., 2020). Participants will need to feel secure in challenging or changing old approaches (Jaaron and Backhouse, 2017).  This is linked to the creation of a "positive error culture" that also enables greater honesty (Lowe and Plimmer, 2019).

Some research on knowledge sharing identifies spatial proximity (nearness) to network partners as an enabler of the learning process (Dooley and Gubbins, 2019). In the innovation literature, it has been assumed that being physically close to other companies contributes to knowledge sharing. This has led to concepts such as innovation and industry clusters or precincts (Balle et al., 2019).

However, other studies have found that the degree of social interaction in a network can be a stronger predictor of cooperation across networks (including knowledge sharing) compared to spatial proximity (Han et al., 2020). In other words, low social distance (and high emotional connection) may be more critical enablers of learning than location. This is linked to trust. In a virtual world and in the age of covid-19, it is likely that social connection and 'closeness' will need to be generated in other ways that do not rely on spatial proximity.

# 5. Install boundary spanners

The functioning of learning networks is also facilitated by 'boundary spanners - key individuals who possess the ability to cross knowledge and organisational boundaries and provide ties that nurture the flow of knowledge both within the network and between the network and the larger external environment. Again, the emphasis is on enabling rather than dictating network activities. Boundary spanners should be enablers or brokers of knowledge within a network to facilitate exchange, rather than agents setting out with a predetermined agenda to invoke change (Klerkx and Leeuwis, 2008, Howells, 2006).

The value of these individuals lies not only in their ability to traverse network boundaries (both physical and knowledge based) but also in their ability to make sense of the network's dynamic complexity and navigate the tensions that influence its operation and performance (Dooley and Gubbins, 2019). There may be a need to build the capability of network members to be better at spanning boundaries and also sharing knowledge ownership (Price et al., 2019). In addition to capacity

building, boundary spanning functions can be promoted through organisational structures, decision authority, or simply cultural norms and behaviours (Price et al., 2019). It can also be promoted through embeddedness, where key intermediaries function as brokers across organisations, with knowledge sharing enabled by them being trusted and embedded within the network.

Boundary spanning also relates to communication. This is because the creation of a learning culture is aligned closely to the development of a more communicative working relationships as a source of learning (Johnston and Hawke, 2002). To maximise the use of new and existing knowledge requires a way for it to be transferred between projects and initiatives. For system scale learning, ways to communicate and share learning beyond the organisation becomes essential (Biloslavo, 2005). This requires investment in appropriate 'backbone' supports (Milway and Saxton, 2011).

# PROCESSES

## 6. Co-develop a learning strategy

Whatever the process, group learning requires a degree of trust building, alignment on knowledge needs, shared vision and commitment to implementation of learning outcomes (Milway and Saxton, 2011). This can be supported by the co-development of a learning strategy amongst network members. Having a learning strategy can help to ensure that resources and capabilities are aligned with the learning agenda of the network. The goal is not to create an implementation plan or impose top-down control, but rather the means and opportunities for network members to make decisions collaboratively. The strategy might include (Clarke et al., 2019):

- Learning goals that resonate and priority learning questions that would be meaningful to the network

- Responsibility for learning development and action, including who would organise and facilitate learning activities (ideally this would be a shared role including volunteers from across the network)

- Roles and responsibilities for capturing, distilling, applying and sharing knowledge

- The means for providing sufficient space and time for network members to engage in reflection and dialogue

Whatever the strategy, it should be emergent and evolve during the course of the network's activities. It should be a dynamic framework and should not inhibit the ability of members to reshape the agenda going forward (Gross Stein and Stren, 2001). Evidence and reflection should inform that strategy process in meaningful ways (Price et al., 2019).

As mentioned previously, as a network matures, it may be important to also engage in 'knowledge nurture'. This is a phase of evaluate-support-re-innovate which relates to how the network maintains and enhances advantageous knowledge exchange within the network for the mutual benefit of all partners (Dooley and Gubbins, 2019).

## 7. Undertake collective sensemaking

Effective learning networks should blur the boundaries between student and teacher, learner and expert - between those with knowledge and those seeking it (Gross Stein and Stren, 2001). This is because, in a learning network, networks members don't just share knowledge, they undertake knowledge discovery (Dooley and Gubbins, 2019). This discovery is underpinned by a capacity for collective sensemaking and interpretation. This is not about achieving consensus. Rather, collective sensemaking requires co-constructing meaning and collectively generating numerous possibilities and future actions (Clarke et al., 2019). It is about creating the space for multiple voices and perspectives, not just the dominant one. It is through the relationships between network members that the generation of new and diverse insights is made possible. Sensemaking approaches can be everything from 'group model' building through to using data and experiences to test assumptions and reflect on changes in understanding.

When learning for systems change, ideally sensemaking will support a deeper understanding of underlying structures, hidden relationships, interdependencies and unanticipated consequences within complex adaptive systems. It should also help members to reframe systemic challenges and broaden the 'solution space'. Learning means critical reflection about the wider system, not just its parts – noting that there needs to be an examination of these parts in combination, as well as of the nature of interactions across the system at different levels and scales.

Above all, sensemaking should involve seeking different perspectives and ways of knowing - and listening deeply. This is because systems change requires interior and exterior transformation - learning about the outside world and individual perspectives and approaches to it.

To this end, learning should result in new awareness and ways of:

- working (e.g. collaboration)

- doing (e.g. best practices)

- knowing (e.g. sensemaking)

- being (e.g. mindsets)

When it comes to sensemaking, existing models can be useful even as a simple benchmarking tool. For example, the Harwood Institute's 'Five stages of community life' has been helpful for a lot of communities seeking to understand their stage of change. Like the adage that 'all models are wrong, but some are useful', it is important to not become bound to one approach or practice. They are fuel for further learning, not a recipe.

# 8. Encourage experimental action

In learning for systems change, there should be a bias towards experimental action that can deliver feedback and learning about the system by surfacing instructive patterns, trends, deep structures and the underlying conditions of the system – such as mindsets, institutions and behaviour – the things that can hold a problem in place (McKenzie and Cabaj, 2020).

This means moving from a position of 'predict, plan and control' towards 'probe, sense and respond' (Snowden and Boone, 2007). And it requires the ability to continually sense and respond in iterative learning cycles in ways that minimise the lag between perception and response.

All humans have bounded rationality and are imperfect decision makers. We are subject to a range of 'decision traps' that can become even more pronounced in the context of uncertainty and lack of feedback (Raiffa et al., 2002). As a networked collective with diverse experiences, it is important to be alert to biases and assumptions, and to foster a willingness to surface them. Experimental actions can include:

- Surfacing and testing assumptions

- Exploring alternative hypotheses

- Seeking and analysing data from the wider system

- Generating, harvesting and interpreting rapid feedback from diverse sources

- Sensemaking to detect larger shifts in patterns and trends

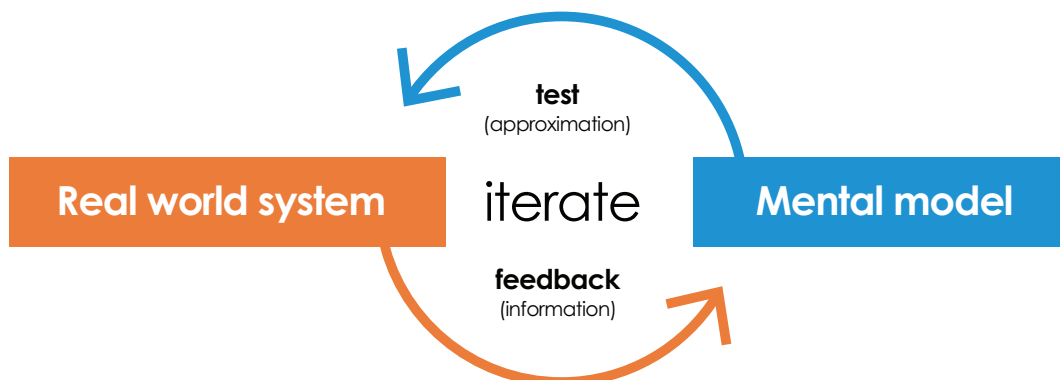Such actions must be underpinned by a willingness to be both explorative and creative.



Image modified from:
https://blog.cabreraresearch.org/systems-thinking-in-a-7-images?hs_amp=true

# PROCESSES

## 9. Incorporate critical reflection

Linked to iterative cycles of learning is the importance of ongoing reflective practice.

Reflection is a critical part of learning. Typically, this involves time or a process for an individual or a group to reflect on real problems or areas of inquiry, and generate new insights and actions based on solid analysis and shared understanding. Critical reflection can be focused on specific events and/or the unpacking of hidden assumptions and habitual ways of thinking and acting. Critical reflection is not about finding right or wrong responses, rather it is about identifying possibilities to be explored.

Critical reflection requires:

* **Generative learning** – by collectively exploring reactions to particular situations, events or scenarios, making sense of patterns and trends, and harvesting learnings for future adaptation;

* **Capacity building** – by strengthening the reflective mindset and action learning capacity of network members;

* **Transparent communication** – by surfacing differences in how a group sees, understands and responds to situations, helping to avoid miscommunication and enabling the collective to work in a more engaged and collaborative way.

Ideally, critical reflection will improve relationship strength and trust by surfacing what is happening in everyday interactions and how different behaviours might contribute to the nature and quality of these interactions.

Reflective practice can be linked to more formalised evaluation processes, or simply exist as an embedded part of the learning process. A simple 'learning log' can help by capturing a summary of learnings after each session to consolidate insights and provide a record for the network to build upon.

# STRUCTURES

## 10. Build a collective memory

While the learning network holds the knowledge, there may be circumstances where it is beneficial to create the infrastructure for the storage of key information and learnings as collective memory. The process of knowledge storage involves finding ways to convert documents, models, human insights and other artifacts into forms that make retrieval and transfer easy without losing the 'true meaning' of the knowledge.

While information technology can enable the creation of vast repositories of information, it is important that processes for knowledge capture and sharing are intuitive (Milway and Saxton, 2011). This is harder than it sounds. A 2010 survey of 116 non-profits found a significant impediment to learning was uncertainty about the most effective processes for capturing and sharing learning. This same survey found that while 98 percent of not-for-profits reported that they collected a lot of information, a third were unable to reflect on it and integrate it in a meaningful way into their work (Milway and Saxton, 2011).

Building collective memory may be defined as processes for capturing, distilling, applying and sharing knowledge, with links to appropriate technology platforms (Milway and Saxton, 2011). Technological knowledge infrastructure might relate to:

- **Technology for knowledge codification and storage** – including different types of knowledge repositories, knowledge-based decision support systems, and tools

- **Communication technology** – that supports knowledge transfer irrespective of its format, user operating system, or communication protocols

- **Collaborative technology** – which enhances person-to-person collaboration. Collaborative technology also includes knowledge maps, which are pointers to knowledge providers inside or outside an organisation (Biloslavo, 2005). This is critical in supporting network members to easily access relevant information and resources.

Whatever the knowledge infrastructure chosen; the dynamic nature of learning means it is important to constantly revisit and adapt it over time as required. And it is worth remembering that technology only becomes a true multiplier of learning when put in service of deeper person-to-person connections and exchanges (Milway and Saxton, 2011).

# STRUCTURES

## 11. Create a simple evaluation framework

To support the ongoing adaptation of a learning network, an evaluation framework with simple indicators as milestones for measuring progress could prove useful. If an evaluation framework is created, it is important that it measures not just 'outcomes' in a traditional sense (traditional evaluation) but also the degree of learning and adaptation that occurs (developmental evaluation). While each learning network should develop its own bespoke framework to fit its specific context, the following indicators may provide a useful starting point. The network could score these indicators based on a self-assessment or simple rating scale, and support this assessment with narratives or examples of how these indicators are playing out in reality.

| ENABLING CONDITION | POSSIBLE INDICATORS |
|---|---|
| **Decentralised approach** | Number of interactions independently initiated between network members |
| | Identification of (and valuing of) new sources of knowledge and diverse voices for inclusion |
| **Structuring for emergence** | Governance mechanisms (simple charter or MOU) that encourages mutual accountability as well as flexibility |
| **Letting go of certainty** | Network member willingness to sit with uncertainty and 'unlearning' |
| **Building trusted relationships** | Degree of member trust in each other |
| | Level of knowledge sharing taking place |
| **Boundary spanners** | Degree to which there are individuals present who act as 'knowledge brokers' |
| | Flow of knowledge both within the network and between the network and the larger external environment (transparent communication across boundaries) |
| **Co-developing a learning strategy** | Articulation of a shared vision for learning amongst network members |
| | Number of opportunities for network members to make decisions collaboratively |
| **Collective Sensemaking** | Level of capacity for (and instances of) collective sensemaking and interpretation |
| | Examples of learning feeding in to collectively generated future possibilities and actions |
| **Experimental action** | Instances of network members willingness to surface and test assumptions or alternative hypotheses beyond the network |
| **Critical reflection** | Sufficient space and time for network members to engage in reflection and dialogue |
| | Creation and use of feedback processes |
| **Collective Memory** | Defined roles and processes for capturing, distilling, applying and sharing knowledge |
| | Ease of knowledge retrieval and sharing |
| | Use of technology that augments codification, communication, collaboration |
| **Evaluation framework** | Development and active use of indicators to reflect on outcomes, adaptations and learnings |

# GETTING STARTED

**Creating a learning network doesn't have to take a lot of time and resources. And it might start as a simple collective of peers from across a system of interest. It could start as an informal collective who share an interest in a particular learning question.**

Over time, the degree of governance and design sophistication could increase. Or it may work to keep it simple as a loosely tied group who explore a learning question through iterative learning cycles.

To help get started, the following summarises the 11-part framework above in to simple steps.

1.  **Take a decentralised approach to learning** – by creating a learning network:

*   Invite a loose coalition of diverse actors and voices from across the system of interest, and encourage those actors to also connect with and invite in others to the network

*   Actively involve network members in the creation of learning and feedback processes

*   Create opportunities for interaction between participating members

*   Enable autonomous nodes or self-directed learning sub-groups to operate within the network.

2.  **Structure for emergence** - allowing for self-organisation while also placing an emphasis on on-going relational management as essential. This includes:

*   Designing mechanisms to help navigate tensions and manage the complexity of the cross-sector relationships

*   Ensuring safe spaces and processes are created for those who bring lived experience and different voices to the table

3.  **Let go of certainty** - by helping network members to see learning (and unlearning) as a strength rather than a threat and to loosen their grip on their own certainties

4.  **Build trusted relationships** – by creating processes to foster ties and trust across the learning network based on mutual respect, shared values, and the appreciation of competency of partners

5.  **Install boundary spanners** – by inviting 'boundary spanners' in to the network and acknowledging their role in crossing knowledge and organisational boundaries and providing ties within the network and beyond.

6.  **Co-develop a learning strategy** – by inviting network members to co-develop a learning strategy, with the means and opportunities for network members to make decisions collaboratively. The strategy might include:

*   Learning goals that resonate and priority learning questions that would be meaningful to the network

*   Responsibility for learning development and action, including who would organise and facilitate learning activities (ideally this would be a shared role including volunteers from across the network)

*   Roles and responsibilities for capturing, distilling, applying and sharing knowledge

*   The means for providing sufficient space and time for network members to engage in reflection and dialogue.

7.  **Undertake collective sensemaking** – by scheduling dedicated time and design processes for collective sensemaking – the co-constructing of meaning and collective generation of possibilities and future actions.

8.  **Encourage network members to take experimental action** - through iterative learning cycles that focus on:

• Surfacing and testing assumptions

• Exploring alternative hypotheses

• Seeking and analysing data from the wider system

• Generating, harvesting and interpreting rapid feedback from diverse sources

• Sensemaking to detect larger shifts in patterns and trends

9.  **Incorporate critical reflection** – by allowing time and designing processes for critical reflection. This might involve:

• **Generative learning** – by collectively exploring reactions to particular situations, events or scenarios, making sense of patterns and trends, and harvesting learnings for future adaptation;

• **Capacity building** – by strengthening the reflective mindset and action learning capacity of network members;

• **Transparent communication** – by surfacing differences in how a group sees, understands and responds to situations, helping to avoid miscommunication and enabling the collective to work in a more engaged and collaborative way.

10. **Build a collective memory** – by co-creating the infrastructure for the storage of key information and learnings as collective memory.

• This may include defined processes for capturing, distilling, applying and sharing knowledge, with links to appropriate technology platforms.

11. **Create a simple evaluation framework** - to support the ongoing adaptation of a learning network.

• This might include simple indicators as milestones for measuring progress.

# CONCLUSION

In an age of complexity, the ability to continually sense and learn from across systems and then adapt accordingly is critical. In this paper, a 'learning networks' approach has been proposed as one way of fostering learning at scale for systems change. The framework fills a gap by focusing on what is required to support learning to occur across scales and boundaries - from the individual to system-wide.

It is a simple meta-framework for developing learning networks that includes high level guidance on the enabling conditions - the mindsets, relationships, processes and structures - that would enable learning networks to flourish. In particular, the framework emphasises that this learning must start with relationships and trust, not books and data. Drawn from both theory and practice, it is intended as a starting point for understanding and exploring the capacities and actions required for systems-wide learning.

It is hoped that this paper is of interest to individuals and organisations who are willing to foster collaborative learning to increase outcomes and impact – learning for systems change. In the spirit of learning and adaptation, feedback and further ideas are invited on how the framework might be further enhanced.

# FURTHER READING & REFERENCES

BALLE, A. R., STEFFEN, M. O., CURADO, C. & OLIVEIRA, M. 2019. Interorganizational knowledge sharing in a science and technology park: the use of knowledge sharing mechanisms. Journal of Knowledge Management, 23, 2016-2038.

BILOSLAVO, R. 2005. Use of the knowledge management framework as a tool for innovation capability audit. International Journal of Innovation and Learning, 2.

BRAND, S. 1999. The Clock Of The Long Now: Time and Responsibility, Basic Books.

BRESCHI, S. & MALERBA, F. 2001. The Geography of Innovation and Economic Clustering: Some Introductory Notes. Industrial and Corporate Change, 10, 817-833.

CARRILLO-HERMOSILLA, J., DEL RÍO GONZÁLEZ, P. & KÖNNÖLÄ, T. 2009. Eco-Innovation: When sustainability and competitiveness shake hands, Hampshire, Palgrave Macmillan.

CLARKE, T., PRESKILL, H., STEVENSON, A. & SCHWARTZ, P. 2019. Building a Culture of Learning: Teaching a Complex Organization How to Fish. The Foundation Review, 11.

DELOITTE 2016. Global Human Capital Trends 2016. The new organization: Different by design, Deloitte University Press.

DOOLEY, L. & GUBBINS, C. 2019. Inter-organisational knowledge networks: synthesising dialectic tensions of university-industry knowledge discovery. Journal of Knowledge Management, 23, 2113-2134.

DOWD, A., MARSHALL, N., FLEMING, A., JAKKU, E., GAILLARD, E. & HOWDEN, M. 2014. The role of networks in transforming Australian agriculture Nature Climate Change, 4, 558-563.

FERREIRA, J., MUELLER, J. & PAPA, A. 2020. Strategic knowledge management: theory, practice and future challenges. Journal of Knowledge Management, 24, 121-126.

FLOOD, F. 2019. Leadership in the Remote, Freelance, and Virtual Workforce Era. In: FARAZMAND, A. (ed.) Global Encyclopedia of Public Administration, Public Policy, and Governance. Springer.

GAN, Y. & ZHU, Z. 2007. A Learning Framework for Knowledge Building and Collective Wisdom Advancement in Virtual Learning Communities. Educational Technology & Society, 10, 206-226.

GILL, S. J. 2010. Developing a learning culture in nonprofit organizations, Thousand Oaks, CA, SAGE Publications.

GROSS STEIN, J. & STREN, R. 2001. Knowledge Networks in Global Society: Pathways to Development. In: GROSS STEIN, J., STREN, R., FITZGIBBON, J. & MACLEAN, M. (eds.) Networks of knowledge: collaborative innovation in international learning. Toronto, Canada: University of Toronto Press Incorporated.

HAN, S. H., YOON, S. W. & CHAE, C. 2020. Building social capital and learning relationships through knowledge sharing: a social network approach of management students' cases. Journal of Knowledge Management, in press.

HOWELLS, J. 2006. Intermediation and the role of intermediaries in innovation. Research Policy, 35, 715-728.

HSU, S. & LAMB, P. 2020. Still in search of learning organization? Towards a radical account of The Fifth Discipline: The Art and Practice of the Learning Organization. The Learning Organization, 27, 31-41.

JAARON, A. A. M. & BACKHOUSE, C. J. 2017. Operationalising "Double-Loop" Learning in Service Organisations: A Systems Approach for Creating Knowledge. Systemic Practice and Action Research, 30, 317–337.

JOHNSTON, R. & HAWKE, G. 2002. Case studies of organisations with established learning cultures, Leabrook, SA, Australian National Training Authority.

KLERKX, L. & LEEUWIS, C. 2008. Balancing multiple interests: Embedding innovation intermediation in the agricultural knowledge infrastructure. Technovation, 28, 364-378.

LAWRENCE, D., CHRISTODOULOU, N. & WHISH, J. 2007. Designing better on-farm research in Australia using a participatory workshop process. Field Crops Research, 104, 157-164.

LOWE, T. & PLIMMER, D. 2019. Exploring the new world: Practical insights for funding, commissioning and managing in complexity. Northumbria University and Collaborate.

MCKENZIE, F. & CABAJ, M. 2020. Changing Systems, Power & Potential. A synthesis of insights from the Canberra Workshop 2-3 March 2020, Collaboration For Impact.

MIDGLEY, G. 2000. Systemic Intervention: Philosophy, Methodology and Practice, New York, Kluwer Academic.

MILWAY, K. S. & SAXTON, A. 2011. The Challenge of Organizational Learning. Stanford Social Innovation Review, Summer 2011.

POLANYI, M. 1966. The Tacit Dimension, New York, Doubleday & Co.

PRICE, K. M., REID, C. & LEAHY, S. K. 2019. Building Principle-Based Strategic Learning: Insights From Practice. The Foundation Review, 11.

RAIFFA, H., METCALFE, D. & RICHARDSON, J. 2002. Negotiation Analysis: The Science and Art of Collaborative Decision Making, Harvard University Press.

RAMIREZ, R. 1995. Understanding Farmers' Communication Networks: An Experience in the Philippines, Rome, FAO.

REESE, S. 2020. Taking the learning organization mainstream and beyond the organizational level: an interview with Peter Senge. The Learning Organization, 27, 6-16.

SEITZ, S. R. & MISRA, K. 2020. Knowledge sharing in social networks: considering the role of political skill and trust. International Journal of Organization Theory & Behavior, 23, 121-140.

SENGE, P. 1990. The Fifth Discipline: The Art & Practice of The Learning Organization, New York, Currency Doubleday.

SHACKLE, G. L. S. 1974. Decision: The Human Predicament. The Annals of the American Academy of Political and Social Science: the information revolution, 412, 1-10.

SNOWDEN, D. J. & BOONE, M. E. 2007. A Leader's Framework for Decision Making. Harvard Business Review.

STARBUCK, W. H. 1996. Unlearning ineffective or obsolete technologies. International Journal of Technology, 11, 725-737.

SWIFT, P. E. & HWANG, A. 2013. The impact of affective and cognitive trust on knowledge sharing and organizational learning. The Learning Organization, 20, 20-37.

WINTERTON, R., WARBURTON, J., CLUNE, S. & MARTIN, J. 2014. Building Community and Organisational Capacity to Enable Social Participation for Ageing Australian Rural Populations: A Resource-Based Perspective. Ageing International, 39, 163-179.

YEUNG, A. K., ULRICH, D., NASON, S. W. & VON GLINOW, M. A. 1999. Organizational Learning Capability: Generating and Generalizing Ideas with Impact, Oxford University Press.

YIN, J., MA, Z., YU, H., JIA, M. & LIAO, G. 2020. Transformational leadership and employee knowledge sharing: explore the mediating roles of psychological safety and team efficacy. Journal of Knowledge

# BUILDING A CULTURE OF LEARNING AT SCALE

## LEARNING NETWORKS FOR SYSTEMS CHANGE

A SCOPING PAPER
OCTOBER 2021

FIONA MCKENZIE