

## Bridging the research practice gap

### Inquiry Learning Networks and Spiral of Inquiry

### Brief No. 2

The spiral of inquiry for equity and quality was developed through collaboration between Helen Timperley in New Zealand and Judy Halbert and Linda Kaser from British Columbia, Canada. This article provides a short background into key ideas informing inquiry learning networks and the spiral of inquiry as well as a brief description of the six key phases of this professional inquiry framework.

## CRITICAL POINTS

- 1** The spiral of inquiry is rooted in moral purpose and is informed by research on mindset, assessment, social emotional learning and meta-cognition.
- 2** Effective teacher professional learning in high performing systems is inquiry based, collaborative, professionally led, linked and coherent, and sustained over time.
- 3** What distinguishes spiral of inquiry from other forms of teacher action research is its constant emphasis on understanding what is going on for learners from an evidence informed perspective.
- 4** The learning principles from the OECD, and First Peoples' Principles of Learning provide a set of lenses for understanding the experience of learners.

### Introduction

We (Kaser and Halbert) have been developing and leading inquiry learning networks in British Columbia for several years. We have actively searched for research studies and practice evidence to inform our work. Over time these ideas have been distilled into the spiral of inquiry framework which forms the basis of practice within the network whilst maintaining focus on quality and equity across diverse settings.

The spiral of inquiry provides an evidence informed and disciplined approach to professional inquiry that is used to change outcomes for learners in a wide range of settings. It provides a ground-breaking framework focusing on changing the experience of learners through the development of new learning and new actions.

Recent research suggests that the spiral of inquiry is one of the most impactful examples of professional learning in the world, consistently delivering demonstrable outcomes for learners (Jensen, Sonnemann, Roberts-Hull, & Hunter, 2016).



## Seven foundational elements of the spiral of inquiry and inquiry learning networks

### Moral purpose

Having a clear, important and shared purpose for inquiry learning networks is vital, as it creates momentum and motivation. The concept of HARD goals (heartfelt, animated, required and difficult) provides a productive way of thinking about whether or not the direction established for inquiry learning communities will capture the hearts and imaginations of educators (Murphy, 2011).

Teacher time is a precious commodity and resources are scarce. Providing time during the day for educators to collaborate is key to successful learning communities. Yet, simply providing time does not mean that practices will change or that outcomes will improve.

### Growth mindset

Carol Dweck's (2006) research on the importance of a growth mindset in learning and learner outcomes has had a significant influence on network thinking. An essential part of the network approach is to enact the research evidence about the possible changes when learners have access to new strategies and appropriate support — and put forth more effort.

### Assessment for learning

From the outset, one of the key goals across inquiry learning networks has been the development of learner metacognition and agency. A deep understanding of both the intent and the strategies of assessment for learning provides the bridge from teacher directed learning to student agency. The work of assessment researchers and practitioners such as Dylan Wiliam and Siobhan Leahy (2015), Lorna Earl (2013) and Ron Berger (2014), has been particularly helpful in providing teachers with specific evidence-informed strategies and tools to make the shifts required.

### A focus on learning and learning principles

The OECD publication, *The Nature of Learning* (2010) contains important findings from a number of respected international researchers about what makes a difference to students and their learning. The learning principles identified in this publication provide a lens for understanding the experiences of learners, helping identify what needs to be strengthened, and focusing improvement and innovation initiatives in areas that have a strong evidence base. The expectation from the researchers associated with the OECD initiative is that a

learning environment cannot be considered innovative unless all seven of the following principles are evident in the experiences of all learners:

1. Learners and their learning are central. Learning is engaging and learners are gaining strength in self-regulation and metacognition.
2. Learning is social and often collaborative through well-organised cooperative strategies.
3. Learning is highly attuned to learners' motivations and the importance of emotions.
4. Learning is sensitive to individual differences including prior knowledge.
5. Learning is demanding for each learner — without excessive overload.
6. Assessments are consistent with learning aims with strong emphasis on formative feedback.
7. Horizontal connectedness is promoted across learning activities and subjects, both in and out of school.

### First Peoples' Principles of Learning

Besides international research on learning, the work in inquiry learning networks is equally and significantly influenced and informed by a growing understanding of the importance of all learners having the capacity to develop another worldview. In the case of British Columbia, a deep understanding of, and respect for, indigenous ways of knowing is fundamental to equity, quality and system transformation.

From a First People's perspective, learning is seen as holistic, reflexive, reflective, experiential and relational. Learning needs to be focused on connectedness, reciprocal relationships and a sense of place. An indigenous worldview acknowledges that learning involves recognising the consequences of one's actions, valuing patience and time, and requires exploration of one's personal identity.

A practical implication for teachers incorporating the First Peoples' Principles of Learning into their practices is the creation of greater connections to the broader community. This mirrors the learning principle of building horizontal connections as highlighted in *The Nature of Learning*. It also suggests the need for educators to make explicit what is being learned in terms of how it influences the self, the family, the community and the land<sup>1</sup>.

### Social emotional learning, self-regulation and metacognition – in four key questions

An additional foundation for the inquiry learning networks in British Columbia consists of four key questions that are



drawn from research on social emotional learning and self-regulation. These questions are:

- Can you name two people in this school or learning setting who believe that you will be a success in life? How do they let you know?
- What are you learning and why is it important? Where are you going with your learning?
- How are you doing with your learning?
- What are your next steps?

While these questions may seem deceptively simple, when used as a regular routine, they appear to have a profound effect on increasing learner's sense of belonging and self-regulation. The first question quickly helps educators identify learners who do not feel connected to adults within the school — propelling them to immediate action.

The cognitive questions help move educator thinking from a preoccupation with content coverage to a focus on what learners are actually experiencing. Student answers also provide timely evidence about the extent to which young people are developing greater agency as learners.

## Teacher professional learning

The final foundational idea for the inquiry learning networks involves ensuring that designs for teacher professional learning draw on current research and practice evidence. While the ideal that teacher professional learning should be based on the identified learning needs of students seems straightforward, this has not been reflected in many professional learning programs — especially those that promise dramatic improvements.

In the *Beyond PD: Teacher Professional Learning in High Performing Systems* report, Jensen, Sonnemann, Roberts-Hull and Hunter (2016) and the Learning First research group examined teacher professional learning in four high performing systems: Shanghai, Singapore, Hong Kong and British Columbia. Although the context of British Columbia is quite different from the other jurisdictions, the themes that were identified across systems have validated and reinforced the approach of the inquiry learning networks.

Jensen and colleagues note that teacher professional learning in these high performing systems is:

- Inquiry based
- Collaborative
- Linked and coherent
- Professionally led
- Sustained and takes place over time.

The sustained emphasis on changing outcomes and experiences for learners through collaborative inquiry has provided a rich set of case studies. These have helped to inform the specific approach to inquiry that is now being applied in schools and districts across British Columbia and the Yukon as well as in England, New Zealand, Scotland and Australia<sup>ii</sup>.

## Spiral of inquiry

In shaping and developing the spiral of inquiry, we have explored a variety of inquiry models designed to create equity and quality outcomes for all learners. We have learned from the challenges and successes of inquiry based initiatives and networks in varying global educational contexts.

Our partnership with Helen Timperley (University of Auckland) has been central to our learning and understanding of the importance of collaborative inquiry. The power of a disciplined approach to inquiry is articulated in the findings of her research study with Judy Parr focusing on the impact of the Literacy Professional Development Program in New Zealand<sup>iii</sup>.

This study (2009) found that if teachers applied what they had learned in systematic ways during the literacy program, this would be enough to support similar gains in achievement for new cohorts of students. If applied as a whole school approach, however, schools would dramatically improve on their achievement gains over time — especially for their most vulnerable learners, when they:

- Engage in an iterative cycle of inquiry
- Re-focus on persistent issues of underachievement
- Invest in continued knowledge building, and
- Establish coherence in learning and teaching practices across curriculum areas.

Building on this New Zealand research and case studies of schools in British Columbia, the partnership with Helen Timperley has led to the development of the spiral of inquiry. The spiral of inquiry is different from other forms of teacher action research in that it:

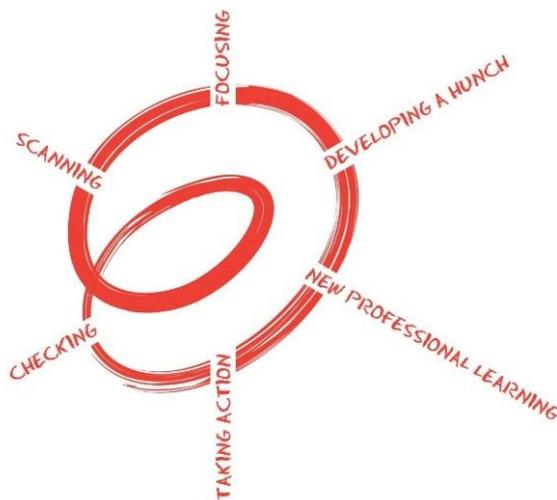
- Requires a collaborative approach
- Starts with a deep understanding of learning and the experiences of learners
- Is specifically designed to change outcomes for learners in important areas
- Uses terminologies that respect teacher judgment, their lived experiences and their language



- Is built on the best of what we currently know from the recent evidence on powerful professional learning.

The spiral of inquiry involves six key stages of:

- Scanning
- Focusing
- Developing a hunch
- Engaging in new professional learning
- Taking new action
- Checking that a big enough difference has been made, and then re-engaging to consider what is next.



Although the stages in the spiral overlap, paying attention to each aspect is critical in achieving the greatest benefit for all learners. At every stage, inquiry teams ask themselves three important questions:

- **What's going on for our learners?**
- **How do we know?** and
- **Why does this matter?**

The first two questions prompt educators to constantly check that learners are at the heart of what they do, and that all decisions are based on thoughtful evidence from direct observations as well as formal evidence sources. The third question helps to ground teams in the importance of the direction they are pursuing.

### **Scanning: What's going on for our learners?**

Many people within a school community have opinions about what is going on for learners. Scanning is all about collecting a variety of rich evidence about what is *really* taking place. In a reasonable amount of time — generally no more than two months, inquiry teams gather and consider useful information in key areas of learning.

These areas may include literacy, personal identity, mathematics, learner well-being, creativity, scientific understandings, science and technology pedagogical practice, the arts and a deeper appreciation of other cultures. Understanding the degree to which students feel emotionally connected to adults in their learning environment and the degree to which they fully understand the key learning goals is critically important in scanning.

A thorough scanning also draws on the learning principles from the OECD and from a First Peoples' perspective to determine the extent to which learners' experiences are reflective of what is known and valued about learning.

### **Focusing: where are we going to place our attention?**

In the focusing phase, inquiry teams ask themselves: *Where are we going to concentrate our professional energies so that we can change the experiences and results for our learners?*

Sometimes, the scanning process reveals a puzzling picture — one that requires deeper investigation. For example, an initial scan may identify that some learners are deeply engaged in their learning while others are not. Some learners may express a great deal of interest in particular content areas while others say they are not engaged. Some learners make good progress in developing key competencies while others are stalled. Some learners feel well supported by the adults in their school while others do not.

Gaining greater clarity about the situation for learners by hearing from them directly before deciding on a course of action is at the heart of the focusing phase.

Unlike the scanning process, which requires a broad perspective and a willingness to listen to the views of learners and their families, the focusing stage requires deciding amongst competing priorities. Selecting one or two areas on which to focus means that inquiry teams need to consider the strongest possible new areas of learning — ones that will help learners make big leaps forward.

### **Developing a hunch: what's leading to this situation and how are we contributing to it?**

The phases in the spiral of inquiry framework often overlap. Using the framework is not a linear process. Evidence from one stage informs the next. Surprises are inevitable and welcomed. They open up the opportunity for reflection and new understandings. The hunch stage asks educators to probe 'what's leading to this situation?' and — every bit as important — 'how are we contributing to it?'



Everyone generally has hunches about why things are the way they are. Sometimes these views are passionately held. Getting them on the table in a way that they can be discussed and tested is fundamental to moving forward together.

### ***New professional learning: where and how will we learn more about what to do?***

All phases of the spiral of inquiry involve learning, but at this stage educators engage with the specific task of carefully designing professional learning. At this point, inquiry teams identify *how and where can we learn more about what to do?*

The professional learning focus flows organically from testing out the hunches about what is leading to the situation for learners. Both internal and external expertise may be required depending on the context of the school and the current capacity of the educators in the area of focus. New learning also requires attention being paid to both research evidence and powerful practices.

The evidence about professional learning and improved learner outcomes in significant areas indicates that a year of focused effort is required. One year is good, two years is much better, and three may be required.

### ***Taking action: what will we do differently?***

This is the stage in the spiral of inquiry where new learning leads to new practices. Once teams have the evidence and the knowledge about the practices that will help learners, it is time to take action by jumping across the knowing–doing gap. At this stage, the inquiry team makes sure that all those involved are supported to try out the new practices.

Teams need to make sure that there is plenty of opportunity for dialogue, observation and reflection. Sometimes second, third and fourth tries are required without fear of judgment or failure. Changing practice can feel risky for many teachers and inquiry teams need to find ways to make the risk-taking less risky.

### ***Checking: have we made enough of a difference?***

The purpose of the spiral of inquiry is to make a difference in obtaining valued outcomes for learners. Changes in practice do not always lead to substantive improvement or useful innovations and it is in this part of the spiral that inquiry teams ask whether they are making *enough* of a difference. The key is to have general agreement ahead of time (ideally at the scanning stage) about what evidence to look for as well as what constitutes enough of a difference.

## Implications

We have been encouraged by the steady improvement of results in British Columbia<sup>iv</sup> and the growing interest in the ways in which inquiry learning networks are contributing to system change. We are committed to ensuring that all learners in our schools and classrooms leave more curious and intellectually engaged than when they arrived. We also believe that it is difficult for young people to grow in curiosity if they are not supported by adults who themselves are passionate about learning. The spiral of inquiry for equity and quality provides a disciplined framework for professional learning and one that we hope contributes to a lifetime of professional curiosity.

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They have served as teachers, principals, district leaders and policy advisors with the Ministry of Education in the areas of innovative leadership, district change, rural education, literacy and Aboriginal education. They are Canadian representatives to the OECD international research program on Innovative Learning Environments.

They have worked extensively with leadership groups in British Columbia as well as in Australia, New Zealand and England. They are deeply committed to achieving equity and quality for all learners.

Linda and Judy co-authored *Spirals of Inquiry* (2013), *Leadership Mindsets: Innovation and Learning in the Transformation of Schools* (2009) and with Helen Timperley, *A Framework for Transforming Learning in Schools: Innovation and the Spiral of Inquiry* (2014).

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<sup>i</sup> For background information and suggestions on how to incorporate First Peoples Principles of Learning into all learning settings please see this blog created by JoAnne Chrona.

<https://firstpeoplesprinciplesoflearning.wordpress.com>

<sup>ii</sup> See for example

<http://www.educationaleaders.govt.nz/Pedagogy-and-assessment/Evidence-based-leadership/Data-gathering->

[and-analysis/The-spiral-of-inquiry](#) and [http://www.wholeeducation.org/pages/overview/peoples-stories/764,0/narrowing\\_the\\_gap\\_through\\_collaborative\\_enquiry.html](http://www.wholeeducation.org/pages/overview/peoples-stories/764,0/narrowing_the_gap_through_collaborative_enquiry.html)

<sup>iii</sup> [www.literacyonline.tki.org.nz](http://www.literacyonline.tki.org.nz)

<sup>iv</sup> See

<http://www.conferenceboard.ca/hcp/details/education.aspx>