

Building Professional Capability in Schooling Improvement

Helen Timperley

Professor of Education

Faculty of Education, The University of Auckland

Building professional capability is fundamental to schooling improvement. No-one argues with this. Similarly, there is no argument that improvement efforts should be directed to better outcomes for the learners the system is designed to serve. Where the arguments start is how the following questions are answered.

- Who within the system should be the focus of initiatives to improve?
- Who should be making the decisions about what to do when?
- What is the starting point?
- What is important to focus on?
- What is a good design?
- Where does evidence and accountability fit?

In the remainder of this paper I will outline answers from research into schooling improvement initiatives that have made a significant difference to outcomes for students. I am drawing on a range of research showing high and sustained gains for students in primary and secondary schools (Lai, McNaughton, Timperley & Hsiao, 2009; Timperley & Parr, 2009; 2010). By way of illustration, one of the most effective large scale initiatives involved 300 primary schools with approximately 100 schools in each of three cohorts. Each cohort showed repeated patterns of improvement, particularly for the lowest achieving students. After taking into account the average expected gain, the average effect size for the final cohort as a whole was 0.44 for reading and .88 for writing using the assessment tools for teaching and learning. This equates to a rate of progress 1.85 times greater than usual for students in schools with a reading focus, and 3.2 times the usual rate for those in writing schools. The rate of progress for those students beginning in the lowest 20% was even larger, with an effect size of 1.13 for reading, and 2.07 for writing (Timperley, Parr & Meissel, 2010). These gains equate to progress of 3.2 times expectation for the lowest 20% of students for reading, and 6.2 times expectation of students for writing. The effect sizes were calculated using Cohen's *d* with Hedge's correction. Moreover, a follow-up study of a sample of schools in the first cohort found that fourteen of the sixteen participating schools either maintained the rate of gain or exceeded it with new groups of students (O'Connell, 2009).

Now to the answers to the questions.

Who should be the focus?

Whether in conference papers, research articles, the statements of policy makers, or interviews with school leaders and teachers, the answer to this question is nearly always, 'Everyone but me'. Policy makers see their job as developing the overall plan for everyone else to implement. Once the plan is developed, the pieces are put in place in the hope that those further down the system levels take notice and do something different. Alternatively, it might be researchers who identify problems and solutions for practitioners. School leaders

want policies within which they can work, with the human and material resources to do so. If they had those, the problems they experience would disappear. Teachers come away from professional development sessions wishing that those designing them would make them more applicable to the ever-increasing challenges they face every day in their classrooms.

The answer to this question of focus should, of course, be, 'Everyone including me'. In the successful literacy initiative I referred to above, those involved at all levels of the system focused on improving literacy outcomes, then deliberately constructed integrated and connected inquiry cycles where everyone from policy makers to students understood the part they needed to play in the improvement effort (Timperley & Parr, 2009).

Who should be making the decisions?

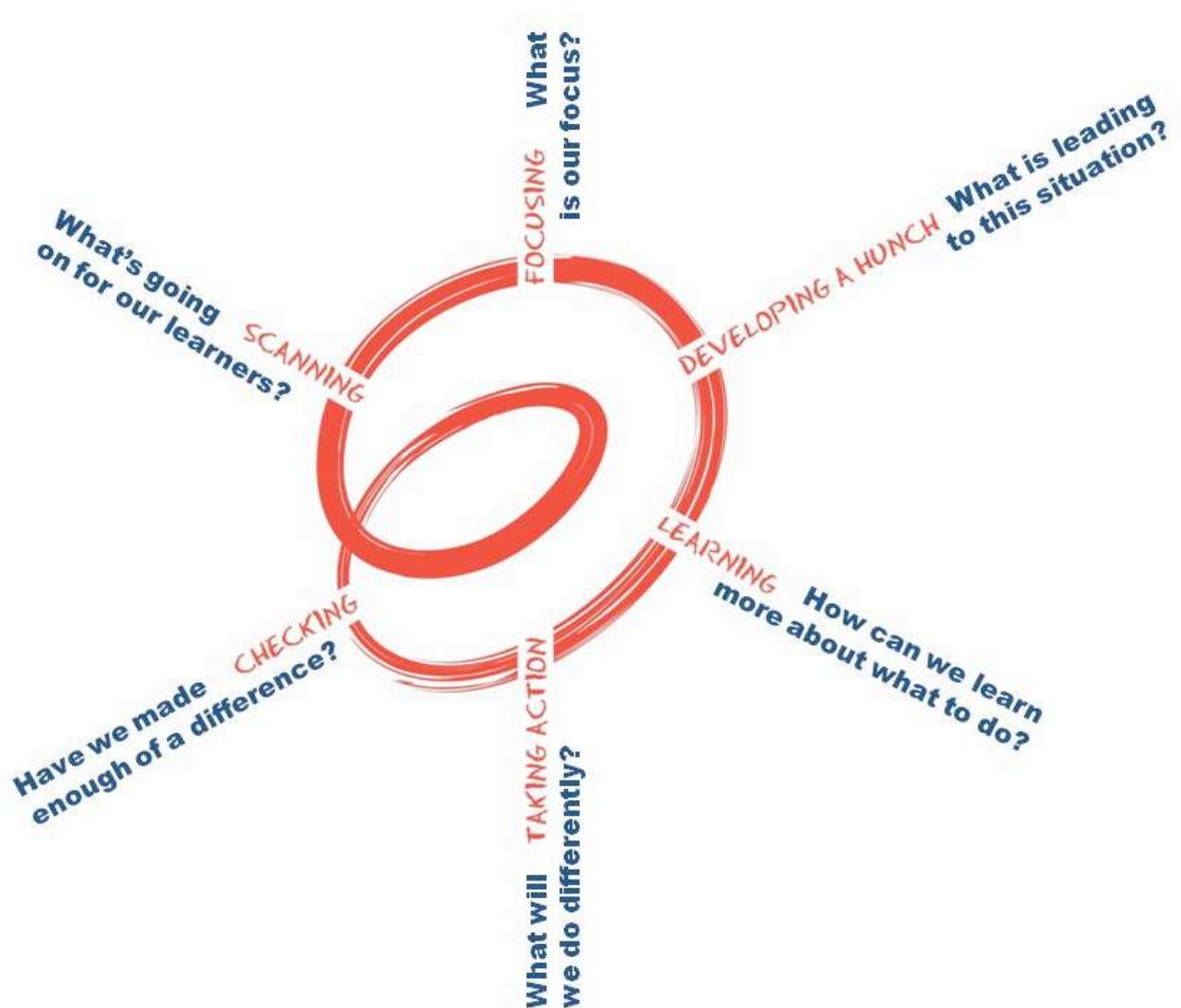
School improvement efforts are often described as 'top-down' or 'bottom-up'. Top down involves someone at a higher level of the system (e.g. a department leader) deciding what needs to change and how others lower in the system need to change it. Top down approaches achieve gains in systems that have a command and control ethos. This does not apply to either New Zealand or Sweden. Both our systems rely primarily on persuasion with occasional regulation or legislation.

However, a 'top-down' approach typically achieves slightly more effective results than 'bottom-up' where the system level of focus (e.g. teachers) decide how they should improve (Rowan, 2009). The problem with bottom-up approaches is that those who want to improve usually do not know how to do so, they would have already taken action. I consider both approaches are flawed.

The approach in which I have been involved is one that considers schooling improvement through the lens of designing for inquiry to make a difference and I have been working on with Drs Linda Kaser and Judy Halbert in Canada. In this approach, all layers of the system develop inquiry stances that cross over between layers in ways that promote self-and co-regulated learning. They hold each other to account for doing their part. Together they inquire collaboratively into what is happening for those learners for whom they have responsibility, identify a focus for improvement and work out what is leading to what, decide on the professional learning focus, and take steps to change. Most importantly, all are responsible for checking if the actions they have taken have made enough of a difference. These spirals of inquiry for equity and quality are illustrated in Figure 1.

Figure 1.

Spirals of Inquiry for Equity and Quality (Timperley, Kaser & Halbert, 2012)



The spiral can be used at every system layer from policy makers, teaching professionals to the learners themselves. In order to illustrate what it means in practice, I will describe it from a school leader's perspective in some detail. This illustration is followed by a brief summary of how it can be applied to a student learner.

Scanning

At a school leadership level, scanning requires the gathering of evidence across a number of important areas of outcomes that are valued for learners. Scanning is important because it helps leaders and teachers to get a handle on the health of the school from the perspective of those the system is designed to serve. Without this wider view, professional learning foci are likely to be informed by readily available test scores that do not tell the whole picture.

Scanning helps leaders and teachers identify where they should focus their future learning in an evidence-informed way, rather than working from perceptions or assumptions of what the issues might be for learners. The process starts to create the motivation and energy for leaders and teachers to engage further.

Focusing

Scanning will typically identify too many areas to form a manageable schooling improvement focus, so the next circle needs to identify what areas to focus on. Focusing makes serious action possible. If more than one or two areas are selected, teachers become overwhelmed with multiple demands and nothing changes. The focusing question asks, "Given the patterns in the information from scanning, what is manageable and is likely to be effective in achieving real change. An important part of focusing involves developing clear goals and targets. Goals and targets that are challenging but achievable motivate effort.

Developing a Hunch

Phases often run into one another and the circles should not be taken as lock-step stages. Evidence from one informs the next. Surprises are inevitable and in many ways hunches about what might be leading to what occur throughout. Hunches guide scanning. They guide focusing. They also guide future action which is why there is a specific phase for developing hunches to answer the question "What is leading to this situation?"

Before rushing into decisions about an initiative or intervention, it is important to take time to identify what sits underneath the information from scanning and focusing so the intervention of choice addresses the deeper issues. If literacy results drop off at secondary school level, for example, there are many possible explanations. Two alternatives to explore might be: Are the primary schools teaching literacy in ways that adequately prepare students for the demands of subject-specific literacy at secondary school? Alternatively, do secondary teachers expect their learners to read and write intellectually demanding material so the learners have sufficient opportunities to improve their literacy? The answers to these questions lead to very different interventions.

We referred to this process as one of "developing a hunch" because it is rare to be able to identify definitive causes. Education is more complex than this. However, hunches can be discussed, unpacked and tested in ways that can lead to more sophisticated hunches.

Learning

The learning phase asks "What do we need to learn and how can we learn it?" When hunches are seriously investigated with those who need to change their practice to make a difference, the purpose and focus of learning becomes obvious. Typically, there is no need to 'sell' it to students, teachers, or leaders because the purpose is clear and learning is designed to solve a particular issue they have identified in the earlier phases.

Learning new knowledge and skills is fundamental to creating the kinds of change needed to make a difference to the educational experiences of young people. If teachers already knew how to make the needed changes they would be doing so. Changing in deeply informed ways takes time, must be challenging and take place in a supportive environment.

Taking Action

In reality, if the earlier phase of learning is undertaken over the extended length of time usually needed, then taking action is an integral part of learning. Asking "What will we do differently?" is built into all learning engagements. If earlier phases have identified an area of focus that teachers care about, then leaders will have difficulty stopping them doing something different. Teachers learn as much through supported trialling of new ideas in

practice as they do from more formal professional development. What is important is that the trialling is informed by a deep understanding of why new practices are more effective than what they did before.

However, it is important for leaders to check that something different is happening in classrooms because assumptions can be inaccurate. Under these circumstances, inquiry becomes an end in itself, rather than inquiry for improving outcomes for learners. We have called this spiral one of inquiry, learning and *action* for good reason.

Checking

The whole purpose for designing inquiry is to make a substantive difference to outcomes that are valued for learners. The checking question asks, "Have we made **enough** of a difference?" What constitutes enough needs to be decided in the early phases and focused on tough challenges, not just the easy ones.

Change does not always equal improvement. Educational issues are complex and no-one's best efforts to do something about them are uniformly successful. If they were, we would not have the persistent challenges of quality and equity pervading our education systems. It is only through careful checking that the effectiveness of efforts to make enough of a difference to learner outcomes can be determined. Usually success is mixed. Some things improve, others don't. The outcomes of the checking process leads to the next phase of the spiral.

An inquiry, learning and action spiral for learners

Schooling improvement initiatives are designed to benefit learners. If they are not resulting in fairly immediate benefit, then they need to be re-designed. Recent research on formative assessment (William, 2010) shows that substantial benefit can be gained by involving learners directly in identifying what is going on for them (scanning and focusing), and for them to take greater control of their own learning (developing hunches, learning etc). The voice of learners needs to be heard throughout the spiral, to help schools and systems sharpen their understanding about what is going on, what areas are likely to be of greatest benefit, and what improvements have resulted.

The cycle can also refer to an individual learner. A student in a mathematics class, for example, is constantly scanning across social, emotional and learning areas. They make very active decisions about what they will focus on and develop hunches about what is leading to what and what they need to learn. As any secondary teacher will attest, these decisions do not always promote their intellectual or academic engagement.

Engaging in the inquiry spiral promotes self- and co-regulated learning and self-control. The importance of these processes in influencing academic outcomes is now well documented (Lucas & Claxton, 2010; Aamodt & Wong, 2011). By providing learners with a structure and working with them to engage in a systematic spiral of inquiry, their decision-making processes are more explicit, and can be weighed up for the positive and negative outcomes.

The remaining Questions

The remaining questions posed as points of argument at the beginning of this paper are largely taken care of through the inquiry, learning and action spiral. The starting point is scanning, it is important to focus on the high leverage, but manageable change possibilities,

professional learning is designed to address the issues identified through the inquiry process.

The question not addressed is where does evidence and accountability fit? The importance of evidence is reflected in the 'How do we know?' question in the centre of the spiral. It applies to all phases. Without carefully designed and collected evidence, the spiral can become the worst of the reflection processes that have no impact on outcomes for learners. In the scanning, focusing and checking phases, evidence is focused on what is happening for learners. In the developing a hunch, learning and taking action phases, evidence about learners is combined with evidence about professional practice and from research about what is most likely to work under particular circumstances.

Accountability should be focused on building widespread capability (Fullan, 2011) at all levels and enough to be making a difference. Each level of the system needs to be accountable to other levels for systematically learning how to make a difference. No-one should be exempt from accountability in public education systems or it would be a case of anything goes. To achieve the systems lift, however, accountability must be framed in terms of building professional capability in schooling improvement.

References

- Aamodt, S. & Wong, S. (2011). *Welcome to your child's brain: From utero to uni*. Oxford: One World.
- Fullan, M. (2011). *Choosing the wrong drivers for whole system reform*. Seminar Series Paper No. 204. Centre for Strategic Education.
- Lai, M., McNaughton, S., Timperley, H. & Hsiao, S. (2009). 'Sustaining Continued Acceleration in Reading Comprehension Achievement Following an Intervention' *Educational Assessment, Evaluation and Accountability*, 1(1), 81-100.
- Lucas, W., & Claxton, G. (2010). *New Kinds of Smart*. Berkshire, England: Open University Press.
- O'Connell, P. (2009). Is sustainability of schooling improvement an article of faith or can it be deliberately crafted? Unpublished PhD thesis, The University of Auckland.
- Rowan, B., Correnti, R., Miller, R., & Camburn, E. (2009) School Improvement by Design. Consortium for Policy Research in Education. www.cpre.org.
- Timperley, H., Kaser, L., & Halbert, J. (unpublished). *Designing for Professional Inquiry*.
- Timperley, H.S. (2011a) *Realizing the Power of Professional Learning*. London: Open University Press.
- Timperley, H.S. (2011b). Knowledge and the leadership of learning. *Leadership and Policy in Schools*.10, 1-26.
- Timperley, H., Parr, J., & Meissel, C. (2010). Making a Difference to Student Achievement in Literacy: Final Research Report on the Literacy Professional Development Project. Report to Learning Media, Wellington.

- Timperley, H.S. & Parr, J.M. (2005). Theory competition and the process of change. *Journal of Educational Change*, 6(3), 227-252, 2005.
- Timperley, H. & Parr, J. (2009). Chain of Influence from Policy to Practice in the New Zealand Literacy Strategy' *Research Papers in Education*, 24(2), 135-154, 2009.
- Timperley, H., Parr, J., & Meissel, C. (2010). Making a Difference to Student Achievement in Literacy: Final Research Report on the Literacy Professional Development Project. Report to Learning Media, Wellington.
- William, D. (2010). The role of formative assessment in effective learning environments. In H. Dumont, D. Istance & F. Benavides. *The Nature of Learning*. OECD.