

## **Using evidence, learning and the role of professional learning communities**

*Louise Stoll*

### **Chapter overview**

Being able to collaborate to make the best use of evidence to enhance teacher practice is fundamental to successful teaching today. In this chapter, I first describe three evidence sources: student and other data; teacher research or enquiry projects; and external research findings. Next, I consider different perspectives on the social learning that takes place when teachers engage with evidence. I argue that professional learning communities provide the ideal home for evidence-informed practice, and that they are what bring evidence to life. I offer four reasons for this. The chapter concludes with a set of suggestions for leadership of evidence-rich professional learning communities.

### **Using evidence, learning and the role of professional learning communities**

Around the world, teacher professionalism is seen as crucial to improving school quality. The authors of an OECD report called for significant change in teachers' practice and development, arguing that education today demands "high-level knowledge workers who constantly advance their own professional knowledge as well as that of their profession" (Istance, Vincent-Lancrin, Schleicher *et al* 2012: 36). Being able to make the best use of evidence to enhance teacher practice is fundamental to realising this ideal. But that's not all: an expectation of collective responsibility underlies the quote. This is about knowledge work for the good of colleagues – not acting as a lone ranger or becoming an individual star. The international picture is also one of increasing collaboration between teachers within and across schools. How do evidence use and teacher collaboration fit together? In this chapter, first I look at different meanings when we refer to evidence. Next, I focus on the social learning process that takes place when teachers engage with evidence. I then argue that professional learning communities provide a valuable context to bring evidence to life, before offering suggestions for leading learning in evidence-rich professional learning communities.

### **Where does evidence come in?**

A recognised and increasingly important feature of high quality professionalism, especially, knowledge work, involves engaging with evidence and in evidence gathering to inform practice. This means collecting, analysing and using data and impact evidence; carrying out research, enquiry and evaluation that produces evidence; and using externally generated research findings. These frequently can be interlinked. But whilst we know that using evidence and promoting its use are critical to improving practice, we also know that these things are often performed in a superficial way. Relatively few schools still are hotbeds of teacher enquiry, and few schools have staff libraries or promote 'the research article of the week'. What's missing?

### **Social learning – a key ingredient**

While acknowledging meta-analyses — as "a compelling evidence base of a particular kind", Andy Hargreaves and Michael Fullan (2012: 51-2) caution that although it's important to know which practices have large positive effects:

A list like this has little value by itself unless you are working with a group of other professionals sharpening the operational meaning of the items on it, and determining how and when to use these different strategies with one's own students.

This takes us back to the issue of collaboration for improvement and transformation. It's a myth that intelligence is just an individual concept (Lucas and Claxton, 2010). Thinking interdependently, being able to work and learn well with other people and learning from and with others is what Art Costa and Bena Kallick (2000) called a habit of an intelligent mind.

Most people don't need persuading that connecting is central to our lives. Social networking is now a norm for most of us. Many readers of this chapter will have 'grown up digital' (Tapscott, 2009: 2); in other words, "digital technology is no more intimidating than a VCR or toaster". We're becoming natural collaborators, staying in touch on mobile devices wherever we are. And as employees, Don Tapscott and colleagues' research found, Net Geners want to work hand-in-hand with colleagues to create better goods and services, design products, influence decisions and improve work processes. But, although social-networking sites help people to connect, they don't necessarily produce collective intelligence (Leadbetter, 2008). How can people's natural desire to collaborate best be harnessed into learning power – collaborating with others, learning with and from them, to achieve personal and collective goals? Let's look more closely at social learning.

### **What's happening when you're learning together?**

Learning with and from others is a natural way to learn. Metaphors can help us think about learning in different ways (Sfard, 1998). One metaphor is acquisition; learning is about acquiring knowledge, understanding and skills. Social constructivism, the underpinning social learning theory, proposes that the learner, drawing on their prior knowledge and experience, makes meaning of new information or problems through talk – sharing, challenging, negotiating and justifying ideas (Vygotsky, 1978).

Social constructivism, when applied to children's learning, often focuses on the teacher's role as guide. In adult learning, social constructivism might be applied to some forms of coaching or a mentoring conversation between a more experienced mentor and their mentee. Most people appreciate the guidance of someone more experienced at times, saying 'have you tried...?' But that great suggestion may not work in everyone's context. Research on the transfer of practice found that it can be more powerful when relationships between those involved are more equal; as Michael Fielding and colleagues (2005) and Judy Sebba and colleagues (2012) describe it, through 'joint practice development'.

Participation is a second social learning metaphor, drawn from social-cultural theories of learning. The main idea is that learning occurs through participating in activity within a cultural context. In Communities of Practice (CoPs) individuals learn by engaging in contributing to the practice of their communities, and the community learns by refining its practice and ensuring there are new generations of members (Lave and Wenger, 1991). CoPs are groups of people sharing a concern, a set of problems, or a passion about a topic, who deepen their knowledge and expertise in this area by ongoing interaction. Basically, a CoP combines three elements (Wenger, 1998):

- a *domain* of knowledge, defining a set of issues and creating common ground and a sense of common identity;
- a *community* of people who care about this domain and who foster interactions and relationships based on mutual respect and trust; and
- the shared *practice* (i.e. frameworks, ideas, tools, information, language, stories, documents etc) the community is developing to be effective in their domain.

An extension of this and another way of looking at learning that has become increasingly popular as interest in innovative practice grows, is thinking of it as creation – specifically knowledge creation (Paavola *et al*, 2004). This draws from organisational learning theory. This argument goes that talk between colleagues helps transform tacit knowledge (what we know but don't articulate) into explicit knowledge and the social process involved helps create new shared knowledge; learning as creating something new (Nonaka and Takeuchi, 1995).

Using just one of these metaphors can't capture the richness of social learning. A more comprehensive picture may be gained by drawing on all of them. But how can social learning be put to work in the service of evidence-informed practice?

### **Professional learning communities – bringing evidence to life**

Social learning is, or should be embedded in the DNA of professional learning communities. Professional learning communities are groups of people within or across schools or, in their most ideal form, whole staffs, who are driven by a common desire to make a difference for all their pupils, who collaborate as they investigate their practices and any other valuable evidence they can lay their hands on to find the interventions that promote the best learning (Stoll and Louis, 2007). Professional learning communities are the collaborative cultures within which evidence-informed practice can be seeded, nurtured and flourish. And, it can make a real difference when schools develop professional learning communities. Where they persistently focus on improving learning and teaching, they improve teachers' practice and pupils' learning (Vescio *et al*, 2008). Why, then, are professional learning communities such ideally suited homes for evidence-informed practice?

- *Enquiry and testing out research ideas is 'the way we do things'* – investigation and enquiry are core activities. Teachers develop expertise through analysing their interactions with students and being open to evidence of the impact they have (Hattie, 2012). They are curious and even eager to try out ideas that have been shown effective elsewhere, for example through meta-analyses carried out by John Hattie for Visible Learning or included in the Sutton Trust/Educational Endowment Foundation Toolkit<sup>1</sup> but, as Hattie says, they use these as a source for forming their own professional judgements: they are the ones creating contextually appropriate knowledge as they generate new ideas and evidence-informed practices.
- *Challenging thinking is actively encouraged* – professional learning communities are characterised by trusting and mutually respectful relationships. Because of this teachers aren't afraid to speak directly because it might offend someone. Cultural norms are such that it's expected that colleagues will act as each other's critical friends, challenging assumptions and thinking. And powerful professional learning that makes a difference to teachers' practice and students' learning does exactly that: it challenges people's

thinking (Timperley, 2011; Stoll *et al*, 2012). As Steven Katz and Lisa Dack (2013) describe it, people's assumptions are interrupted. Evidence can be a great way to challenge thinking when it contradicts what you think you know. It can stop the 'if it ain't broke don't fix it' mentality.

- *Learning conversations are commonplace* - Members of communities connect through dialogue: all participants play equal roles, suspending their individual assumptions as they enter into a genuine "thinking together" (Senge, 1990). This fits well with joint practice development's emphasis on equality. People listen to each other. But in professional learning communities, the learning goal is more overt as people engage in learning conversations that challenge their thinking about how they have been tackling an issue. New evidence can provide an important stimulus for learning conversations. Teachers' tacit knowledge, including any presuppositions, ideas and beliefs are brought to the surface, examined, challenged and mixed with their colleagues' knowledge and the external knowledge of the evidence. Collective intelligence is harnessed, and new ideas and practices are created as initial knowledge is enhanced or transformed through the conversation (Earl and Timperley, 2008). So learning conversations are the way that teachers make meaning together and jointly come up with new insights and knowledge that lead to intentional change to enhance their practice and student learning (Stoll, 2012). Exploring evidence, participants offer diverse perspectives, challenge each other in respectful ways, and are open to being honest and pushing themselves to reflect deeply in ways that challenge their thinking.
- *People think about the best ways to exchange knowledge* – Professional learning communities use evidence to create new knowledge which they will then aim to move around the school and other schools in a spirit of collective responsibility. Sharing knowledge with others can be challenging. Evidence-informed practice which works well for some teachers may not easily translate in different contexts. Yet a core activity of professional learning communities is sharing knowledge to help enhance others' practice. Knowledge needs bringing to life in ways that will help others to engage with the ideas, locate them within their context and in relation to prior experiences and learning, make meaning, and construct new knowledge from them. This involves a social process of making learning connections that I call *knowledge animation* (Stoll, 2010). The word 'animate' comes from the Latin word 'anima' which means breath, life or soul. To animate is to bring something to life, to put it in motion. It suggests action and movement, dynamism and vibrancy, invigoration and innovation. The focus of knowledge animation is helping people to learn and use knowledge generated elsewhere and, through it to create valuable new knowledge.

As professional learning communities generate evidence-informed knowledge they want to share, they should be thinking of knowledge animation strategies that will help others make those necessary learning connections. Professional learning communities need to ask themselves questions like: what animation tools and processes are going to help people learn, use or adapt and exchange particular knowledge best? In other words, what tools and processes will be most powerful in helping people expand their repertoire and change their understanding, attitudes and behaviour? External evidence, whether from academic research or teachers' collaborative enquiry, needs presenting in ways that will interest others, enable them to process the external ideas within the

frame of their own experience and explore implications for their own context. As already discussed, it also needs to challenge assumptions if new learning is to take place, as people reflect on how it fits with their own prior knowledge and contexts and then combine it with prior knowledge to create new knowledge which they will then use to enhance their practice.

### **Leading learning in evidence-rich professional learning communities**

Evidence-rich professional learning communities require intentional leadership. Proactive individuals will always exist in schools, innovators and early adopters of new ideas (Rogers, 1971), creatively developing their practice by drawing on evidence and using evidence in different ways. But ensuring that evidence-informed practice is a school-wide or school-to-school network-wide reality depends on ensuring supportive conditions: in short, you need the right culture, structures and learning opportunities. My own and others' research and R&D activities have found a number of helpful ways to lead learning in evidence-rich professional learning communities (also see *resource box 4.1*):

- *Be evidence passionate* – Evidence passionate leaders are deeply curious about finding out what will make the most positive difference to their own students' learning in the broadest sense. They understand that practice doesn't necessarily have all the answers and value academic research because it can provide one important external perspective. Their own enquiry habit of mind (Earl and Katz, 2006a) leads them to look for a range of perspectives on problems, purposefully seek relevant information from diverse sources, and investigate and explore ideas until they are clearer about what it means. Registering for their own high degrees, participating in reading groups, collaborating on peer reviews of each other's schools as several networks and partnerships now organise, or joining projects with local networks or universities where they carry out focused learning enquiries and data analysis with other headteachers, senior leaders or middle leaders are just a few examples I have experienced and come across both in England and internationally. The leaders are both learning and also modelling that evidence matters.
- *Promote enquiry habits of mind* – As well as modelling, this means leaders taking every opportunity to create a culture throughout and across their schools where enquiry is a habit of mind that routinely challenges colleagues' assumptions and practices, and helps them make well-evidenced decisions that are more likely to lead to success. If teachers are going to become more open to learning, to experimenting with new evidence-informed practices and collaborating with colleagues to evaluate their success, they have to feel safe to do so. Developing trust – relationships first (Kaser and Halbert, 2009) – is vital, both in relationships between teachers and leaders but also those between teachers. A teacher won't open up their practice to a colleague's 'scrutiny' i.e. observation if it feels risky to do so. Creating a culture in which staff are open to taking the kind of risk it takes to doing something different, is fundamental to introducing new practice (Stoll and Temperley, 2009).
- *Facilitate deep exchange, including providing time and space* – If teachers are going to engage in serious and evidence-informed analysis of their practice, and deep learning conversations, the context needs to be carefully planned to facilitate this. There is no getting away from it, powerful professional learning – and, indeed, any other learning – requires time (Stoll *et al*, 2003). Whether covering classes themselves, findings ways to

rearrange timetables, having colleagues or recently retired teachers covering classes or finding other ways to free staff up, it's absolutely essential that teachers have the necessary time to engage in evidence-informed collaborative practice development. Some of this might be arranged outside of school time, but where observation and some other activities are concerned, it has to take place during the school day. Creative use of technology is now enabling teachers to observe classrooms elsewhere in their own and other schools, and social media can support teacher engagement with evidence, as long as attention is paid to ensuring that the technology facilitates meaningful exchange. Development of coaching and facilitation skills among staff members also helps to support learning conversations and development of internal critical friendship.

- *Make connections with research partners and other critical friends* – Over many years, research has frequently been viewed as the domain of academics in ivory towers. While researchers have their own imperatives and motivations, many passionately believe that their own and other research has much to offer teachers and leaders that can help them enhance practice. In addition to their external theories and findings, which need animating, they can offer schools rigour and research and evaluation skills. Collaborations between practitioners and researchers potentially can make a real difference to students' learning experiences and outcomes. Many excellent examples exist, but it may require changes in some school-university relationships to develop more powerful partnerships. Teachers and leaders need critical friends who will ask challenging questions. Academics can ask these, as can colleagues in other schools who can also become partners in collaborative enquiry and peer review, providing a much wider landscape for colleagues to gather evidence and investigate practice.
- *Have a theory of action* – Leaders need to think seriously about why and how the teaching and learning practices they decide to support in their school will make a positive difference to students. They also need to articulate this and check whether their hypotheses were correct. If the practices need adjustment, or even changing, they need to take action to do this and continue to monitor the situation with mini feedback loops, constantly moving practice forward so that it has the greatest chance of being successful. Chris Argyris and Donald Schön (1974) described how people have two theories of action. The first is an explicit 'espoused' theory of action that they explain to others about why they behave in a certain way. But their theory-in-use is the unspoken theory that actually governs what they do. Successful practice depends on the two theories being congruent with each other. Creating a theory of action or theory of change requires identifying a desirable end goal – or as Lorna Earl and Steven Katz (2006b) describe it 'starting with the end in mind' (i.e. the student learning you are seeking). You then work backwards through intermediate outcomes, establishing links between these and the goal, listing causes and effects, then working out which activities are leading to which outcomes, and identifying what else is needed for your interventions to work. Starting with end in mind about a student learning issue means encouraging and supporting teachers in gathering the evidence from students, parents and each other up front to deepen their understanding of the issue. External research reviews may help provide evidence about what worked in other contexts, but it doesn't guarantee it'll work in your own situation. That's why it's important to think about your theory of action and be ready to refine it as necessary.

- *Work towards sustainability* – Finally, leaders think about change that lasts. I find Andy Hargreaves and Dean Fink's (2000) framing of three elements of system reform helpful here. A school is a system, and so is a group of schools. What leaders are aiming for is sustainability: this is what the DNA part is about. Hargreaves and Fink write about the importance of depth, breadth and length. Depth, in relation to evidence use, is thoughtful, professional, informed practice that is underpinned by a deep understanding of what leads to the best learning experiences and outcomes for individuals and whole groups of students, and an ability to articulate why and how this makes a difference. Breadth means that it isn't just mavericks or 'keenies' who are thinking about and using evidence. Evidence use has gone viral. And length means that using evidence really is just 'part of the way we do things'.

**resource box 4.1:**

Stoll, L., Bolam, R., MacMahon, A., Thomas, S., Wallace, M., Greenwood, A. and Hawkey, K. (2006) *Professional Learning Communities: Source Materials for School Leaders and Other Leaders of Professional Learning* (London, Innovation Unit, NCSL and GTC).

These materials, based on the results of the first national study of professional learning communities (PLCs) in England (Bolam *et al*, 2005), were designed as knowledge animation tools to help: 1) promote understanding of and engagement with the idea and practice of PLCs with particular reference to people's own contexts; and 2) to stimulate PLCs by promoting self-evaluation, reflective enquiry, dialogue, collaborative learning and problem solving. They are available at: <http://www.lcll.org.uk/professional-learning-communities.html>

Collaborating with others is a means of ensuring that young learners across our schools have equally high quality opportunities. By developing professional learning communities with peers, locally, nationally and internationally, teachers and school leaders can share and tease out principles of good practice, engage in deep and challenging conversations, create knowledge to respond to particular issues that any one person might find it hard to resolve, observe colleagues elsewhere, experience fresh perspectives, reduce narrow and isolated thinking, and see your own school through a different lens.

**Take out messages**

In the spirit of this chapter's topic, these take out messages are posed as questions to feed into learning conversations:

- **TAKE OUT ①:** To be successful, teachers today need to collaborate to generate and make the best use of evidence to enhance their practice. How well do evidence use and teacher collaboration fit together in your context? What are the challenges in connecting them and how might these be resolved?
- **TAKE OUT ②:** Learning together is a natural process. What kinds of social learning can be found in your school/across your schools? What sorts of metaphors would you use to describe this learning and why?
- **TAKE OUT ③:** If professional learning communities are the collaborative cultures within which evidence-informed practice can be seeded, nurtured and flourish, in what ways is

your community's culture strongly collaborative and what are the priorities for development?

- **TAKE OUT ④:** To share and exchange evidence-informed knowledge with others, it needs animating – bringing to life. What are the most successful strategies you have designed or come across to animate knowledge?
- **TAKE OUT ⑤:** Having a theory of action about practice helps you articulate the results you expect as a result of your practice and the reasons. What is your theory of action around using evidence in your school/across your schools and how will you test it out?

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<sup>1</sup> <http://educationendowmentfoundation.org.uk/toolkit/>