

From Professional Learning Community to Networked Learning Community

David Jackson and Julie Temperley

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In important ways education reform and professional development networks appear to be uniquely adapted to the rapid socio-economic changes taking place in society..... As educational networks become a larger and more influential part of the educational landscape, it is increasingly important to understand them organisationally as well as to understand their work, their influence, and their effects on both teachers and students.

(Ann Lieberman & Diane Wood, 2003)

Introduction

There will not be much argument against the view that the world is becoming profoundly more knowledge-rich, nor that networks, in response, are now an increasingly significant organizational form. As Kathleen Allen and Cynthia Cherrey state in their book *Systemic Leadership*:

Two major shifts occurring in the world are having a significant effect on how we work together, influence change and lead our organisations. The first shift is from a world of fragmentation to one of connectivity and integrated networks. The second shift is from an industrial to a knowledge era.....All of us need to explore new ways of working that keep pace with this networked knowledge era.

(Allen & Cherrey, 2000)

It is also the case that the characteristics of network-based knowledge and learning systems are paradigmatically different from the prevailing orthodoxies of the past. This chapter argues that the school system, long separated, fragmented and resistant to lateral learning, is beginning to demonstrate the potential of school-to-school collaboration and is generating evidence that enables us to understand how to do this in a disciplined way – and with a focus upon both raising the bar and closing the gap.

The case being made here is not about beyond-school collaboration and enquiry *as opposed to* internal professional learning. It is not networked learning community (NLC) *instead of* professional learning community (PLC) – quite the reverse. Two things are being said. The first is that the school as a unit has become too small-scale and too isolated to provide rich professional learning for its adult members in a knowledge-rich and networked world. A new unit of meaning, belonging and engagement – the network – is required. The second is that the collaborative learning and enquiry norms of PLC actually *require* openness to external learning from networks. The definition of PLC in a recent large-scale DfES study in England states:

An effective professional learning community has the capacity to promote and sustain the learning of all educational professionals in the school community; has an enquiry orientation; and has permeable boundaries, internally and externally – all with the collective purpose of enhancing pupil learning.

(Bolam et al, 2005)

The permeability to external learning referred to, from other schools and from the public knowledge base, is crucial to informed internal learning.

School networks are almost certainly a key part of the answer. The problem is that we currently still know too little about the dynamics and relationships between professional learning and networked learning. That makes networked learning vulnerable to accusations of being too 'social', or of lacking discipline and focus. There is a very real concern about 'cost benefit' (both transaction cost and opportunity cost) in networks. As Judith Warren Little has argued, this is fresh ground and, as yet, much under-researched:

Despite the growth of networking in education and repeated appeals for more 'professional community' as an avenue to school improvement, we know little about the interaction between a network-based professional community and the localised professional communities rooted in the daily lives of schools. We are only beginning to learn what exactly transpires in such interactions that constitutes resources for professional learning and school improvement.

(Warren Little, 2005)

She goes on to add – and this is the basis of the chapter – that 'the NLC initiative presents an extremely fruitful opportunity for such learning.'

Just over three years into the Networked Learning Communities programme, the largest school-to-school network initiative in the world, we now have a huge body of evidence – from both programme enquiry and research, and evaluation by a range of internationally regarded experts in their fields. We are now able to explore what is being learned about the relationship between PLC and NLC, and about leadership at all levels that extends beyond a single institution.

There is also significant evidence from the programme of consequent changes in Local Authority practices as they adapt to networks as a new 'unit of meaning' for members and a new 'unit of engagement' for brokerage and facilitation by external support agencies. We have learned much about the leadership of networked learning activities and about the Local Authority's role in the implementation and support of networks more effectively and at scale.

Expanding the paradigm

Across the English speaking world, the dominant school improvement models have similar characteristics: schools are designed on factory production principles; the profession is layered and structured; the system is tiered – a hierarchy of school, school district, state and national agency. Policy is mandated, practices are prescribed, outcome targets specified. The logical route to improvement appears to be to strengthen delivery mechanisms and to tighten accountabilities through targets, inspection, financial incentives and consumer choice.

Such 'top-down, outside-in' change approaches work well in the short term, but then stall. Medium- to long-term improvement, it seems, requires a shift in emphasis to capacity-building for sustainability. So, whilst improvement programmes which apply existing knowledge across the system have produced clear short-term gains, centre-to-periphery, outside-in change strategies are unlikely to continue to work well in the medium to long term. Change needs are too rapid, knowledge is too ubiquitous, contexts of knowledge application are too diverse. Centrally co-ordinated strategies are unlikely to be sensitive to the unique challenges of diverse contexts. They fail to stimulate and thus utilise practitioner innovation and ownership. Equally importantly, the improvements already achieved have still not closed the gap in educational achievement between the most and least advantaged (Bentley, 2003; Hargreaves, 2003).

It is also fair to say, though, that random, unstructured and unconnected distributed learning patterns will not serve the system well either. They would be unlikely to achieve the common purpose and connectivity required to bring coherence and alignment to organisational efforts.

An alternative way of providing the connection and alignment to address these concerns is offered by networks of schools that engage in orchestrated networked learning. Both logic and evidence from practice tell us that purposeful collaboration is more fruitful to learning than competition. In fact, evidence shows us that the two are not even mutually exclusive – some of the best collaborative practices are between parties contesting together to be better. What we have called networked learning – joint work founded upon learning principles, that enables effective practice to be developed and tested within context through collaboration between institutions – appears to offer a highly effective method of adaptation and integration. It is this approach that lies at the heart of what NCSL set out to achieve in the Networked Learning Communities programme (NCSL, 2002).

This contextually located learning is consistent with Michael Fullan's recent writing on 'systems thinking in action' (expanded from Peter Senge's original work in 1990) in which he writes:

When you learn in context two things happen. One is that, by definition, the learning is specific to the context. The other is that you are doing so with others.....The very premise of systems thinking is that you continually expand the contexts which you experience and learn from as you seek solutions to complex adaptive challenges. Learning in wider contexts leads to changing these very contexts as one interacts with others to develop new solutions.

(Fullan, 2005a)

Cross-school collaborative learning, underpinned by moral purpose, has proved to be energising for those working in NLCs.

Networked learning communities

The Networked Learning Communities programme in England is a large-scale development and enquiry initiative involving 137 networks (1,500 schools) between 2002 and 2006. It was specifically designed to provide policy and system learning (as well as practice evidence) about network design and implementation issues, about network size and type, facilitation and leadership, formation processes and growth states, brokerage, system support and incentivisation. It was charged with generating evidence about how and under what conditions networks can make a contribution to raising student achievement, about the leadership practices that prove to hold most potential for school-to-school learning and about the new relationships emerging between networks as a unit of engagement and their Local Authority partners.

There were six strands to the basic framework of the networked learning communities design:

- **pupil learning** – a pedagogic focus
- **adult learning** – professional learning communities a key aspiration
- **leadership learning** – at all levels
- **organisational learning** – new organisational learning norms
- **school-to-school learning** – networked learning
- **network-to-network learning** – lateral system learning

Each network additionally elected to have at least one external partner, usually a Higher Education Institution (HEI) or Local Authority (LA) – or both. Finally, there were also four non-negotiable principles:

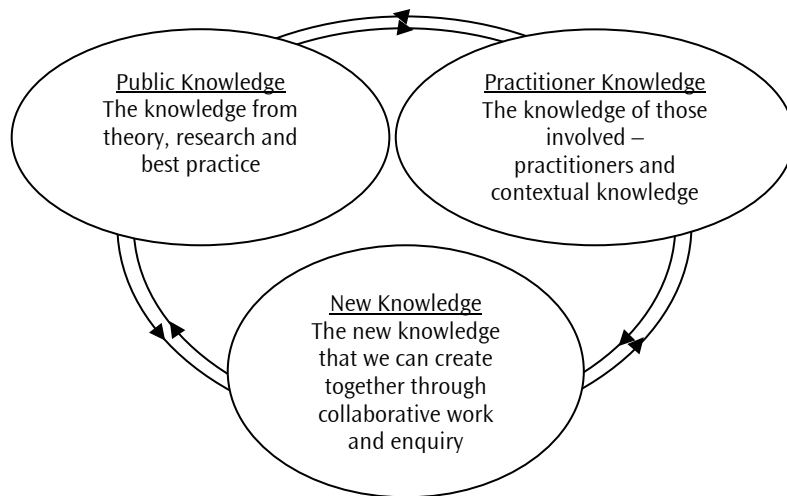
- **moral purpose** – a commitment to success for all children ('raising the bar and closing the gap' is a social justice representation of the same theme)
- **shared leadership** (for example, co-leadership)
- **enquiry-based practice** (evidence and data-driven learning)
- adherence to a **model of learning**

Both collaborative engagement and generosity of spirit are involved – hence two key mantras within the initiative. The one for collaboration was: **working smarter together, rather than harder alone** and for the critical moral purpose and community dimension: **learning from, with and *on behalf of* one another.**

There were many elements to the learning models within NLCs. There was a commitment to inside-out change processes; to coherence-making through joint learning; to sustainability and capacity-building; to reflective, problem-solving approaches. Networks co-constructed learning and engaged in contextual enquiry. However, there was one model of learning that provided a programme-wide discipline and analytical template for all the work. It was drawn from the parity afforded to the use of three fields of knowledge:

1. **practitioner knowledge** – starting from what people know, the practice and unique context knowledge practitioners bring to the table
2. **publicly available knowledge** – theory, research and knowledge from best practice elsewhere
3. **new knowledge that we are able to create together** – through collaborative working and enquiry-based and problem-solving practices

Model 1: Three Fields of Knowledge



Networked learning as a part of a changed paradigm

Networked learning is at the heart of the relationship between school networks and professional learning community. This section explores in some detail what has been learned from the NLC programme about networked learning specifically. The section that follows links NLCs and PLCs.

Within schools and between schools, adults are involved in multiple random networking relationships, some with strong ties, others arising from weak ties (Granovetter, 1973; Watts, 2003). These connections offer rich opportunities for learning and make up an unpredictable tapestry of interpersonal connections. They are not, though, networked learning – they are networking.

Networked learning takes place when individuals from different schools in a network come together in groups to engage in purposeful and sustained developmental activity informed by the public knowledge base, utilising their own know-how and co-constructing knowledge together, as in the above model. In doing so, they learn with one another, from one another, and on behalf of others.

The idea of learning ‘on behalf of’ others is crucially important to the concept of networked learning. It means that networked learning, as it relates to schools, is the interaction of two types of learning:

1. learning that takes place between individuals from different schools
2. subsequent transfer of learning that takes place to other individuals within participants’ schools

Networked learning entails four distinct learning processes:

1. **Learning from one another:** where groups capitalise on their individual differences and diversity through sharing their knowledge, experience, expertise, practices, and know-how
2. **Learning with one another:** where individuals are doing the learning together, experiencing the learning together, co-constructing the learning, making meaning together. Collaborative practitioner enquiry and

collaboratively learning about recent research are good examples of this activity

3. **Learning on behalf of:** where the learning between individuals from different schools is also done on behalf of other individuals within their school and network – or the wider system
3. **Meta-learning:** where individuals are additionally learning about the processes of their own learning

To be most effective, the combination of these four learning processes will make use of the three different types of knowledge (Model 1).

It is networked learning that has the potential to expand professional identity from the school as a unit of community to the locality as a unit of educational community – it can expand PLC to NLC. In other words, participants across schools agree a shared purpose and content focus for their learning, they use proven models of professional development and their learning has practical relevance to the context and aspirations of their local network of schools.

This contextual relevance focuses activity on some sort of change. Within NLCs this means changes in teachers' knowledge and understanding and changes in their school-level behaviour and classroom practice – as an intermediate outcome. The ultimate purpose of networked learning is to improve student learning, achievement and attainment. Evidence from the programme also suggests, though, that there are wider benefits to networked learning, typically improved confidence and self-esteem, enhanced motivation and a greater sense of professional efficacy and identity.

In summary, successful networked learning activity in NLCs has the following characteristics. It:

- is focused upon shared learning objectives, locally owned by groups of schools
 - exhibits the characteristics of the learning design outlined above
 - comprises participants drawn from different schools, learning on behalf of colleagues within their own and other schools in the network
- or
- is comprised of participants within the same schools, learning on behalf of colleagues within their own and other schools in the network
 - is designed to enable individuals to learn from, with and on behalf of others
 - is purposefully designed and facilitated to change professional knowledge and practice in order to improve student learning
 - houses within its design opportunities for leadership learning
 - is potentially transformative – for participants and for students – owing to its orientation towards changes in practice

These disciplines begin to answer some of the questions about cost-benefit. When teachers within a network come together it takes an effort of will. They need no persuading that the effort has to be made worthwhile in terms of learning gains and changed practices. That is the first thing that they problem-solve. In contrast, despite what is known about high-quality CPD activities, all too often teachers' experience within their own schools has been that learning does not start with the knowledge that practitioners bring; often it does not connect with the publicly available knowledge base; and rarely is new knowledge created and captured through collaborative processes on behalf of a wider constituency.

In this respect, for those network participants whose host school has poor internal learning cultures, it offers what Hargreaves (2003) has called ‘liberation from context’.

A working model or metaphor may help at this point to illuminate the networked learning concept.

A model for networked learning

Church and her team (2002) alighted upon the net metaphor as a way of accessing and illustrating the distinctiveness of key components of network activity. In Figure 2 below, the triangles represent the network units (member schools). The threads between them stand for the necessary relationships, communication and trust. They represent ‘relationships with a purpose’ (or what Canter, 1994, calls ‘the collective and collaborative optimistic ambitions of the participants’). The knots represent what participants do together, the purposeful activity that joins them – sites of networked learning undertaken on behalf of the whole.

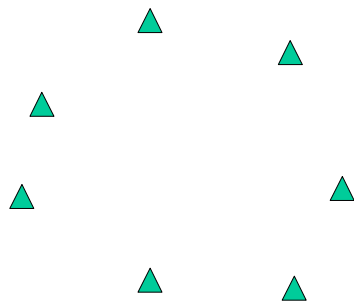
It is these knots that provide a learning network with its internal architecture, a flexible structure that only exists to achieve benefit for members – the children within schools primarily, but also the adults and the community served by the network.

Network members seek to effect purposeful change together – on behalf of one another. And when they create collaborative groups to work and learn together, they are engaging in an effort to contribute to that shared goal. This joint activity gives the focus, strength and purpose to the network. It adds value.

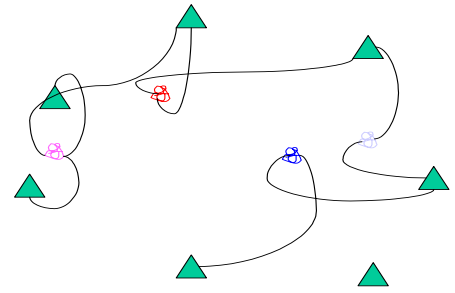
Threads tie us to each other across the joint activities. Without trust and high levels of communication there are no networked learning relationships. This operates as a sub-structure – the cultural norms of networked learning¹. The threads link the participants through communication, shared ideas, information, relational processes – even problem resolution and conflict. The participants spin these threads themselves; they voluntarily participate and connect because networked learning is founded upon discretionary effort. It is normally or typically beyond the prescribed role responsibilities and structural positions of participants’ home school. These threads and knots together provide the tensile strength of the network and need to be tended, stretched and played in just the same way that fishermen artisans will tend and play a conventional net.

¹ This feature is crucially significant because it helps to explain the competition-collaboration paradox of school networks. Francis Fukuyama suggests that social capital arises spontaneously as a product of iterated relationships. If individuals interact with each other repeatedly over time, they develop a stake in a reputation for honesty and reliability. He suggests that relationships based upon a society composed entirely of selfish people will develop social capital over time simply because it makes sense to work to co-operate rather than in opposition. Given high levels of trust and communication, competitors will form collaborative relationships.

Model 2: Threads, knots and nets

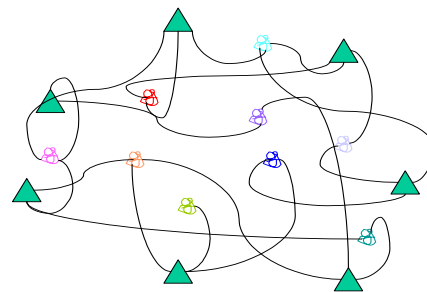


1. The network partner schools



2. The growth of threads and knots

3. The net - working!



The networked learning knots are the 'key points of dynamic learning, with potential for wider resonance' (Warren Little, 2003). They represent the meaningful work of the network. Networked learning knots are the right place to start for networks, and from our study of NLCs there seem to be five types of knot that enhance professional learning:

- **joint work groups** eg project teams, curriculum development groups
- **collective planning** eg steering groups, professional development groups
- **mutual problem-solving teams** eg focus groups
- **collaborative enquiry groups** eg enquiry teams
- **shared professional development activities** eg learning forums and joint staff days

Some of these might be seen as being architectural to the network, such as steering groups and learning forums, whilst others are more fluid and adaptive, such as enquiry teams and project teams. The most effective learning knots tend to involve active and

sustained enquiry and problem-solving activities between network members from participant schools.

Whilst strong threads (relationships, trust and communication) are necessary for good knots, joint work arrangements with staff from network schools are the means through which trust, openness and relationships are fostered. Which comes first? From the NLC programme, the answer is almost certainly that development is iterative, but it is equally true that the threads will not precede the knots. We need to do good work together to develop strong threads – and there is good theory and evidence of the potential dysfunctionality of trying to spin threads as ends in themselves.

So, the net provides the overarching structure or fabric created through the stays (the partners), the relationships (threads) and the networked learning activities (the knots), a structure which participants design and re-create for themselves, to which they contribute and from which all benefit. Network structure is flexible and adaptive, not fixed and constraining. It is an expanded PLC. Additionally, it is a structure that exists outside normal institutional parameters, so it also offers freedom from school role expectation. Networked learning knots offer highly promising opportunities for activity that is unencumbered by institutional role or status parameters and perceptions. Within the NLC programme, there are many examples of joint work groups containing very mixed groups, including adults other than teachers (assistants and support staff; non-educational professionals, governors, parents) and pupils. Usually the leadership of these groups is determined by purpose rather than rank.

To conclude the metaphor, we know that network architecture – just like any other organisational structure – needs to be tended by someone in a leadership role whose professional identity makes that task a priority (Wohlstetter, 2003). We also know that you have to work the net (Lieberman, 1996, 2003). An NLC, just like a PLC, needs net workers.

PLC and NLC – could there be a relationship?

The heading to this section is a play upon a delightful quotation from Susan Loucks-Horsley: “teaching and learning – could there be a relationship?” The point, if it needs to be made, is that of course there has to be, but that it is never as easy as it seems.

The journey of the networks within the NLC programme was a hard one. If the representations and claims in this article appear at times to suggest that the answers are easy, be assured that it was never like that. Rather, the development of school networks for those leading them is as complex and challenging and important as one might imagine it would be: each network different; each local context posing its own particular set of challenges; each set of developmental and collaborative histories unique; each range of external support possibilities constrained by past relationships; each network working against the grain of the system and contributing to the knowledge base as it went.

Five claims about NLCs and their relationship with PLC form the structure of this section. Each is considered in turn. They are:

1. Networks of schools both build from and contribute to professional learning community.
2. NLCs have the potential to take professional learning community to scale.

3. Networks of schools offer a more effective unit of engagement for intermediate system personnel (Local Authorities and universities) and therefore a more ready access point for external knowledge.
4. Networks are well suited to provide the conditions that we know from research are essential for effective collaborative professional learning.
5. Evidence from the NLC programme suggests that NLCs work both in their intermediate aim (changed teaching practices) and in terms of their key outcome (improvement in pupil achievement).

1. Networks of schools both build from and contribute to professional learning community.

In relation to this first point, some working definitions might be helpful. The professional learning community statement used here is adapted from the work of the USA's Southwest Educational Development Laboratory:

The term 'professional learning community' is used to describe a school committed to achieving a culture of collective learning and creativity that is characterised by: shared values and vision; supportive and distributed leadership; collaborative professional norms; an enquiry orientation; and facilitative organisational conditions.

(Pancake & Moller, 2002)

As defined in the programme, an NLC is a cluster of schools working in partnership to enhance the quality of pupil learning, professional development, and school-to-school learning. We drew from the OECD Lisbon Seminar (2003) in defining NLCs as follows:

Networked Learning Communities are purposefully-led social entities that are characterised by a commitment to quality, rigour and a focus on outcomes.... They promote the dissemination of good practice, enhance the professional development of teachers, support capacity-building in schools, mediate between centralised and decentralised structures, and assist in the process of re-structuring and re-culturing educational organisational systems.

There is a clear synergy between the two definitions. They are reciprocal and lead us to suggest three ways in which school networks appear to strengthen or extend PLC:

1. In a network of schools the strength of some schools' internal learning culture enables other schools to learn from that through network activity.
2. A school's own professional learning culture is enhanced by networked learning. In other words schools learn to collaborate more effectively internally by collaborating externally. The benefits are recursive.
3. Permeability to learning from the external knowledge base (theory, research and the practice of other schools) is necessary to avoid stagnation and constant recycling of a school's existing knowledge base.

It was a specific element of the NLC design to support the development of schools as PLCs. NLCs place teachers, leaders and groups of schools at the heart of innovation and knowledge creation, enabling the development of context-specific practices and problem-solving solutions.

The design built from what was known in other sectors. For example, the major OECD research study *Knowledge Management in the Learning Society* (2000) found that the

move towards learning organisations is reflected in changes both in firms' internal organisation (internal networking) and in inter-firm relationships (external networking). Within companies, the accelerating rate of change makes multi-level hierarchies and strict borders between functions and organisations inefficient. Interestingly, education had the poorest learning strategies of all the sectors in the ORCD study. Elizabeth Lank's recent private report (2005) uses multiple private sector examples to show how the capacity and capability for internal and external collaboration and co-creation has become a decisive strategic advantage. A decade ago, Rosabeth Moss Canter's extensive study (1994) into private sector company collaboration across the world produced similar findings.

It is not a huge step, then, to say that the evidence from the NLC initiative appears to suggest that **between-school** networks may, in fact, be both the catalyst and context for the internal redesign required also to generate professional learning networks **within** schools.

2. Networked learning communities have the potential to take professional learning community to scale.

Returning to the two definitions for a moment, one notable difference is that the second expands the 'unit of meaning' to a group of schools – and also embeds its purposes within wider system influence. The network is viewed as a mediating unit between tiers of the educational structure, and it is seen as having the potential to re-culture local systems.

One reason for this is that networks have the potential to harness the energies of practitioner members. This is something Michael Fullan sees as being critical to 'moving beyond the standards plateau' across the system:

The need, then, is to seek new strategies which capture the hearts and minds of all participants. To seek, in other words, to galvanize the commitment and ingenuity of large swathes of the system. In this respect networked learning communities represent powerful strategies for simultaneously incorporating tightness-looseness. They offer the potential to incorporate tight-loose within an organic system in which the very processes serve to provide built-in checks and balances from straying too far toward limiting tightness or its opposite, diffuse looseness.

(Fullan 2005b)

Despite the obvious challenges and the discretionary effort required to establish and sustain networks, 1,500 schools participated in the NLC programme, and the more recent Primary Strategy Learning Networks policy in the UK has seen more than 2,000 PSLNs enroll – 7,000 schools in total. Finance has clearly not been the incentive. Critical drivers have included the orientation towards learning, the sense of local control, the potential for local innovation and the compelling nature of the networks' aspirations. In the UK, networks have already moved to scale.

3. Networks of schools offer a more effective unit of engagement for intermediate system personnel (Local Authorities and universities) and, therefore, a more ready access point for external knowledge.

There a strong evidence base that school development benefits from external facilitation (eg Fullan and Miles, 1992; Stringfield, 1998). Having adapted over the past

decade or more to the expectations and demands of the delivery and accountability system, our current intermediate institutions (Local Authorities and universities primarily) are not well geared to the new task of brokering and facilitating networks. Turn the challenge around, though, and self-supporting networks can increasingly be seen as a means of facilitating innovation and change from the ground, as well as contributing to a progressive restructuring of support systems (Hopkins, 2001; Demos, 2001). The system emphasis then becomes less about exercising control – which is both impossible in an increasingly autonomous context and antithetical to creativity and innovation – and more about harnessing the interactive and creative capability of system-wide forces.²

Critical to understanding the conceptual step-change that can help to achieve this are two frames of thinking. The first is to begin to see the network as the ‘unit of meaning’ (so that a Local Authority with 100 schools and 14 networks would move from having 100 units to 14 units of engagement). The second is to understand the changed nature of the relationship itself.

The NLC programme spawned interesting research findings about the positive role of some universities in supporting networks, although examples of practice were highly variable across the country (Campbell et al, 2005). In particular, where successful and sustained, such partnership offered the following benefits to networks:

- direct access to external knowledge
- support for disciplined practitioner enquiry
- design of customised learning programmes to support network priorities
- support for leadership learning across the network
- accreditation for programmes of activity (both learning and enquiry)
- access to knowledge about best practices elsewhere

Similarly, programme-wide enquiry revealed evidence of significant adaptation on the part of Local Authorities as they moved beyond delivery and accountability and towards brokerage and facilitation. The generic characteristics of these roles (NCSL, 2004) involve brokering and facilitating:

- network membership that is inclusive and diverse
- relationships within and between networks
- partnerships beyond the network
- networks’ access to resources
- transfer of knowledge between networks

In practical terms, the following specific partnership activities are facilitative of network-wide learning:

- supporting school group self-review and peer review – using data to enable the choice of a learning focus that will raise standards
- facilitating relationships and activity between participant schools
- encouraging commitment from headteachers – and involvement of the best school leaders beyond their own school on behalf of the network
- advising on the use of funding and critical friends
- brokering links with HEIs, other Local Authority staff and consultancy support – brokering partnerships
- connecting groups of schools with existing network practice and knowledge, both within the Local Authority and beyond

² For a further discussion of these points see Fullan, M, 2000, *The return of large scale reform*, **Journal of Educational Change** Vol. 1 No 1 pp 1–23

These are very different roles – more enabling, more capacity-building – than those of recent history, and they involve different skill-sets, too. The most helpful characterisation is that the Local Authority moves from being the expert to being a learner about and co-designer of network activity.

4 Networks are well suited to provide the conditions that we know from research are essential for effective collaborative professional learning.

This section looks in particular at two substantial research projects, one commissioned by, the other undertaken by NCSL's Networked Learning Group. They are:

- The External Evaluation of the NLC programme
- A programme-wide enquiry into Collaborative Professional Learning in Networked Learning Communities

The **External Evaluation** study (Earl & Katz, 2005) was a three-year, three-phase multi-site study of the programme. It involved, as Phase 1, a theoretical analysis of the key features of NLCs. In doing so, it identified 'professional knowledge creation and sharing' as an *interim outcome* of NLCs, with impact on pupil learning, engagement and success as the *ultimate outcome*. In other words professional learning in networks – networked learning – is posited as both cause and effect; process and outcome. We can start to understand this relationship in more detail by looking at two of the seven key features of learning networks. (Other key features are purpose and focus, relationships, leadership, accountability, capacity-building and support.)

Key Feature 3: collaboration

Collaboration within networks engages practitioners in opening up beliefs and practices in order to provide them with opportunities to participate actively in the development of their own practice and that of the profession. This interaction allows for sharing both *within* schools and *across* systems; it spreads innovations beyond discrete sites; it creates a dynamic process of interpretation and evaluation of practice between colleagues; and it fosters identification with the larger group, extending commitment beyond the single classroom or school.

Key Feature 4: enquiry

Enquiry is a fundamental tenet of learning networks – enquiry and learning are bound up within one another. Network members routinely investigate the challenges of their work and their context. Enquiry is the process through which practitioners are able systematically and intentionally to explore information from research, from experts and from each other in support of local decision-making and problem-solving. Collaborative enquiry also involves thinking about, reflecting on and challenging individual and collective experiences in order to come to a deepened understanding of shared beliefs and practices.

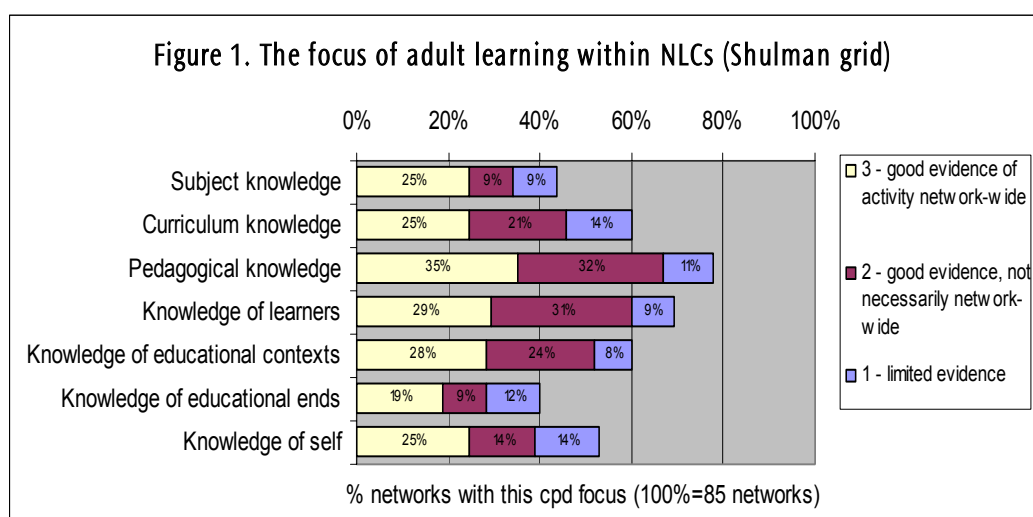
What the data from the External Evaluation makes clear is the added dimension that working on behalf of a wider group – the school, the community, the profession, all children – brings to our understanding of what motivates network leaders and participants to invest in the work together. The evaluation offers a theory of action that draws on beliefs and values – on the moral purpose at the heart of PLC.

The **Programme-wide Enquiry** in 2004-2005 was designed to study the relationship between networked learning and collaborative CPD. Eighty-five networks participated in the enquiry designed to address these specific questions:

- How do NLCs improve the quality of adult learning and CPD?
- How do networked learning communities improve the quality of classroom practice?
- How do NLCs improve school-to-school learning?

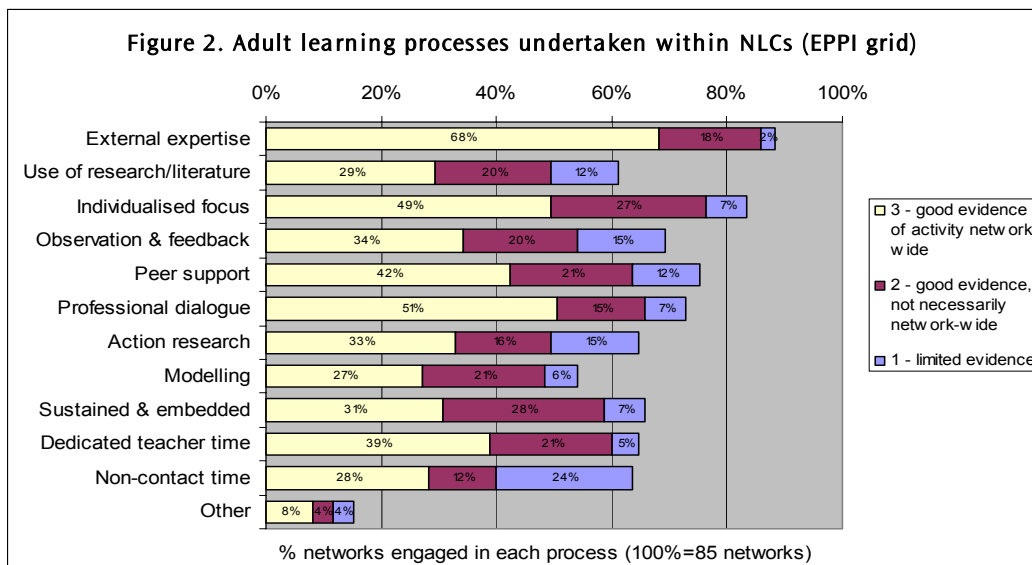
To establish what it was that adults in the network were learning about, the enquiry looked at seven areas of teachers' professional knowledge:

- subject matter knowledge
- curriculum knowledge
- general pedagogical knowledge (knowledge about teaching)
- knowledge of learners (ie how pupils learn)
- knowledge of educational contexts
- knowledge of educational ends, purposes and values
- knowledge of self



There is not space here to make interpretations about each of the data-sets. Figure 1, though, clearly indicates that the top two reported areas of focus for professional learning in networks were pedagogical knowledge and knowledge of learners (eg learning to learn).

To explore the extent to which NLCs are being strategic in their use of CPD, the enquiry used outcomes from the recent DfES commissioned EPPI systematic review of collaborative CPD (CUREE, 2004) as a lens through which to view the processes involved in adult learning in NLCs. The extent to which networks reported engagement in these is shown below.



The most commonly used CPD processes highlighted within NLCs were the ‘use of external expertise’ and the ‘individualised nature of the activity’, which were both cited by over 80% of the networks, and the ‘use of peer support’, and ‘professional dialogue’. These also showed the most evidence of being widely networked.

The evidence reinforces the point made earlier that networks provide a more effective unit of engagement for external support than the individual school. This includes HEI inputs, independent consultants and trainers and Local Authorities. Their inputs include external course design and provision, support for practitioner enquiry, conferences, supporting specific school improvement programmes, modelling and coaching practices and supporting international visits. NLCs claim a spectrum of benefits from their expert inputs. These range from increased opportunities for inter-school collaboration to increased changes in the knowledge base and classroom practice of the teachers involved.

A common criticism of school-based CPD is that it is often short term and has limited impact in the classroom. By their very nature, networks offer avenues for adult learning that are more sustained than the traditional one-day course. One of the key ingredients of effective CPD from systematic research reviews (CUREE, 2004) is the development of processes to encourage, extend and structure professional dialogue. Almost by definition, NLCs fit this requirement – they are designed to engender dialogue between practitioners.

Consistent with the analysis of network knots earlier, various models for sustaining and embedding CPD and adult learning emerged:

Study groups and work groups

groups of individuals meeting on a regular basis to share good practice and expertise or to collaborate in planning activities

Foundation subject co-ordinators in the primary schools from Knowsley Southern Area Network were released from the classroom to meet for an hour and a half. They got to know one another, shared knowledge and created a body of resources to benefit all schools. They constructed a common curriculum for focus weeks and offered this at the same time in all schools.

Reception teachers across all the schools in the Tunbridge Wells NLC were supported to design a reception curriculum for all the town's reception children – and the capacity to support one another to deliver and evaluate it. Many were the only reception teacher in their school and this their first experience of collaborative learning with colleagues.

Enquiry groups and learning sets:

groups, focused on pedagogy, facilitated by Higher Education partners, advanced skills teachers, or Local Authority personnel

In the BSIP North South Network, a group of 10 teachers meet regularly in a twilight session facilitated by an AST to develop approaches to individualised learning. The AST also visits teachers in their schools or hosts visits from them, providing additional observation opportunities.

Sustained professional development activity:

sustained professional development input through long-term programmes, sometimes co-designed and delivered by an external provider to targeted network members such as lead learners.

Coaching and instructional leadership over six months, teacher classroom research delivered by an HEI over two full days and four twilight sessions, and co-ordinated provision of input related to Ruth Miskin (Literacy) and Guy Claxton (Building Learning Power): the practitioners in the Bristol NLC hope to roll out these activities to others.

A longer-term strategic approach was apparent within a growing proportion of the networks, for example there were several instances of a small group being specifically trained to become trainers themselves, but not all.

5. Evidence from the NLC programme suggests that NLC networks work both in their intermediate aim (changed teaching practices) and in terms of their key outcome (improvement in pupil achievement).

Three sources of data are used in this final section:

1. a systematic international review of evaluations of school networks that have had a positive impact upon pupil learning outcomes
2. classroom-focused data from the programme-wide enquiry
3. key stage results comparing year-on-year improvement in NLCs compared with non-NLC schools

Much of the programme's early research had a strong developmental orientation, with enquiry methods integrated into the developmental purposes of the programme. This

approach generated high levels of practitioner advocacy. It also yielded large data-sets rich in operational and process detail but relatively undifferentiated in terms of weight of evidence. This limited the extent to which validity and reliability claims could be made – or correlations drawn with the improvements in pupil learning outcomes registering in the quantitative analyses of pupil attainment and other data.

In the **Systematic Review of Network Evaluations** (CUREE, 2005), the review question was: *What is the impact on pupils of networks that include at least three schools?* The review group was seeking to understand the relationship between different characteristics and processes of networks and their positive impact for pupils.

Networked professional learning emerged as being at the heart of the majority of the effective networks – *those that made clear differences for pupils*. This was not a preconception held by the review group: it was a finding. During the course of the review, sub-questions relating to innovation, knowledge transfer and collaboration began to coalesce around networked professional learning.

Whilst at one level collaboration was a means by which networks secured buy-in from a wide range of partners, most effectively it was built into professional learning as the principle means by which networks achieved depth – through the effective transfer of knowledge and skill.

Significantly, peer-to-peer collaboration, in combination with specialist expertise (most often provided through HEIs and Local Authorities), was the dominant model. This finding resonates powerfully with the findings of the CUREE EPPI systematic review on collaborative CPD (2004) and with the programme findings reported above – and with previous research in the field (Lieberman, 2005).

Examples of such effective collaborative activities included:

- teachers teaching teachers across a network
- participation in collaborative work groups
- action research-based professional development involving a commitment to reciprocity and the creation of structures for sharing learning
- collaborative teams working with district partners
- peer-support teams which receive further mentoring from university staff

The review group drew the following conclusions and suggested implications:

For practitioners ...

Schools should consider how their membership of networks could support and enhance teacher CPD opportunities through cross-organisational collaboration.

And for policy...

Policy members supporting and promoting networks should pay particular attention to using networks to expand CPD possibilities and expectations and to ensuring that CPD is harnessed strategically to build and sustain networks.

The programme-wide enquiry also asked the question: *Is adult learning in NLCs improving the quality of classroom practice?*

NLCs report a number of ways in which they believe that they are making an impact in the classroom:

- Network activity is seen as encouraging schools to take a fresh look at their understanding of and approaches to lesson and learning design. Many networks are committed to collaborative planning at an individual or subject level and are focused on practical, classroom-based activity.
- NLCs are seen as enabling practitioners to gain first-hand practical experience of a broader range of learning environments, the different issues involved in personalised learning and the strategies available to deal with them.
- Practitioners in networks feel able to use NLC membership to enhance their understanding and use of externally generated programmes and strategies (eg AfL, learning styles, thinking skills)
- Engagement with enquiry activity is significant in changing teachers' views of their pupils and their capabilities. In a number of cases changes in teacher behaviour are evidenced in the reports by comments from pupils.

"Teachers feel more confident learning from fellow practitioners. The tools used in implementing assessment for learning and the enquiry-driven networked processes of adult learning have led teachers to develop new skills in managing and developing learning in their classrooms." (Teacher)

School-to-school learning

NLCs create collaborative school-to-school CPD opportunities, and it is at this level that networks have their greatest impact on CPD. School-to-school learning involves more than one school, but not always the whole network. This reflects the commitment to voluntarism and 'learning on behalf of' that characterises NLCs. Within the school-to-school learning mechanisms, many of the processes and activities involved are consistent with those described above, and with those found to be effective in EPPI systematic research reviews.

For example:

NLC school-to-school learning mechanism	CPD activities from the research review
Research Lessons	observation, feedback, professional dialogue, peer support, action research, individualised focus, sustained and embedded
Mentoring and coaching	external/specialist expertise, peer support, modelling, dedicated teacher time, professional dialogue, observation and feedback
Networked Learning Walks	observation, peer support, modelling, dedicated time, professional dialogue, external/specialist expertise

The enquiry data showed that Networked Learning Walks and mentoring and coaching were regarded as the most effective NLC school-to-school learning mechanisms. Network-wide conferences were also frequently mentioned. All facilitate lateral learning between schools. Perhaps unsurprisingly, those NLCs engaging in a range of professional learning approaches report a greater impact on learning than those using only one kind of CPD.

Perceptions about impact in relation to NLC school-to-school activity include:

- enhanced understanding and perception of pupils' capabilities
- changes in teachers' skills and competence
- enhanced self-esteem, for example through experience of leading staff meetings in other schools, opening network events and addressing Local Authority colleagues

Some NLCs also noted the effect of changing practices and collaborative learning on staff retention and recruitment – also the subject of a focused research programme.

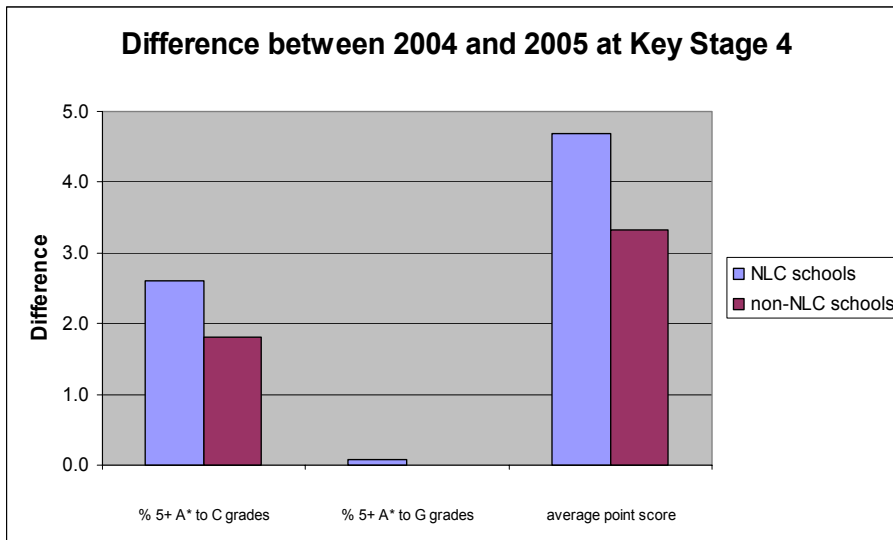
Finally, some hard data from Key Stage 4

In the UK, GCSE results at 16 have long been the educational currency of choice. There are multiple graphs that could be displayed – Key Stage 2, individual network growth patterns, data sets by Local Authority. Two graphs related to Key Stage 4 will suffice to make the point.

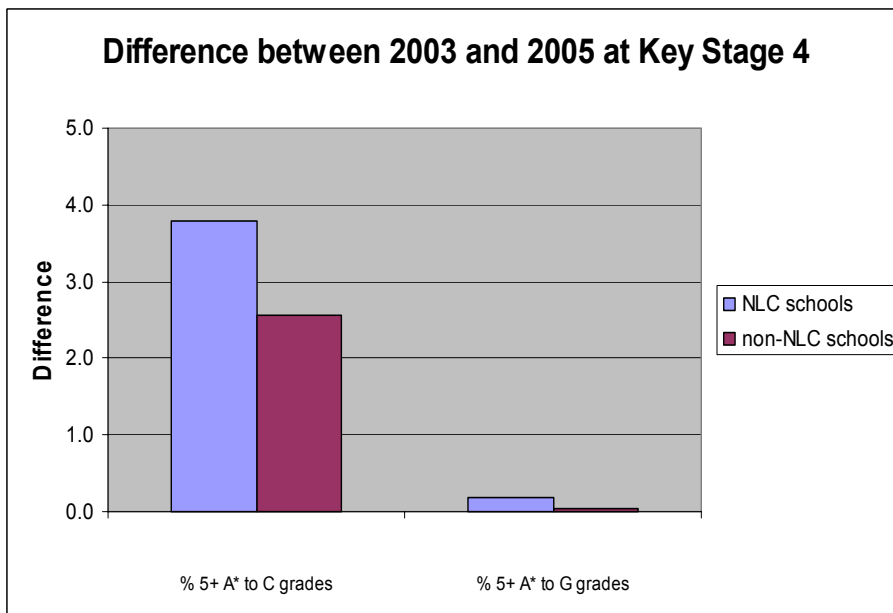
It seems reasonable to believe that networks of schools focused upon learning together around collectively defined priorities and purposes will raise student achievement by a factor greater than if they hadn't bothered. It is helpful, though, when the data shows this to be true.

Key Stage 4 data for 2005 supplied by the DfES shows NLC schools have risen more than non-NLC schools in the percentage of pupils achieving five or more A* to C grades between 2004 and 2005.³ In terms of average point scores across all grades, the results again show that NLC schools have risen more than non-NLC schools (Graph 1).

³ This analysis of Key Stage 4 attainment data was based on school level raw published data for 2004 and school level unamended (provisional) raw data for 2005 as supplied by DfES.



When comparing Key Stage 4 for 2005 with the results from 2003, it can again be seen that NLC schools have risen more than non-NLC schools in the percentage of pupils achieving five or more A* to C grades. In terms of average point score, it has not been possible to make a comparison as the method of calculating the score was changed (Graph 2).



Conclusion

The key word in all the above analyses is *learning*. Effective networks promote networked learning – and that is a step on the road towards a learning system. What both grounded theory and research from the NLC programme tell us emphatically is that by *aligning* networked learning processes for adults and pupils, and having leadership that promotes and supports that learning, there is evidence that networks succeed in their twin objectives of fostering learning community and raising pupil achievement.

The achievement graphs above are a real bonus, because the claim could be made that a way of working that gives control back to the profession, that fosters professional learning, that stimulates innovation, that energises and enthuses teachers and that balances central accountability with peer responsibility would be the way to go, even if results stayed the same. Achieving all that and doing no harm to results would have been quite an achievement in itself.

When you enlarge your world laterally within your own level of the system, and vertically across levels, you gain ideas and perspective. When many people do this you literally change the very context (for the better) within which you work. Networks get you out of your own narrow world.

In sum, I believe we should push ahead with networked learning communities. One route to strengthening networked learning communities is to have a growing number of leaders exploiting the strategy for the greater public good. The question it leaves us with is how can we now build on early initiatives to accomplish the greater ownership, coherence, capacity and impact which systemic change beyond the plateau demands of us all?

(Fullan 2005b)

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