



## Knowledge creation and management – building an enquiry and research strategy for a networked learning initiative

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**Knowledge Creation and Management – building an enquiry and research strategy for a Networked Reform Initiative.**

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## **Background**

In 2003 the English National College for School Leadership established a research and development initiative to promote “Networked Learning Communities” (NLCs). The programme invited volunteer networks of schools with either Higher Education or Local Education Authority partners to prepare proposals for supporting networked learning for pupils, adults, school leaders and groups of schools over a three year period. Successful bidders were to be offered £50,000 per year and the opportunity to work with other similar networks. Forty networks started in September 2002 and a further 40 started in January 2003 involving some 1000 schools in total. The initiative was supported by the Networked Learning Group (NLG) at the National College, comprising approximately 50 professional and administrative support staff including a group of facilitators whose role was to support networks. During the Autumn term 2002 a small group of facilitator-researchers worked with the author, an external consultant, to start to develop the oriented research strategy for the programme highlighted in the symposium submission. This included preliminary work on defining what such a strategy might mean and the nature of its relationship with professional learning, practitioner enquiry and more traditional research.

This paper explores the process of developing an appropriate research strategy within an initiative oriented towards knowledge production. It does so through an examination of early strategic decisions relating to programme values, empirical and theoretical approaches to research utilisation, drawing in particular on the work of Huberman (1993) and concludes with case study examples of early research related work. In doing so the paper enters contested territory in full acknowledgement that the efforts of the programme make pragmatic compromises; the reflections here are offered tentatively to the world of academic critique for debate, refinement and exploration, not as simple solutions.

There are three core features of the Networked Learning Communities Programme that set the context and framework for developing its research strategy:

- its comprehensive attempt to embrace the complexity of networked reform in education communities;
- its emphasis upon enquiry oriented learning; and
- its claims to contribute to knowledge creation for and on behalf of others.

The NLC programme is positioned on the boundary between schools and teachers and university-based research. Some, but by no means all NLCs have strong links with universities and have specific research aims. An early question for the initiative, which will ultimately shape the direction of the Programme’s research strategy, is how far can or should knowledge creation be defined in traditional research terms and what is the connection to be made between programme approaches and those of academe? The scale of the programme, its 3 year timescale and its capacity to link policy making, practice and research all have the potential to complement established approaches to research but not necessarily to duplicate them.

## **The Networked Learning Communities in Context**

Although the NLC programme is unique in the UK, it has grown out of past reform initiatives with which it shares common features, in particular:

- Improving the Quality of Education for All (IQEA) Hopkins (1994) – an initiative shaped and organised by the research community with a strong focus on school improvement and pupil attainment;
- the School Based Research Consortia – an initiative prompted, funded and guided by a national government agency;
- its design draws, too, on the work of Anthony Alvarado and Elaine Fink (2001) in an effective 11 year programme of school improvement, through instructional leadership, in Community School District 2 involving 45 schools and 22,000 students in a diverse urban setting in New York City; and
- on the work of Lauren Resnick (2001).

The connections with the UK initiatives have been particularly strong because many schools, networks, co-leaders and activists at programme level were deeply involved in predecessor initiatives. Efforts have also been made, however, to draw on programmes from other countries through:

- literature searches and reviews e.g. Demos (2002);
- international study visits (see Paper I in this Symposium)
- including facilitators from the international community in the facilitation team;
- small scale studies of and consultation with similar networks during the design phase (What does a network facilitator do 2002).
- testing of early ideas, processes, instructions and outputs at international events such as this one.

Evidence and learning derived from research about learning and school improvement have also played a strong and explicit role in the programme design. The NLC programme was grounded in research in its design as well as its intention. At its inception its leaders and funders believed that it was distinctive in its combined focus upon:

- networked learning’;
- learning at 5 “levels” (pupils, adults, school leaders, school and inter-school); and
- its focus on the “distributed” leadership provided by a wide range of actors in schools.

### **Does NLC’s Focus on Innovation have Implications for its Research Strategy?**

Whilst the programme has its roots in existing evidence, theory and previous reform initiatives, its goals are located in practice and in challenging expectations. As a government funded programme involving 1000, self-identified schools, the NLC programme self-consciously tries to innovate. Throughout all the programme literature there is an emphasis on innovation, starting with the following statement from the proceedings of the CERI/OECD conference in Lisbon, 2000 “Networks are

an effective means of supporting innovation in times of change..... and of restructuring and reculturing educational organisations and systems.”

The aim to be ground-breaking ranges from efforts to change practitioner interest in and conceptions of knowledge creation and research, or research and evidence informed practice through to efforts to seed practice informed policy making. There is also a strong commitment to breaking down the potential barriers to networked learning caused by inter-school competitiveness, a phenomenon in the UK associated in particular with the combined effects of market based resource allocation and comparative accountability mechanisms. The early aims and aspirations set out in the recruitment literature include the statement:

“In Networked Learning Communities, schools and teachers will create and exchange knowledge collaboratively, continuously and systematically. By ensuring that adults learn, that schools learn, and that schools learn from one another, we can help all children to become powerful learners.”

(Why Networked Learning Communities? NCSL 2002).

Similarly, the programme introduces its research and development work as follows:

“The NCSL Networked Learning Community Programme will build upon this (i.e. schools’) work by inviting potential partner schools to utilise best available knowledge to establish model networks.”

It goes on to describe the characteristics of such networks in relation to enthusiasm to learn from and with others, the articulation and sharing of values, the creation and transfer of knowledge to support improvement, the dispersal of leadership and commitment to and resourcing for Continuing Professional Development (CPD). (Networked Learning Communities, learning from each other... Learning with each other, NCSL 2002)

Knowledge creation in this context is as much about sustained and collective professional development and learning as traditional research with its disciplined processes of goal setting, valid and reliable data collection and transparent analysis. There is recognition of the importance of the “best available knowledge” but no consensus as yet as to what constitutes “best”. The programme faces questions about whether to give priority to identifying best available knowledge only from products of the academic research or to extend this to the day to day enquiry and research of participants. The programme has responded in a number of ways.

Research processes in the NLC were intended to nourish the work of the programme through an emphasis upon *enquiry orientated learning*. This intention is evident in all of the programme literature, the criteria for application from aspirant networked learning communities, the applications themselves, the early work of the networks and the NLC facilitators’ own work in supporting networks. Yet the programme aims to work with research and enquiry without being a traditional research project or agency. It has described itself as a ‘development and research’ initiative, aiming for an “oriented research strategy” and not as a research project geared towards traditional findings. Ambitiously, the NLC seeks to use enquiry orientated learning “to change the way we are thinking about learning at every level in the education system” (‘Why Networked Learning Communities?’ 2002).

The programme also aims to facilitate practice-informed policy making. To this end, NLC has formed a partnership with an influential UK policy think tank, DEMOS, within

which there is a commitment to developing “real time research,” that is research and or enquiry whose processes and outputs are designed to gather and process information capable of informing events as they unfold. The focus here again is on engaging with research processes and findings for immediate and intermediate purposes rather than in order to add to the formal, academic canon of knowledge.

The context for the Research Strategy thus:

- emphasised the importance building on others’ knowledge – provided that knowledge is inclusively defined;
- defined knowledge creation as a continuous, collaborative process – rather than a process leading to products such as research findings and publication in academic journals;
- accepted innovation as an imperative of practice;
- aimed to secure a positive influence for learning and enquiry/research on policy and practice; and
- was open to and interested in longer scale, longer term and more deeply tested knowledge building.

### **The Education Research Context**

Does the distinction between knowledge creation, diffusion and use really matter? A brief review of recent developments in education research indicates that this is an issue which goes to the heart of current debates about “evidence-informed” practice, “best practice” and “sharing good practice”. In the UK, in particular, there has been considerable national policy analysis and reflection upon the role of education research in recent years. In England the National Teacher Training Agency (TTA) sponsored a good deal of debate through the work of its research committee. This included the presentation of a controversial paper by one of the committee’s members, Professor David Hargreaves, which challenged the quality, relevance and accessibility of education research in (1997). Similar debates have unfolded internationally. These are reflected in the OECD programme of reviews of educational research and development across 8 member countries (OECD 2001 & 2002). This debate about national policies and approaches has also spawned reflective think pieces and secondary debate about the nature of research and evidence informed policy making starting with lively rejoinders to Hargreaves( *ibid*), (Hammersley, 1997) moving on through reflections on the role and functions of research reviews (Oakley, 2002, Elliot, 2002) to more practitioner oriented contributions from organisations like the English National Teacher Research Panel (Cordingley et al 2000, 2001) with which this author is closely associated. This literature spans the terrain and maps many of the issues faced by the NLC initiative encompassing issues such as:

- the need for more research that focuses on issues of concern to teachers and schools, and in particular for research that reaches deep into learning and teaching processes (*Cordingley 1997,, Hargreaves, 1997, Harris, 2002 Stoll 1999*)
- a need for more, large-scale, high quality and mixed methods research, capable of answering within a single study questions about *whether* different issues or approaches are important helpful and *in what ways* the issues or approaches take place and have an effect Hillage (1998). Exploring whether there is an effect will rely to a degree on comparative studies involving a considered approach to sampling and to the testing and validation of instruments, data and findings. Exploring how such

effects came about will necessarily depend upon more qualitative approaches, data and analysis because of the need for fine grained illustration of complex and dynamic processes.

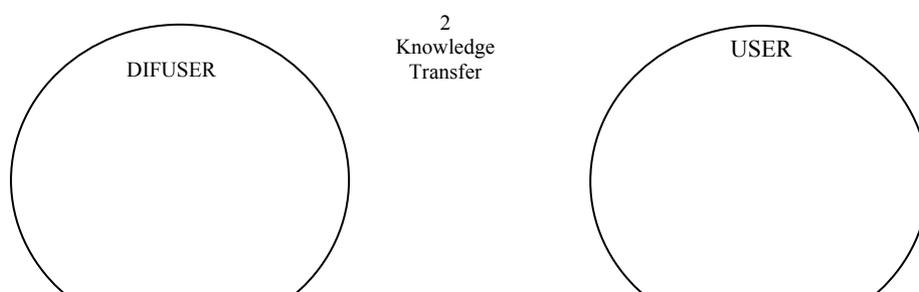
- a need for a more cumulative approach to research and evidence building both within and between studies – of the sort supported by the Cochrane and Campbell collaborations (and in England, the EPPI Centre approach) to developing systematic and technical research reviews, (Hillage 1998 & Oakley 2002);
- a need for greater skills in appraising research findings, particularly quantitative findings (Gorard 2001) amongst researchers and research users; and
- the importance, given the context specificity of educational practice, of recognising the need for practitioners to interpret the implications of research findings for their own context (*Guskey 1995 and Eraut 1994*).

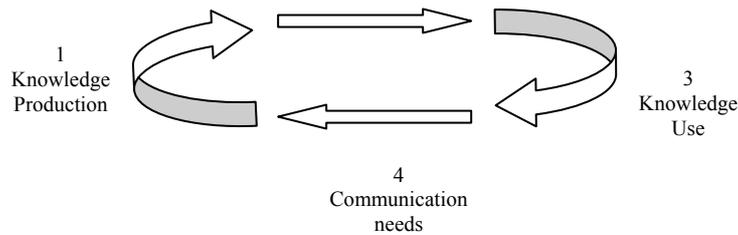
The initial concern for NLC was how to shape a research strategy in the context of these national concerns and its own ambitious goals. Should the NLC set out to create or commission studies that do meet those needs, as part of its commitment to best available evidence? Should it concentrate upon making appropriate research available to the networks? Or should it try to undertake such research itself? Finally, given its commitment to research only as a means to the end of supporting networked learning, how was the process of knowledge transfer to be conceived?

### **Knowledge, Utilisation and Transfer**

The research dissemination and utilisation literature addresses the issue of the interface between research and its use in two ways. Huberman (Chapter 4, page 36 19XX) characterises traditional approaches to knowledge utilisation as being linked or cyclical as shown in figure 1 below. In the linear model, knowledge is produced and, through the agency of a knowledge diffuser, transfers to users. He points out that “the bulk of research about knowledge use and dissemination has to do with the transfer process and the conditions under which it can be accelerated, without resulting in an undue ‘distortion’ on the part of users”. (ibid). A more developed model involves users, often through action research, in defining “the type of knowledge they require. The research community is then able to frame its next raft of studies around these needs.”

Figure 1. Relationship between diffuser and user (from Huberman XXXX)





Neither conception treats users as knowledge producers. The NLC programme does. Does that mean that the NLC research strategy needs to position itself in the left hand circle or at both ends? Clearly the networks themselves were not conceived simply as users of the knowledge created by others, given the commitment that “schools and teachers will create and exchange knowledge collaboratively, continuously and systematically.” If the programme occupies both spaces then the research strategy will need to address both sets of processes. The emphasis on knowledge creation would sit at one end and the notion of networked learning would sit both at the other end and in the connecting strands between the two. It is important to note here that Huberman was writing about knowledge transfer before the emergence of networks focused on knowledge transfer. There is now evidence Figgis (2000) of their importance both in the successful utilisation of research and given the right structures, in its diffusion, Kushner, Simmons et al (2002). However, as this paper attempts to show, such duality is not unproblematic. To be effective, it would mean establishing a workable interface between NLC knowledge creation and the other potential users in schools and in different types of networks. And because knowledge creation involves building on what is already known, means would also have to be found for drawing in the knowledge base of academe. The initial dilemma was to identify how far knowledge creation activities require participation in large scale and traditional research of the kind recognised and acclaimed in the academy but which, from an NLC perspective, remains locked into journals, bookshelves and the experience of direct participants.

Huberman goes on to highlight “one of the more robust findings in the research utilisation literature” - the importance of “sustained interactivity” in demonstrating research effects on practice. He also emphasises the importance of exchanges between knowledge creators and *potential* users (i.e. not those with a direct role in the study) during its conduct. He points out that in most instances “there is, at best, modest activity” during the conduct of studies although the pace picks up when findings are brought to user organisations. He lists interventions and exchanges during this ultimate phase of knowledge transfer as including:

- translating findings into contextually grounded, semi-operational forms, e.g. alternative ideas of what study results can mean locally, of what can be ‘done’ with them;
- ‘nourishing intermediaries,’ i.e. providing inputs and advice to local actors recruited earlier in the process to bring the study into the host setting;
- mixing ‘readable’ written products with in-person interventions on the part of the research team;
- staying with the user setting over time, typically to the point where internal discussion, training and decision-making mechanisms have engaged actively with the findings;
- focusing on the alterable variable i.e. on the connections between the study’s findings and policies or practices within the user environment that are judged amenable to change;
- scouting out and taking into account local susceptibilities;

- going beyond the study, i.e. engaging with users on issues of local significance or controversy for which the study has no specific answers but in which the researcher has conceptual or practical expertise.

This list relates closely to the priorities of the NLC initiative and its expressed need for “orientated research,” despite the somewhat technical language. Users are “not confirmed simply as ‘targets’ but as actors who will transform the knowledge-base in line with their own representation of the problem”. (ibid). Wrestling with the processes identified by Huberman would certainly fit well with many NLC aspirations. It also opens up the question of whether some activities are focused on knowledge creation and others on knowledge transfer and whether such a distinction matters.

### **How does this Framework from the Literature Relate to Early Realities?**

Quite early in the development of the research strategy the research team identified several principles that gradually created a sustainable path through these questions. First of all, since the NLC was conceived as a Development and Research programme, the work needed to be *fit for purpose*. The first purpose was ensuring that learning took place continually and continuously at programme level as well as in networks and schools. The aim was to gather in data and learning from the networks, make sense of this and portray it back to networks in forms that supported their learning. Whenever possible, as the Schools Based Research consortia had indicated Cordingley & Bell (2002) data collection needed to be useful to those involved in collecting it as well as in answering research questions. In particular, feedback from data was needed to inform learning cycles across the initiative at the same time as learning and practice unfolded. In effect, there was a need for action research at programme level. This was constructed as Real Time Research and is explored in a separate paper (Horne & Bentley 2003) for this symposium.

Simultaneously, and informed by commentators like Huberman (ibid) and the work of earlier initiatives such as IQEA (Hopkins 1994) and the School Based Research Consortia (Cordingley and Bell 2002) the NLG identified a need for a resource focused on:

- the representation of learning (or knowledge);
- the intense sharing of good ideas;
- the interpretation of actions; and
- the reconstruction of developed strategies to meet the learning needs of others; and the mining of available resources.

In the language of the Networked Learning Group, this is a process of surfacing and making visible the learning within the networks so that patterns could be identified and made available across the networks. To this end part of the research resource was constructed as the Learning Exchange. Here, artefacts, including research and enquiry reports and instruments and guidance about tools and processes were to be pooled in ways which facilitated others’ learning, Networks were supported in this by designated NLC personnel. The emphasis in all of this activity was on learning, rather than the more fashionable business construct of Knowledge Exchange.

Once these elements of the research strategy had been clarified there remained the processes and boundaries between knowledge creation as learning and in its more traditional form – research. The NLC spectrum of activity ranged from enquiry orientated learning for oneself (albeit with others) through enquiry orientated learning with and for others and extended to both small and large scale, learning orientated

research. Each type of activity needs to be conceived and supported in ways that enable it to inform and strengthen the others. In this way the products of enquiry orientated learning would be accumulated and made accessible within the Learning Exchange, thus completing Huberman's knowledge cycle.

Huberman asserts that the more developed forms of knowledge transfer involve larger scale research being shaped by the sum of user needs defined and expressed through action research. But this rarely occurs in reality, at least in the UK. Here, there are few mechanisms for even making practitioner action research titles, publicly available, let alone for analysing their processes and findings to identify the pattern of needs and interests. Some systematic trawling of teacher research needs and priorities has been commissioned (Galton 1999) as part of the TTA's strategies for promoting teaching as a research and evidence informed profession. And proposals are now being developed for creating a database of teacher enquiry questions and summaries of findings in order to enable such needs analysis. In the meantime, at least in theory, the NLC initiative represents one of the few relatively large scale opportunities for identifying and analysing such needs.

### **What distinguishes enquiry orientated learning and learning orientated research? A tentative framework.**

The research team developed a tentative framework for identifying a spectrum of research, enquiry and learning and for exploring the myriad of related, dynamic activates. The aim was to develop a degree of consistency in providing support, evaluating appropriate follow up activities and identifying excellence. This framework was also intended to help the NLG decide whether, and if so how to make distinctions between the different elements. At a meta level, the purpose of the document was to:

- acknowledge the importance of all of the activities to the NLC enterprise and so to challenge assumptions about hierarchies of knowledge;
- identify a framework for supporting the development of high quality work at each point on the spectrum and for establishing a quality base line; and
- create an identifiable core of thinking around which further research work and strategy building could be developed.

The document identifies a spectrum of purposes and activities and explores the points at which the aims of activities affect their fitness for purpose.

### ***Enquiry Orientated Learning***

First, the framework draws on existing literature about teacher learning. This started with recognition of the context-specificity of learning and teaching activity and of the professional skills involved in learning in such complex, fast paced and dynamic settings. The emphasis on enquiry in particular grew from recognition that enquiry provides opportunities meets all of the conditions of effective CPD highlighted by others such as Joyce & Showers (1998). This approach is lent considerable weight by the findings of the technical and systematic review of the literature on the impact of CPD, forthcoming (Cordingley, Bell & Rundell 2003). They identify a range of activities which are natural components of networked practitioner research or enquiry:

- identification of personal learning needs and starting points (the engaging question);
- a requirement for sustaining activity (through the iterative clarification of problems or questions, evidence collection and analysis and drawing conclusions);
- a safe space in which to admit need (through the protection afforded by enquiry protocols);
- dialogue that surfaces internalised learning and supports the development of metacognition;
- observation and feedback (generated through engagement with data, and the chance to engage with specialist experts (through enquiry, mentors, colleagues and the literatures).

For many pupils, teachers and leaders, the first steps of enquiry oriented learning are intensely personal ones. the goal of the activity is personal learning. The framework suggests that tests of quality in this case would need to measure how far the activities met the individual learner's needs and how far the process drew on and contributed to the knowledge and skills of the others involved in the learning process. Subsequent discussions of the framework have highlighted the need for other tests of quality to relate to the ethical context in which the learning took place and, ultimately, the benefit to pupils.

#### *Enquiry oriented learning for and with others*

Within the NLC context the framework was intended to encourage a commitment to progressing from enquiry orientated learning *for oneself* to enquiry orientated learning *for and with others*. Here the tests for quality would relate to fitness for purpose of supporting the learning of participants and others. The tests in relation to meeting the learning objectives of participants and to ethical considerations continue to apply but to these must be added consideration of the needs of the "others" who are not involved. In this context the demanding but authentic list of conditions for knowledge transfer identified by Huberman start to assert themselves again. If these activities are necessary for knowledge to transfer from research findings or scholarship into practice, are they also necessary for others to benefit from enquiry orientated learning?

The exploratory enquiry and research framework proposed and, therefore, to some extent will test, the idea that the further the potential beneficiaries of enquiry orientated learning are from its generation the greater the need for the "sustained interactivity" identified as important by Huberman. In these circumstances, quality assurance and support need to relate as much to the way in which the learning is made available to others as to the generation of the learning in the first place.

To illustrate this in concrete terms, if teachers in a school notice a group of colleagues becoming excited about changes in students' or their own learning in staffroom conversations or meetings, transfer may be effected through personal contact. Enthusiasm is infectious. Colleague teachers or students working in the same context will be able to check out or triangulate the reality underlying the enthusiasm. They will know that the activities or approaches worked in their own organisational culture and for their community. They will be able to ask questions and observe practice naturally in pursuing their own needs and interests and/or the requirements of their school. They have the potential to be active 'users' of the knowledge – providing the prevailing organisational culture, the regulatory environment and the models of learning and professionalism reinforce their sense of agency.

Teachers in other schools in the networks share some of these advantages but will need more information about the context for the learning: the NLC provides an explicit medium for providing such information. However the greater the distance, between subjects, phases or types of communities served by potential users and originators, the greater the need for detailed representation of the specifics of the learning – and for acknowledgement that users will need to interpret the learning for their own context.

As NLCs grow, the self-conscious development of a professional learning community may have the power to short-circuit some of those problems as learners, through exploring networked learning, gain increasing meta cognitive control of their own learning and as the environment for enabling learning becomes increasingly supportive. Without such recognition and support, the learning for others may become little more than the equivalent of an exciting travel brochure – good to look at and imagine but falling well short of profound experiences without significant investment.

The implication of the distinction between the two forms of enquiry oriented learning is that for learners not involved deeply in NLCs and for those involved in policy making, the emphasis on learning for and with others generates a requirement for the development of a pedagogy for sharing practice; the needs of the other learners must be attended to with increasing commitment.

For the enquiry and research strategy's purposes this extends not only to the ways in which the learning is made visible but also to the nature and quality of the evidence in which it is grounded. This is important for practical reasons as well as for larger ethical reasons. Once potential learners or users of the knowledge being generated through enquiry orientated learning have no direct knowledge of the context they need more detail and they need to know that they can rely on the authenticity of the evidence. For example they need to know about the learners, school, communities, networks, subjects or phases involved. They also need clarity about the relationships, assumptions and values that may have influenced the activity, if they are to be inspired to try aspects of the practice in their own context and supported in doing so.

Whether and/or how far different NLCs have enough in common for learning to transfer without the scaffolding of information/evidence and learning processes is an important question for the initiative. So is the extent to which learning can travel from schools, teachers and leaders in NLCs to those who have no contact with the initiative. Finally this raises important questions about the comparative effectiveness of tools and processes developed for use by others, of case study accounts of enquiry and of large scale and more traditional case study and enquiry resources.

### *Learning Orientated Research*

Enthusiastic as NLC participants may be to engage in enquiry orientated learning with and for others it is not yet clear how many are willing or interested to engage in research or enquiry explicitly intended to add to the knowledge base. Here, the emerging enquiry and research framework makes two particular distinctions. It proposes that learning orientated research (as distinct from enquiry orientated learning) must first be committed to building systematically on what is known already and secondly to publication of methods, data, analysis and findings to enable peer review.

By no means all systematic enquiry made public as advocated by, for example, Stenhouse (1980) is committed to the building upon what is known already. The

barriers to making practitioner enquiry public are considerable. The span of the literature, its scale, the cost of accessing it (which is not always apparent to academic colleagues with access to university libraries and academic search engines) create initial, well rehearsed stumbling blocks. The effects of a sustained focus in research funding and assessment on the excellence of inputs (methods) and outputs (peer reviewed journal article) over outcomes (utilisation) and the lack of systematic and technical as opposed to interpretive reviews, mean that the content of research emphasises the knowledge generation process over knowledge communication and interpretation thus inhibiting practitioner engagement. The problem is not simply one of supply. Much action research, in an effort to move away from meaningless citations and towards an emphasis on practice and making differences has focused exclusively upon practitioners' own data in this context.

The barriers to writing in public to enable peer review are also considerable. There is the extensive, often heated, debate about practitioner versus academic research. Husler et al (1986) McNiff (2002) and Elliot (2002) and others have argued extensively for the authenticity of practitioners addressing questions teachers care about. Hammersley (1997), Foster (1999) and Gorard (2001) in the UK offer dismissive rejoinders. This is hardly an environment in which teachers, for whom writing is not an everyday activity, are likely to feel confident about taking risks. They may produce Masters theses for accreditation purposes, but writing beyond this is rare. In reality, as Chapman points out (1995), neither model has reached deep into educational practice. Indeed, he quotes Adelman (1987 p177) as suggesting that the outputs of action research "are indistinguishable from the positivistic, single item, cause-effect research which the promulgation of teaching as a practical ethic has tried to replace". It is perhaps no surprise that of 1000 central Government funded teacher Best Practice Research Scholarship in the UK for 2000 – 2001 and 2001 – 2002, only 37 and 50 teachers respectively chose to submit a formal research report for publication. The scheme was funded as continuing professional development and thus participants were happy to share practice amongst colleagues at conferences at school staff meetings and through subject and professional associations. They were not willing to enter the fray of peer refereed publication and critique.

Should the NLC be encouraging practitioners to enter this territory as part of its commitment to knowledge creation? There are encouraging precedents. From 1997 – 2001 the Teacher Training Agency allocated 30 Teacher Research Scholarships a year and 90% of these teachers produced full research reports *and* 4 page summaries designed to raise other teachers' interest in research. The 4 TTA funded Schools Based Research Consortia and, to a lesser extent, IQEA have generated a considerable body of teacher writing much of which has appeared in peer research journals and at research conferences. The International Teacher Education Journal proposes to publish a special edition dedicated to teacher research in Spring 2004. The English National Teacher Research Panel will hold a second National Teacher Research Conference in 2004 where, as in 2001, over 80 teachers will present research of good quality by any standards. In the UK, therefore, there is an emerging body of teacher writing about research for both academic and practitioner colleagues. It would be a shame if the Networked Learning Communities initiative were not to contribute to further development. But to do this, more formal criteria and processes are needed. First, to ensure that emerging practitioner writers have positive experiences from their forays into academe. Second, to ensure that expectations and support are focussed on the "best available knowledge".

The NLC has chosen to enter the fray first by adopting and testing the research criteria developed by the National Teacher Research Panel. This Panel of teachers with research expertise have been established to provide expert and evidence

informed inputs into research policy making and delivery and to promote the development of research and evidence informed practice. Their plain language Research Criteria (see Appendix B) are designed to be capable of guiding their own and others' judgments of the quality of both large scale and practitioner research. They are designed to encourage and promote that element of practitioner enquiry capable of informing the work of other practitioners who are at some distance from the original research. They are also designed to contribute, principally through disciplined exemplification, to the pedagogic knowledge base. Early thinking was that learning orientated enquiry that reaches this point or, indeed sets out to reach it, should be encouraged within the NLC initiative because of its capacity to enthuse and encourage enquiry orientated learning at all 5 levels targeted by the programme, just as much as for its contribution to the larger knowledge base. The work of the National Teacher Research Panel and early discussions amongst the networks reinforced a common sense view that teachers are significantly more influential for other teachers than academics. School leaders were thought to be keen to listen to each other as the world's largest online community of practice "Talking Heads", run by the National College for School Leadership shows. The NLC focus on pupil, adult and leadership learning was similarly intended to explore the proposition that student enquiries will be similarly infectious!

### **Examples of Enquiry Orientated Learning for Myself with Others**

In spring 2003, at the time of writing, half the networks have been in existence for one and a half terms and the remainder for half a term. Whilst there is a rich array of research related work emerging on the ground, there is as yet very little in the public domain. Exemplification is therefore, as yet, somewhat restricted. Nonetheless, there are publicly available examples at every level, albeit from a limited number of networks. In the main, the networks already providing public materials are those which have grown from pre-existing relationships.

Within the Networked Learning Group (NLG), several facilitators have taken up the challenge of "enquiry orientated learning for myself with others" by completing learning journals. One facilitator, Julie McGrane had extensive experience not only of using a journal as part of her own action research in a school but also of coordinating a research programme that included teacher journals for a group of colleague teachers, organising on the way a pyramid of journal sharing between colleagues and a system of annotation and feedback to accompany this. She started to develop a related, collaborative approach to journals amongst facilitators during the autumn term 2002.

Across the networks, there are many examples of teachers taking their first steps in Enquiry Orientated Learning by asking open questions about why particular groups of students respond differently to others. Sometimes the others they work with are their students, who they consult in a range of ways about teaching and learning processes. Sometimes they are colleague teachers or teaching support assistants. Leaders are establishing study groups and students, too, are embarking on mini-enquiries.

There are also examples at Network level. In the Hexham partnership of schools, a small group of network participants are enquiring into the training needs of teaching assistants across the network. The analysis is squarely aimed at meeting the teaching needs of the network and the outcomes are already shaping second year planning.

### **Examples of Enquiry Orientated Learning for and With Others**

One of the activities planned for the NLC launch conference provides a vivid example of enquiry orientated learning for and with others. Following the completion of an interpretive review of findings and outcomes from networked learning initiatives DEMOS and NCSL (2002) the Demos team, with active feedback from the emerging NLG, identified a series of questions for networks to address. These questions were developed into a group of 28 more focused and immediate probes about early actions, and Networks were invited to identify priorities for their own networks in addressing these questions by locating the probes in priority order within a diamond containing 9 squares. The process of reflection, discussion and prioritisation was widely welcomed and thought to be helpful. The outcomes were captured and analysed collectively. The resulting pattern and range of priorities were fed back to the networks in a presentation to co-leaders highlighting, for example, the four questions which 25% of the NLCs (20) put at the top of the apex, the first of which was: "How will the pedagogic focus of the network improve achievement for all pupils?". Eighteen networks identified, "How will the network produce a set of principles for powerful learning that will be used by pupils, teachers and leaders?" as their top priority.

Within the networks the more developed, explicit and collective forms of enquiry shaded "from work done for oneself with others", whether it be an individual student, adult, leader, school or network, to "work done with and for others", to "learning orientated research" on a gradual basis. This can be illustrated through work in the Cambridge SUPER network which has existed in a range of forms, for several years. Here, for example, a teacher wanted to "find out whether a three stage review process consisting of a review 5 minutes, 24 hours and one week after the teaching period, helped pupils to improve their ability to recall information learnt in lessons." Initially, the teacher worked with her own class with some input from her head of department. Subsequently, two other members of the mathematics faculty replicated the project and finally another colleague with a low ability class started to test the strategy. The teacher, Rachel Hollingsworth, presented her enquiry at a SUPER network research day and explored it with colleagues. She has written a short report to a writing frame prepared for the network by its university based co-leader, Colleen McLaughlin, to enable the sharing of such work between colleagues. The framework comprises the following questions:

Figure 2

- |   |
|---|
| <ol style="list-style-type: none"> <li>1. general information <ul style="list-style-type: none"> <li>- title, school, contact.</li> </ul> </li> <li>2. Aims <ul style="list-style-type: none"> <li>- what did you want to find out ?</li> <li>- and why?</li> <li>- what was the main focus in terms of student groups, curriculum area etc?</li> </ul> </li> <li>3. The methods you used to gather evidence; <ul style="list-style-type: none"> <li>- what information did you need to address your research question?</li> <li>- how did you collect it?</li> <li>- what was the timeline?</li> </ul> </li> <li>4. Outcomes <ul style="list-style-type: none"> <li>- what did you find out about the substantive issues of the research?</li> <li>- what impact has the research had on practice?</li> <li>- what are you planning to do next?</li> <li>- what did you learn about the methods used?</li> </ul> </li> </ol> |
|---|

Not every enquiry addresses every question but the framework enables participants both to present their work accessibly and to access each others' work quickly. The snowballing or infectious nature of this kind of learning within a professional learning community illustrates nicely the transition from work for oneself to work for others – where there is a meaningful and interested audience; dialogue about the enquiry with such an audience in itself adds to the learning.

The work also, of course, moves towards learning orientated research as it gathers pace, focus and structure through the process of collaborative refining and critique that comes with making it semi-public. It has not yet reached the point where the teachers or the network are presenting the work to a wider or more distant public, where additional information may be needed. But it is easy to see this development taking place if those involved find the task meaningful. The enquiry is already structured by clear questions, data collection activities that relate to the questions and triangulation of different perspectives (comments from students, from teachers and assessment data). Curiosity amongst colleagues is likely to spark an interest in observing the review process to understand how such review works in practice and how it would work for different groups. The opportunities for engaging with the research of others are there. As the teachers' interest deepens, they may want to know more about other research about pupil reviewing. Equally, given the partner university's active research in this area, the work may well have grown in the light of the extensive discussions of formative assessment and learning how to learn currently taking place in the UK, sparked to an observable extent by the research review "Inside the Black Box" by Black & Wiliam (1998).

Developing the work and accounts of it to incorporate, for example, reflection on how the work links with what is known already could relatively easily move this and other reports, from accounts of high quality, enquiry orientated learning for and with others, to reports that would meet the requirements of academic research journals.

Further illustration and the kind of detail about the interventions that can only really be generated from observation by third parties because of the complexity of classroom activities, could similarly enable the work to start to meet the learning needs of teachers, not researchers, included in enquiry orientated learning.

### **Learning Orientated Research**

The SUPER and the other examples all show that small scale, "learning orientated research" may grow naturally from sustained, enquiry orientated learning. But conducting meta-analysis from larger numbers of small studies is notoriously challenging. So is conducting generalisable, rigorous, naturalistic evaluation, i.e. evaluation of interventions that arise not from a research design but from practice or policy based momentum. So for the Networked Learning Group (NLG) it may be necessary to build stepping stones between programme wide *enquiry orientated learning* and network based and programme wide *learning orientated research*.

The programme wide research resource is limited. Early examples of learning orientated research – related work have included:

- commissioning reviews of literature involving, for example, the Demos study of other networked learning programmes ( ), an analysis of networked learning theory (McCormick, forthcoming), NFER desk research on 'networked learning' (NFER, forthcoming); an evaluative study of network-based use of action learning sets (Fielding, 2003) and

three linked studies by the Open University into communities of practice, online network communities and web-based networking (forthcoming);

- supporting proposals from researchers such as Professor Charles Desforges and Pete Dudley to explore; a network-based lesson study initiative; working with the private sector to develop existing materials (e.g. Hay McBer's Transforming Learning) into a 'networked learning' tool..; and
- developing fine grained and sharply focused case studies of network facilitation.

In addition, the Programme's sponsors, the English government, are committed to commissioning an external evaluation of the programme. To enable such research, the programme has established a database that links details about publicly available school and pupil performance (which is extensive in the UK) and socio economic needs data with learning goals, networking processes and teaching strategies to facilitate both internal and external enquiry.

In its early stage of development, at network level the degree of engagement with learning orientated research varied significantly and often depended upon the extent of the partnership between the NLC and the HE institution and the nature of the learning focus. Where the learning focus was closely related to topical research and development issues such as assessment for learning, co-leaders, HE partners and schools are currently working out how to link small scale studies to larger scale projects. Some networks, like the SUPER network mentioned earlier, were also attempting to research the unfolding network process. Clearly it is much too early to exemplify such work. Nonetheless, there is a small scale example from a survey of teacher perspectives again from the SUPER network, that illustrates the commitment to researching the networking process. One teacher had undertaken an enquiry into what teachers think and feel about research in general, and about engaging in enquiry – and about why teachers “choose to develop or reflect their skills in undertaking classroom enquiry”. The enquiry was provoked by a comment made in a semi-structured interview..... ‘I think it's important to elicit how teachers feel, what their views are, what people's views are without having to qualify it.’ To this end she/he coordinated a mini survey of 28 teachers. Her study raised important questions for her own network and generates the possibility of building parallel, broader research in other networks and/or for the initiative as a whole. Publicising this work in the Learning Exchange to encourage other networks to pursue similar routes might lead incrementally to large scale research – or to a proposal for a larger scale and more formal study (once again closing the loop between practitioner and academic or professional research).

## **Conclusion**

Developing a research strategy within any educational, policy-funded initiative will always pose challenging questions in terms of appropriate relationships with academic research not least because of the different time scales and accountability regimes involved. Developing an appropriate research strategy within an initiative that aims to explore the knowledge creation- knowledge use interface was bound to be especially complex and contestable. The early stages of development have involved, as this paper shows, clarification of boundaries within the programme as well as those beyond it. As the work of the NLCs and the NLG moves on from early relationship building and goal and value clarification to create a more extrovert and concrete vehicle for dialogue, the tentative early steps outlined in this paper will be tested and illustrated operationally. As both the network and the research team

capacity grows the opportunity for shared work across boundaries will grow too. In this phase of development, attention can move from generic and abstract questions about the nature of the NLCs and NLG to concrete questions about what research can offer in relation to the many and specific learning foci of the networks and to the process of networked learning itself. This process would be greatly enriched by comments and critique of the contents of this paper.

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## Appendix A

### An enquiry and research strategy – an initial, tentative framework

There is a great deal of often rather fraught discussion about whether practitioner enquiry constitutes research. We see these activities as closely related at several levels. We want the NLC programme to approach these issues practically in relation to decisions we will have to take ( e.g. can this enquiry report go into the public domain with the NLC logo/kite mark? What does good practice look like?). More important still we want to think about them in relation to the support we will need to offer.

From the point of view of a practitioner or student involved in learning that makes use of enquiry processes distinctions between enquiry, learning, research and knowledge won't be very meaningful. The key issue is what do you want to learn and which processes will help you do it. The focus at this point is your own learning.

But as soon as you want to share what you have learned with other people the focus needs to move, at least to some degree, to the learning of those with whom you want to share your learning. At present there is an elision between learning and sharing learning. NLC Group will need to make a distinction between the two when NLC looks at work to decide whether to support its promulgation or provides training or support. We want to work on the basis of fitness for purpose.

***We suggest that the purpose we attend to should be principally meeting the needs of the learner - and that sharing learning with others brings responsibilities about meeting their needs.***

Of course meeting others' learning needs is also a powerful form of learning in its own right so there will always be lots of learners' need to juggle. So, for example, when deciding whether to kite mark work as NLC work we should attend to the needs of potential users of the documents more than those of its authors

***We suggest 3- 4 broadly distinct contexts for sharing learning that can help us make effective decisions about quality assurance and support: personal, partnership, programme wide and political.***

We can also see a case for trying to differentiate only three contexts: personal, partnership and public<sup>1</sup>.

If colleagues are working in a *purely* personal context, albeit collaboratively they are the person whose learning is given priority. Fit for purpose here means fit for meeting that learner's objectives. Some, but by no means all, of this work will also meet our

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<sup>1</sup> Once something is 'out there@ in the 1000 plus schools currently participating it is potentially available to a far wider audience than we can know and is therefore already public.

research criteria<sup>2</sup> – not least because they are designed to shape and support effective enquiry as well as to evaluate it.

If colleagues are working with and for others on a collaborative basis perhaps on behalf of their school or network then fit for purpose means meeting the needs of members of the partnership and of those at whom the learning is aimed but who are not immediately involved. This will impose a greater degree of systematic working and formality upon the learning process first to enable wider communication and second in relation to meeting the needs of others. Here again some but not all work will meet the NTRP criteria; that would be an ideal but not a necessary condition for programme support or endorsement in this context.

If colleagues are engaged in work whose core purpose is developing knowledge for use and testing for the programme as a whole or perhaps even the profession at large then the relationship changes more significantly. As the distance between the audience(s) and the locus of enquiry increases so the amount of knowledge or access to knowledge that the audience has concerning the enquiry activity and context diminishes. In order to trust the outcomes of the enquiry they need to know more about the evidence that supports the findings so that they can make their own judgements about what can be concluded. Fit for purpose here means that enquiry oriented learning needs to be systematic and transparent enough to enable others to understand the evidence base from which conclusions have been drawn and/ or replicate the activities to test, interpret and develop them for other contexts. We think at this point it is important to consider enquiry as research or “systematic enquiry made public”, as Stenhouse put it, and so would always expect it to be developed to meet the National Teacher Research Panel criteria.

***In effect we are proposing that the broader and more influential the context at which the knowledge generated is targeted, the greater the need for a rigorous and, systematic evidence base.***

Below we tentatively explore 4 domains of enquiry activity. Do they make sense?

**Personal: enquiry orientated learning that I do for myself to improve my classroom practice**

- If the goal of enquiry orientated learning by a pupil or practitioner is enhancing his or her own understanding then they are the main beneficiaries. If a teacher engages in enquiry orientated learning in order to improve her own classroom practice and the pupil learning within her classes then this too can be seen as personal learning. Within an NLC we hope that such learning would always take place with the support of others.

**Network: enquiry orientated learning that we do for our school and network.**

This type of learning is for oneself *and* for others. The learning is also a means to an end. This learning takes place between individuals and/or schools in situations where

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<sup>2</sup> We have agreed that we will use, and test for our purposes, the criteria developed by the National Teacher Research Panel for both small and large scale research for at least the first year.

it is relatively easy to find out more about the outcomes and context of the enquiry from those who carried it out, because in our case they are a part of the same school or Networked Learning Community. The membership of the NLC should in this case meant that there is some shared knowledge about the schools and individuals involved in the enquiry.

For example if more than one teacher is enquiring into how Thinking Skills Strategies help pupils to learn, then the main beneficiaries are not just those individuals involved in the enquiry, but the pupils in their own and their colleagues' classes. Of course there is still a lot of personal learning going on, but the outcomes have wider impact.

**Programme: enquiry orientated learning that our network does for the programme as a whole.**

This type of learning is also about learning for one self *and* for others. However this learning takes place on a scale where it is much harder to engage with those who carried out the enquiry. Other teachers in the NLCP will have some limited knowledge of the programme, and of the activity of other networks within the programme that will help them make judgements about the outcomes of enquiry.

For example if efforts to trial Thinking Skills Strategies are developed for the benefit of teachers in other NLCs then it becomes helpful to think about the activities as 'systematic enquiry made public' (Stenhouse) in other words as research.

**Profession: enquiry orientated learning that the NLCP does on behalf of the teaching profession.**

This type of learning is also about learning for oneself with and for others but aimed at a much larger audience. We must assume that other professionals will have little/no knowledge of the NLC programme or the school context in which the enquiry took place. So it becomes necessary to provide explicit evidence of the context, methods, and outcomes of the research to enable judgements to be made about what can be inferred from the outcomes of the enquiry.

For example if efforts to trial Thinking Skills Strategies are taken forward, not just as a learning process for teachers in the NLCP, but as an effort to create knowledge for the benefit of the whole teaching profession then it becomes helpful to think about the activities as 'systematic enquiry made public' (Stenhouse); in other words as research.

**Policy makers**

We originally wondered whether policy making represents a distinctive context but were very worried about implying that there should be different tests of quality for policy makers and practitioners. We also think that concentrating on policy makers' needs in terms of their learning takes us to the position where we very definitely write differently for them, and this meets the case.

## National Teacher Research Panel

### RESEARCH CRITERIA

Key criteria for assessing research that sets out how to be useful to teachers are summarised below:

Projects need:

(i) **a sharp focus**, supported by clear research questions or proposals for developing them. Projects should be directed towards outcomes which can be communicated to and used by teachers to inform their classroom practice;

(ii) convincing **arrangements for accessing and building upon what is known already about** the area to be studied. Projects need to show that they will make a systematic and cumulative contribution to what is known already about effective teachers, effective teaching of the curriculum and/or pedagogic leadership.

(iii) clear **research methods**. Projects need to show that they:

- will take place in a **relevant field of investigation**;
- include practical and systematic arrangements for **collecting evidence that is relevant to the research question or hypothesis**. They will need to show that:
  - **interview or observation goals are clear**;
  - their evidence is **relevant to the experience of teachers**;
  - the collection analysis and interpretation of data will be guided by **a consistent logic**;
  - there are clear strategies for **triangulating data**. For example are data about processes complemented by data about outcomes? Are data about perceptions complemented by observation data?
- have practical **arrangements for checking the interpretation of evidence and findings with practitioners and researchers**;
- involve systematic approaches to analysing data which allow the testing of issues emerging from the data as well as exploration of original hypotheses;

(iv) details of **arrangements for communicating the research to others**, including for example:

- arrangements for working out the meaning or the implications of findings for day-to-day practice with teachers;
- a report or other materials for publication in, for example, professional journals, LEA newsletters, research journals, preparation of a video or interactive CD ROM as well as reports which enable academic peer review;

- a short summary designed to whet teachers' appetite for finding out more and to enable them to make an informed judgement about whether the research is relevant to their needs;
- the development of vivid exemplification of ideas, theories and approaches being applied in practical teaching and learning contexts.