DRAFT

National College
for School Leadership

Networked Learning Communities

Learning from practitioner
enquiry and research
in
Networked Learning Communities

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Note   Quotes in the text ascribed to network teachers are notated as follows:

Role – network case study number.

Hence HT-C refers to a head teacher in case study C.

Figures

SECTION 1 Introduction – the research rationale

Educational research on school improvement is currently located within two policy contexts. The first is the development within education of the concept of teachers as researchers illustrated by the focus on practice-based research to enable school improvement (see for example, DfEE (2001) funding for Best Practice Research Scholarships; the NCSL (2003) promotion of Networked Learning Communities); and the Learning and Skills Research Centre's focus on practice-based research (Morris, 2002). As the need for practice-based researchers to share their evidence to ensure impact on school improvement has emerged this policy agenda has evolved into one based on school consortia and networks as reflected in the 'Networked Learning Communities' initiative of the National College of School Leadership. These networks seek to contribute towards the development of 'communities' of collective learning and knowledge creation within schools. The second policy context derives from debates concerned with practitioner research and the knowledge it generates. There is an on-going controversy surrounding the validity of such research (see for example, Hargreaves, 1996; Hillage, 1998; Tooley and Darby, 1998; Hammersley, 2002) and this research draws on this debate to design an appropriate framework for the research.

This proposal responds to the call for evidence-informed policy and practice based upon the rigours of systematic review (EPPI, 2001; Hargreaves, 1999). Hargreaves suggests that teachers have frequently 'tinkered' with teaching practices as a route towards educational improvement and that if the development of school-based knowledge is to move beyond 'tinkering' it would need to be accompanied by efforts to subject the resulting knowledge to systematisation and testing. This research design combines a systematic process with relatable findings from the case study schools to ensure the validity and relevance of the research. The research will consequently address the aims and research questions but will also meet the need to further enhance the research capacity of each case study school through this process (Gorard, 2002; White, 2002).

The literature relating to the research activities undertaken by networks or groups of schools is sparse. This is because practitioner research has rarely in the past used more than the host school of the researcher as an evidence source. Where schools have networked for purposes related to school improvement, the network has functioned as a learning exchange forum that disseminates the findings of practitioner research undertaken in each of the constituent schools. This is true of the Comer Schools Development Programme, the Coalition of Essential Schools and the League of Professional Schools, all based in America (Hopkins et al. 1994:76, programme websites), and of the *Improving the Quality of Education for All* (IQEA) programme in England (Hopkins 2002a: 42). A notable exception is the Northwest Regional Educational Laboratory, based in Portland, Oregon, that has arranged for groups of teachers and pupils to do field research on school improvement topics in a range of schools across the state (The Restructuring Collaborative 1997).

There is, however, a rich literature on practitioner research both in the classroom, as a means of personal professional development, and across classrooms, as a means of improving schools. This literature includes not only advice on research techniques (for example Croll 1986, Hopkins 1991, 1994, 2002b), but also on creating a research capacity within a school, embedding a research culture to the extent that a school becomes a learning community (for example Hargreaves, A. 1997, Ainscow et al. 2000).

In recent work Hargreaves (1999, 2001) examines the notion of the knowledge-creating school and proposes that evidence-informed practice offers a mechanism for school improvement. An important feature of such writing is the emphasis given to the development of trust relations that facilitate on-going continuous improvement within and between schools. These discussions suggest that high trust relations enable dialogue between members of an institution enabling them to share not only their successes but also failures. In this way the intellectual knowledge capital of the school is enhanced (Halpin, 2003; Habermas, 1984). Such processes articulate to allied conceptual frameworks that view the school as a community of practice

or learning community (Lave and Wenger, 1991). The research process will enhance the relationships already established and serve to widen dissemination across networks. It will create mechanisms through which school-based knowledge is subject to validation through the wider networked relationships and could enable the relatability and use of such knowledge to be determined. Such processes raise questions about the way in which collective learning is constituted at inter- and intra-school level, as well as the manner in which networks build on what is already known (Hopkins and Jackson 2003). Allied to these processes are questions concerned with understanding the operation of networks, the relationship between research conducted within the community and other processes that influence how far innovative practices can be replicated and disseminated (Huberman 1993). This body of research is useful in giving pointers, mainly by extrapolation, as to the nature of the support likely to be needed for practitioner research to flourish across a network of schools. In particular, this report addresses the following:

- How do Networked Learning Communities support schools to learn from research and evidence?
- In what ways are networked learning communities collecting, analysing and informing practice using data, particularly in relation to their learning foci? In what ways are they describing and providing evidence of progress? How does this relate to/differ from their current use of school-based and system-wide data?

The report identifies key support elements identified in the research literature, and uses seven case studies to illustrate the pertinent actions taken by networks towards creating learning communities. In order to engage with these issues the case studies will examine networked relations, both within schools, between schools and network to network.

The research team consisted of:
- two research coordinators, Dr Linda Devlin and Dr John Beresford;
- one research fellow (0.5);

❑ research administrator;

❑ six associate network practitioner researchers.

The research coordinators met on a monthly basis. The research team had overall responsibility for:-

❑ ensuring that the research process was guided by the BERA ethical guidelines and the NCSL protocols for enquiry and research projects;

❑ research collaboration across the networks by engaging in regular dialogue through research team meetings and by electronic mail;

❑ developing school-based researcher skills and the research capacity of the school and communities by modelling and offering appropriate research training and support;

❑ ensuring the research management ran smoothly, including keeping to deadlines and achieving the outcomes as agreed with NCSL.

The purpose of the research was primarily to gain detailed insights into the working of the Networked Learning Community but the intention has also been to encourage critical reflection on the research process in order to further develop the research capacity of each of the participant network schools. The respondents were identified by the network as the school based research coordinators or those engaged in enquiry across the network. The coordinators of these activities and those that had participated in the research were also asked to respond through the questionnaire or interview.

The research is based on a sample of case study Networked Learning Communities (NLCs) committed to the development of good practice in enquiry and research to enhance and sustain school improvement. The sample has been identified on the basis of network practice to date evidenced through the NCSL Networked Learning Group Spring Enquiry 2004 and the National Conference Exhibitions, June 2004. Geographical factors were also taken into account to ensure a sample representative of the national pattern of

networks. Finally the selection of networks was based on the self-evaluation of the readiness of the school staff to commit to their continuing professional development in research and the further development of their learning community.

Six of the case studies are Networked Learning Communities are funded by the National College for School Leadership, the seventh is a network funded by Creative Partnerships, an organisation for promoting the arts in schools that receives funding from the Arts Council.

Network A is situated in the Potteries, and consists of 8 primary schools and 3 secondary schools. This network originally identified a number of strands of research activity but on the basis of the findings and the changing needs of the schools is now focusing on the needs and provision for gifted students

Network B, in the West Midlands, currently consists of four secondary schools spread across two local authorities. The schools were all previously part of a similar school improvement network that received direct funding from the participant schools. The co-leaders are both classroom teachers.

Networks C/D, in the West Midlands, comprise a cluster of two networks that have different foci for their work but collaborate to enhance the research opportunities for members and disseminate the outcomes to both sets of network schools. A significant aspect of being a member of the network is how the research is disseminated outside of the schools. The original "Joint Cluster Submission" (2002) states that "the network is integral to the overall strategic plan to support the development, identification, dissemination and celebration of good practice". The larger network currently includes one special school and sixteen primary schools. As the name Local Enquiry and Research Network would suggest, the focus of the network is enquiry-based research.

Network E is situated in a small town on the south coast of England. It is based upon an Academic Council that existed prior to the NCSL Learning

Networks initiative, and consists of a secondary Community College, the only secondary school in the town, and four of its feeder primaries. The co-leaders are the head of one of the primaries, and the head of music at the college.

Network F is situated in a northern city. It consists of ten secondary schools. The network has close links with the local authority, which provides one of the co-leaders.

Network G consists of 16 loosely networked primary schools in and around a town in the east of England. Seven expressed an interest in accessing Creativity Action Research Awards (CARA). This enabled teachers in each of the seven schools to undertake action research that focussed on the creative input in the classroom of a funded external creative practitioner. The two designated leaders of the project were a local education consultant, who enlisted the schools and teachers, and the education officer (director) of a local Art Gallery supported by the town's local council, who enlisted the creative practitioners. Details are presented below in tabular form (Figure 1).

Figure 1- Network Features

Network	Geographical Location	No. of schools	Type Sec/Pr/Sp	HEI/ Consultant	LEA involvement
A	Potteries	13	Pr/Sec	Yes	No
B	West Midlands	4	Sec	Yes	No
C/D	West Midlands	23	Pr/Sp/Sec	Yes	Yes
E	South Coast	5	1 Sec/4Pr	No	Yes
F	North	10	Sec	Yes	Yes
G	East	7	Pr	Yes	No

SECTION 2 Methodology

The research adopted a collaborative approach with the identified case study networks, each network nominating a contact to work with the research team. This person had some background in enquiry and research and experience of working with the network schools. It was intended to involve the school-based researchers in the systematic review of the research process at three stages: design, data collection and analysis and dissemination of outcomes. This has occurred in most cases. They have also been involved in the collection of documentary evidence across the network in line with the case study data collection framework. These school-based researchers have enabled an exploration of intra- and inter-school socio-cultural processes that facilitate or inhibit the development of a community of practice allowing an analysis of the school's intellectual/knowledge capital. Furthermore they have allowed the research team to explore the way in which knowledge becomes embedded in specific schools and within networked communities.

The data collection process has focused on the research questions outlined above and incorporates critical reflection on the collaborative research process. This has involved engagement with the network researchers to reflect on the process of enquiry and research and the implications of the relatability of case study research in education.   The case study data collection methods included:

➢ documentary analysis (including electronic material);

➢ interviews with practitioner researchers and those that support them in the school, the network and the wider environment ;

➢ focus group interviews with pupils (where appropriate);

➢ participant observation of meetings and lessons.

Pilot

The research tools were developed for the NLC enquiry and research activity in two of the case study networks and were piloted with the network researchers. In addition to the interview schedules (Appendix 1 and 2) and

the observation format (Appendix 3), the team also collected a range of qualitative evidence using a Group Response Schedule (Appendix 4). This schedule was developed specifically for the purpose of this work on the basis of issues raised by the school-based researchers. Firstly, they and the respondents had very little time available to conduct one to one interviews: if they met with the staff as a group (e.g. as part of a staff meeting) they could introduce the questions and allay any concerns about the research and its purpose. It would enable them to respond to any issues arising from the questions and to clarify the inevitable minor confusions about which elements of the projects were school-based and which were network-based. There would also be an opportunity to encourage written qualitative responses, which would ease the pressure to capture all the responses through time-consuming note-taking by the researcher.

On the basis of these comments two steps were taken. Firstly further researcher support was provided for the focus group evidence collection process. Secondly the group response technique was developed, based on the network enquiry and research proposals and the research activity identified in the pilot. This method was then piloted in one school where a number of staff, research-active and not research-active, were asked to meet as a group and discuss the work of the network. The researcher, using the Group Response Schedule to aid recording, collected evidence of the focus group discussion. The members of the focus group were then asked to reflect on their involvement with network enquiry and research and use of the outcomes and respond in writing on an individual schedule.

A further issue of the methodology indicated in the pilot was the judgement of the respondents in responding to the questions about the research process. Firstly the respondents did not always use common terminology, mainly because they did not necessarily recognise what they had been involved with was research. The respondents also had differing levels of responsibility within the network schools. With headteachers, deputy headteachers, classroom teachers and learning assistants the profile of the research activity

could vary from school to school within the network. The standardized response sections made it possible to make comparisons in a complex situation between those who considered the network enquiry and research to be central to their routine work in schools and those for whom "the collaborative work was small on their own personal radar", but who acknowledged the importance of the work to the school. This is particularly the case where the respondents were not active researchers and required some prompting with regard to an appropriate descriptor of their level of involvement. The qualitative responses enabled the researchers to gain some measure of the impact of the enquiry and research in the network.
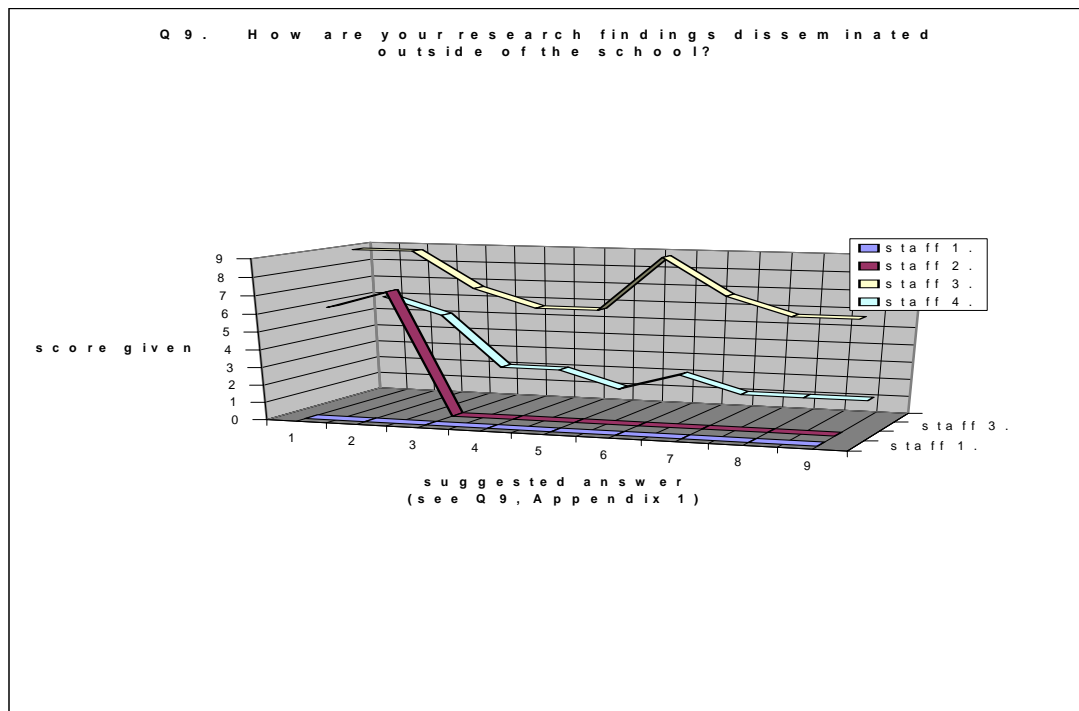
The benefit of the scoring system was that it offered the respondent the opportunity to indicate the extent of their involvement in a list of suggested research activities (Appendix 1). The fundamental purpose of the schedule was to determine the extent to which staff were engaged with the research processes that were underpinning the work of the network and to what extent they felt they were involved. The final version of the system was that a score of "0" equated to an activity not happening; a score of 1 meant the activity was emerging, a score of 2 meant that an activity was developing and a score of 3 meant that an activity was at an advanced stage. School-based researchers reported that this scoring mechanism encouraged respondents to think carefully about the nature and purpose of the network enquiry and research and enabled the recognition of the many parts of the research process. This was particularly the case where the enquiry and research process was well integrated within the wider school and network activities. The views can be presented both in a numeric form for purposes of comparison across the case study networks or as the original qualitative statements.

The opportunity for respondents to provide their own, detailed answers to the questions in a more open-ended style was fundamentally important to the research. Many staff did share their own opinions and feelings about the process they had experienced and the way in which each phase of the work

was integrated into the work of the school and network. However a number of the participants commented that the questionnaire was too long and that they lost motivation to complete it in a satisfactory manner. This was reflected by the fact that very few detailed comments were made in the open sections of the questionnaire. The lack of detailed qualitative responses in the pilot emphasised the need for follow-up interviews that accommodated the depth of response, particularly in relation to the integration of the research process across the network schools. This was addressed by follow-up telephone interviews with respondents who did not provide any detailed comments on their perceptions of the process.

Issues were raised about the variability of the findings across the pilot schools, which were acknowledged and addressed by the team. Q9 (Figure 2) investigated the respondents' opinions with regard to how research was disseminated outside of the school. "Staff 1" demonstrated a complete lack of awareness of the research dissemination avenues available. This was in sharp contrast to "staff 3" who scored each suggested answer six or above, suggesting that the listed methods of dissemination were developing or at an advanced stage. These differing levels of awareness of the dissemination opportunities reflected the individual's level of involvement with the school based enquiry and research. The Group Response Schedule does have the potential to produce some interesting comparative charts (Figure 2) but the team are not intending to present the report findings in this way on the basis that this may not be a reliable format. It certainly does not convey the underlying reasons provided in the telephone interviews for the use of the scoring by some staff respondents. When the respondents were questioned further it became clear that the language used in some of the questions was not fully understood by all the respondents. Some staff were unaware of all network provision, or may not have been able to access opportunities provided.

Figure 2

Q 9 .   H o w   a r e   y o u r   r e s e a r c h   f i n d i n g s   d i s s e m i n a t e d   o u t s i d e   o f   t h e   s c h o o l ?

Staff 1 = ICT co-ordinator   Staff 2 = Deputy Head

Staff 3 = KS1 & Music Manager   Staff 4 = Headteacher

On the basis of feedback from school based researchers it was agreed that the schedule would be used flexibly with respondents in line with the nature and needs of the network. The schedule could be used with those who were interviewed by the research team, but could also be used by the school-based researchers with school colleagues who were directly or indirectly involved with the school-based enquiry and research. It was agreed by the research team that the most important message to convey through the research design was that the aim was not to compare schools or networks but to gain an overall view of the use of enquiry and research in the networks.

In addition to the development of the schedule one to one interviews were undertaken with the headteacher, contact researcher for the network and a respondent were also piloted. These interviews were semi-structured, and addressed aspects of the coverage of the schedule (Appendix 2). Participant observation of network meetings and events were scheduled in the original

documentation and this evidence was used in the pilot. This included observation of steering group meetings, mentor meetings and a dissemination event. These elements of the pilot did not reveal a need for any significant changes. The team also identified a number of key documents, which were provided by the network schools including school development documentation and research reports or artefacts and minutes of network meetings. This aspect of the work was conducted in line with the original submission.

Finally the evidence of the impact of the collaboration was highlighted in the pilot interviews with staff, particularly where the research and evidence gathering was a clustered, collaborative activity. It was agreed by the team that the analysis framework should ensure that these elements were evidenced (Figure 3). The key areas indicated in the pilot were the collaborative behaviours that existed within the school and between some staff in some schools in the network. These included the building of trust relationships and "being able to rely on colleagues to do what they say they will do", developing ways to work together effectively with other schools "to achieve things we cannot achieve on our own" and to build these new ideas "into our routine practice". These concepts tended to be more evident where they did not exist, such as when it is difficult to contact co-workers across the network or where frustrations arise about the involvement or lack of it in network actions. One group of respondents felt that they were managing people and "their insecurities as well as the research process but that this had in the longer term proved to be highly beneficial to practice within the school".

Figure 3

ALL STAFF INVOLVED IN RESEARCH

LEARNING SCHOOLS   LEARNING NETWORK

NO COMMITMENT   COMMITMENT
TO NETWORK   TO NETWORK

DORMANT SCHOOLS   LEARNING EXCHANGE

NO STAFF INVOLVED IN RESEARCH
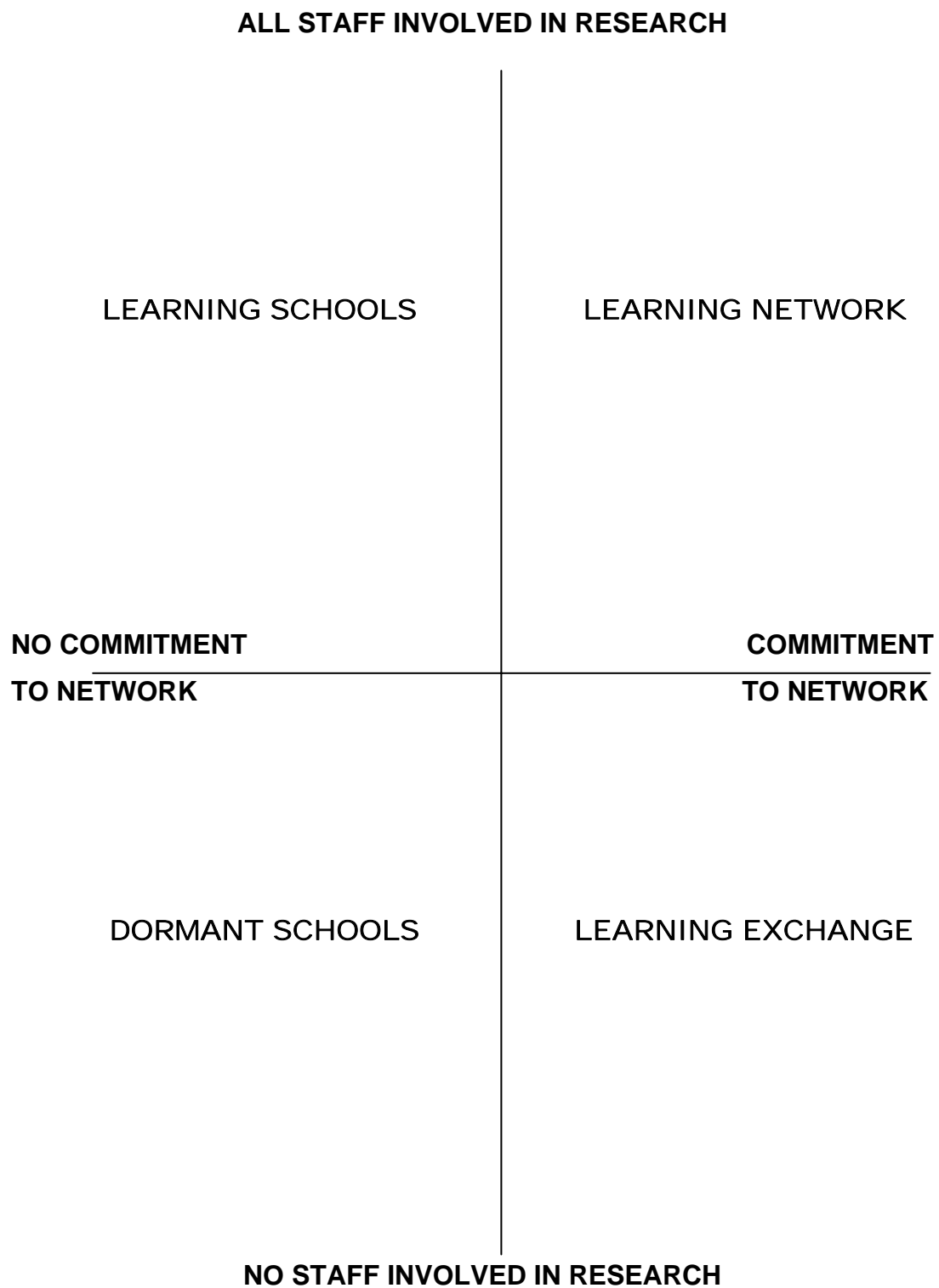
Typology of research and learning orientation in schools in Networked Learning Communities

**SECTION 3 Networked Learning Communities enquiry and research environment**

The consideration of the network support given to the initiation of collaboration between the case study networks has raised a number of issues worthy of exploration. Also explored is the nature of differences between an individual institution and a network of such institutions that are involved in the same business, in this particular case the development of teaching and learning. These matters underpin the broader enquiry and research development theme, which has formed a substantive element of the Networked Learning Community initiative. The networks engaged in the case study research (pages 8 and 9) have all formed and developed in different ways guided by the NLC initiative and local conditions in the education environment. Other factors such as professional relationships, previously existing or nurtured through network activity, changes of school and network leadership and the construct of the collaborative activity have played a significant part in the subsequent direction and evolution of the network. However, as Holmes & Johns-Shepherd (2004:3) point out,

> *There is no blueprint for an effective network. No one set of arrangements or no one particular type of organisation is necessarily better than another.*

What is significant is that these factors influence the patterns, processes and support mechanisms of the enquiry and research activity and how the research outcomes are utilised in these complex, flexible and loosely coupled structures.

Individual schools will have different priorities and foci for development and these have been important in determining engagement with and purpose of the network. These in most cases (74% of group respondents), reflect the aims and vision of each school or a clearly identified segment of their activity (Appendix 1, Question 5). The network focus has been identified on the basis of an explicit and recognised need that is shared across the engaged schools. This was the very strong position from which several networks (D, F & G)

initiated their activities. Other networks (A, B, C) used the enquiry and research to determine the focus of the network activity from a number of options. Network A initially worked to improve provision in several areas of the curriculum but after the first round of evidence collection they determined a common focus and formed a collaborative research group. Network B identified six areas of interest but over the longer term these were subsumed into three for a range of reasons.

Fig. 4. How do you decide upon the focus of your research?
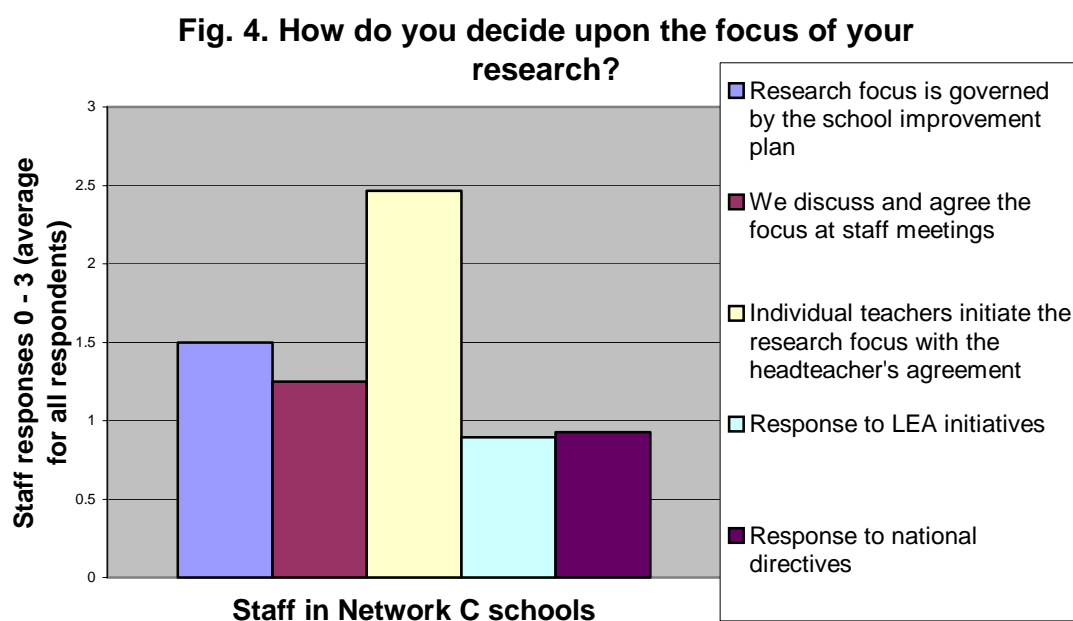
Schools will have different capacities to deliver change, for example in the extent that they are able to explore and diagnose their own situations through reflection and enquiry and to act upon the findings.   The use of collaborative enquiry in three of the case study networks has had the effect of

creating an opportunity to develop a response to the evidence that is considered by the researchers to be the best way forward. This network knowledge has been used alongside other views in the network decision making process to agree a common way forward. To some extent the implementation and planning have been agreed by the network leaders although the environment in each school does have some effect on how the initiative is delivered. (HT-A)

Individual schools will have their own methods of planning for change, and will use different procedures and involve different groups of people compared to other schools. Management arrangements and methods of internal communication to help implement change will vary from school to school. There will also be variation between schools in the type and level of expertise of those charged with managing change, and developing teaching and learning. Schools will therefore have differing development imperatives. It has been evidenced that within each case study network each school response to enquiry and research will vary. Most of the networks have been flexible to address the fact that some schools want to use research evidence to evaluate changes implemented, defer change until evidence is available or in a small number of cases not engage directly in the enquiry and research activity other than at the dissemination stage. In all cases the current network member schools have evolved a positive attitude to evidence informed change agendas over the three year funding period.

In addition to sharing a common strategic focus for improvement and valuing evidence-informed change, schools in the case study networks share other commonalities and needs that form the basis of their enquiry and research agenda. Where networks are geographically based, there may be some similarity in the type of pupil recruited, because of a common catchment area. Some networks may contain schools sharing certain circumstances – low pupil scores in public examinations, schools in the same local authority (LA), schools in rural or urban areas. All schools are required to teach the National Curriculum, and are subject to overarching regulations relating to staffing structure and school governance. All schools within the state sector will be aware of national and local priorities through communications from the DfES and from their LA (Figure 1) and are subject to the same public accountability through inspection. Figure 5 presents these differences and commonalities in graphical form. The evidence shared through the enquiry process helps networked schools to "make sense of their environment in relation to the local, national and international policy back cloth and the hone their provision to accommodate and in some instances personalise learning at staff and pupil levels(HT-C).

GEOGRAPHY   CIRCUMSTANCES

STAFFING
STRUCTURE

NATIONAL
PRIORITIES

Aims and vision   Foci

CPD

Planning

**TEACHING
AND
LEARNING**

Expertise

Leadership

Involvement

Procedures

Communications   Regulations

Enquiry capacity
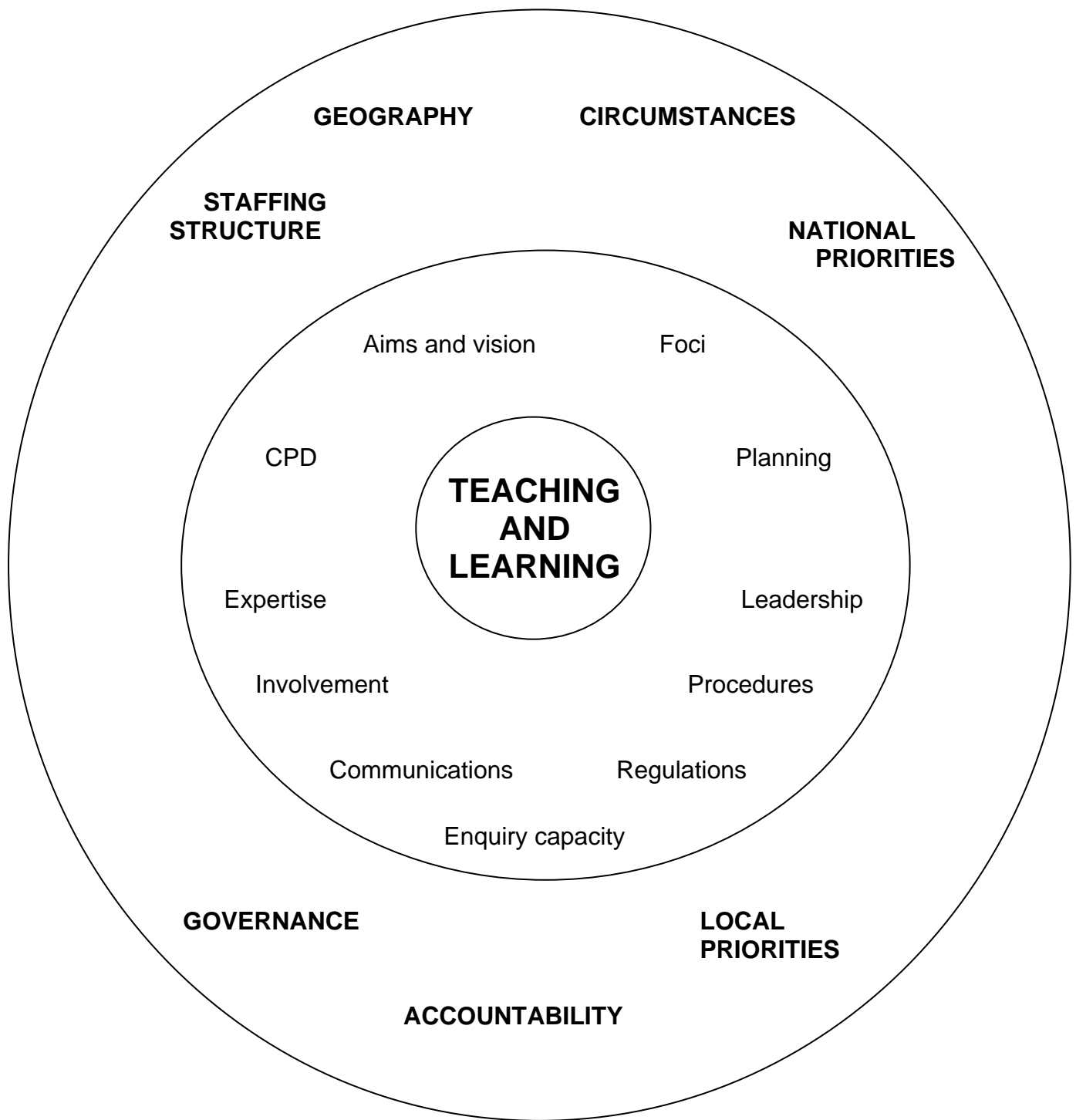
GOVERNANCE

LOCAL
PRIORITIES

ACCOUNTABILITY

Figure 5   The Networked Learning Environment

This brief analysis of the differences between institutions and networks is useful inasmuch as it problematises the support activities that schools in networks require to undertake and learn from practitioner research. In terms of developing research and enquiry within a network, it asks:

- How can practitioner research gain status and become regarded as a worthwhile school activity?
- How can teachers be persuaded to involve themselves and others in learning from research activities?
- How are researchers empowered through their involvement in research activities?
- How are research links established between sometimes disparate schools across the networks?

These issues are explored through the analysis of the responses to the nature, purpose and use of the research activity undertaken by the networks. The following sections are structured in response to the research questions indicated on page 6 and the indications about the research and network processes provided in the research findings.

SECTION 4 How do NLCs support schools to learn from research and evidence?

Establishing the status of practitioner research

Establishing practitioner research as a worthwhile activity in schools, according to network researchers, has a number of dimensions. Firstly, there is a need to recognise the value of the research outcomes with respect to academic and other research. Secondly, through the quality of the research processes, the work is regarded as valid and reliable within the network context. Thirdly, enquiry and research is established as an important activity that teachers should undertake as part of their professional duties in school. In most network schools this represented a substantial cultural change and, as most staff in schools did not initially recognise their research role, some of the networks have established a considerable research portfolio from a very low level of research awareness and capacity.

The views expressed about research in schools by respondents in this study are in line with a recent literature review of action research in schools which suggests that teachers "often held a hierarchical view of research in which the academic was seen as 'better' than that undertaken by teachers." (Black-Hawkins 2004). There certainly was some indication that the researchers in the case study networks did not always see themselves in the same role as the university staff and researchers:

> *The expectation was that the university colleagues involved would take a leading role and it was very difficult to persuade them in the early stages that they were co-researchers with equal merits and responsibilities for the research process.* (Co-leader - C)

However over time those that had been involved in network research activities in networks B and C recognised that they had "more credibility within their local area than much of the material relating to national initiatives" (Researcher - C). Colleagues responded positively to the research outcomes "especially when they had been engaged with evidence collection or analysis" (Researcher - B).

Altrichter and Posch (1989) commented that practitioners were distrusted as researchers because the empirical methodology of most action research – suggesting a hypothesis, collecting evidence and confirming or rejecting the hypothesis – restricted theory-building and the creation of new knowledge. The authors countered this argument by suggesting that teachers routinely reflected upon their own theoretical perspectives on teaching prior to undertaking research. Schon (1988) also suggested that such theoretical perspectives could be modified during research in a process of 'reflection-in-action'. The new knowledge produced as a result of action research has been termed 'craft-knowledge', and not the "familiar idealisations of knowledge as propositional, abstract and theoretical" (McFee 1993). This 'real-time research' makes it fit for "immediate and intermediate purposes" (Cordingley

2003), for modification of practice within the lesson where action research is taking place, as well as in subsequent lessons.

The validity and reliability of such research is provided by what has been called "contextualised understanding" (Bentley and Horne 2003), that is the understanding of colleagues teaching similar pupils in similar environments who "respect teachers' knowledge as well as knowledge from research and reform" (Lieberman 1999). The reliance upon 'craft-knowledge' rather than academic knowledge to effect change has been challenged for neglecting the role of 'utopian discourse' in human affairs (Newby 1995). This in turn has been countered by suggestions that these two kinds of knowledge are balanced and blended by teachers to produce "shared, collectively owned and institutionally relevant knowledge" (Jackson and Leo 2003). The group respondents viewed practitioner research as a context for teachers to visit educational theory and apply this in other contexts. The group response sheets demonstrate that the vast majority of teachers (90%) were "confident to talk about the theoretical basis for their work" and "present their views in staff meetings".

This process of blending craft-knowledge with academic knowledge has been apparent in a number of the case study networks. In the B, E and F networks teachers have engaged with theoretical concepts relating to assessment for learning. In network C and E reading time was funded as part of the devolved allocation to research partnerships. History teachers in Network F also accessed the relevant literature, and sought ways of applying the ideas to the teaching of history, supplementing this with visits to other history departments in the city to see how teachers there had adapted their practice, "opening oneself up to different approaches", in the words of one teacher. There was some indication that these activities were direct outcomes of the network activity, as one teacher remarked that he "hadn't been academic for twelve years".

In one of the schools in network B, academic input was provided by the network research officer, who gave a presentation on assessment for learning

and provided a lesson observation schedule which was used to give instant feedback to teachers at the ends of lessons (see Beresford 2006). Teachers in network G valued the input of their creative partners in helping them to understand how children responded to creative input, but equally valued the support for the research activity.

The status of practitioner research was clearly raised in schools where the findings had some impact upon the culture of the school, that is in the ways things were done. In the first year of the A and C network's existence, research projects seem to have been largely designed to combat short-term problems like bullying, lack of groupwork expertise or an inadequate physical environment for learning. While the sparsity of long-term projects may have led to difficulties of embedding a culture of research in the schools, it did produce immediate and visible results. In the B and E networks, teacher-researchers were given opportunities to disseminate their findings at staff meetings and workshops: strong support for their work from senior management ensured wide interest and a good take-up of the practices that were on show. In contrast, the work of the network F history teachers seems to have had little impact upon teaching practice beyond their subject departments.

Notions of making a positive difference also helped to establish the status of practitioner research in the network schools. In network G, teachers were introduced to a technique called Draw and Write which could be administered at the beginning and end of the art project: this enabled them to analyse the growth in development of pupils' understanding of key concepts and vocabulary. In the B network, teachers were introduced to quantitative research methods that could be similarly used to gauge the changes in the attitudes of groups of students during the course of a particular programme. Where such methods were not employed, as in the C and E networks, teachers expressed strong support both for their own professional judgement and that of their colleagues. In C there was a strong reaction against a suggestion from a higher education representative that such judgements were inadequate to assess progress and added value.

It appears in such circumstances that teachers are prepared to accept the value judgements of colleagues with whom they work or with whom they meet and get to know, either through shared professional development opportunities or, in some networks, through joint research activities. Where they assess that practitioner research has made a difference to the learning of pupils with whom they are in daily contact, the status of such research is further raised. The findings and lessons drawn from such research is seen as fit for purpose – fit for the purpose of individual teachers in their own classrooms, and fit for the purposes of other teachers who know and trust them in other classrooms within the network.

Writers on practitioner research stress the need to make it a high priority within schools, with opportunities being staged within the school's procedures to undertake and discuss research (Elliott et al. 1979, Oldroyd 1985, Lieberman 1995, Cocklin et al. 1996). Recent literature reviews suggest that the advocacy of the head teacher and senior management within the school is paramount, with research outcomes being reflected in school improvement planning (McLaughlin 2004, McIntyre 2004). Clearly the allocation of dedicated funding and time to action research activities, as well as accreditation of research activities, also send out clear messages about the priority being given to such work (see Frost and Durrant 1997, Hopkins 2005):

> *Network leaders have designed opportunities to spark enthusiasm among the staff and the research has been part of this agenda. The practitioner research is not currently a shared identity across the network as many staff still do not see themselves as part of this, but the notion of school improvement as action enquiry is stated as part of the explicit values of school. This approach is also explicit in the sharing of high professional expectations.* (Researcher – B)

The conditions under which networks are required to function ensures that funds are allocated to provide both the time and resources needed for practitioner research. The funding for the network G also allowed for time for

reflection between the teacher and the creative partner, as well as for action research. Network C allocates grants from a centrally-held steering group budget which fund research activities and associated accreditation costs. In network F, the Local Authority holds the funds centrally, and commissions research in schools. In network B, part of the budget was originally devolved to teachers managing research 'themes' across all the network schools, and is now allocated to teachers managing a theme within their own school.

A list of the research themes across the case study networks suggests that most relate closely to national priorities – learning styles, thinking skills, inclusion, assessment for learning – or local ones, for example the development of outdoor learning environments in network C, and the use of interactive whiteboards in network D. Celebrations of achievement also raise the status of practitioner research: in December 2004 network E held a Teaching and Learning Fair based upon the NCSL Annual Conference model, and network G held a plenary seminar in July 2005 where teachers and creative partners from all seven projects met to share their experiences. Both projects were the subject of substantial local press coverage in 2005.

Getting staff involved in practitioner research
Having established practitioner research as a worthwhile school activity, there is plenty of testimony that it is a short step to convincing staff that such research is of benefit to institutional teaching and learning (Elliott et al. 1979, Somekh 1995, Louis and Marks 1996, Hopkins 2000). There are few teachers who will admit to not wanting to improve their practice, and the craft-knowledge derived from research in a setting with which they are familiar makes practitioner research a potent force for change. Its voluntarist nature is also important, as two directors of the Essex Primary School Improvement Project (EPSI) testified:

> *Data collection and analysis perceived to be leading to school improvement is more likely to be constructively received by teachers than that perceived to be an attempt to increase accountability to the LEA or central government.*

<div align="right">(Sebba and Loose 1997)</div>

Staff involvement in data scrutiny and analysis is also seen as a key element in embedding practitioner research in schools (Somekh 1995, Louis and Marks 1996).

All of the networks studied have placed an inclusive enquiry and research agenda at the heart of their network activity. The focus of the studies have been driven by the identified needs of the schools but have also explored extension issues from the original research or new areas that have been identified by a collaborative. These changes have been fairly easy to accommodate because of the features that are prerequisites of membership of the NLC:

1. Design around a compelling idea or aspirational purpose and an appropriate form of structure
2. Focus on pupil learning
3. Creation of new opportunities for adult learning
4. Dedicated leadership and management in relation to network activities.

According to the Joint Cluster Submission (2002:7), the aim of the network C was to:

> *enhance the enquiry and research capacity of schools by involving teachers in the enquiry projects and ultimately the management and support of these projects in their own schools and other schools.*

With specific reference to "pupil learning and outcomes", the same document highlights a number of agreed objectives, these being:

- *To enhance the self-esteem and motivation of pupils through talking about their learning*
- *To provide positive role models of "learners"*
- *To provide individualised support for learning*
- *To raise pupils' awareness of their learning styles*
- *To provide evidence based recommendations for changes in pupil learning experiences*
- *To have a positive impact on the achievement of pupils*
- *To build the confidence in the notion of pupils and teachers as learners.*

(Networks C and D Joint Cluster Submission, p.7)

It was important that the involvement of the member school teachers in research activities, and to what extent they had been involved, was ascertained. Fifty teachers completed the group response schedule and of these 79% had been involved in research as a participant and 86% had been involved in actually collecting data for themselves. Not all staff in schools can be expected to be involved in research. The headteacher, for example, may sanction research to be undertaken and will support the process in terms of release from the classroom and the facilitation of evidence gathering but may not necessarily be actively involved.

The respondents were given the opportunity to list examples of the type of research activities they have been involved with and the themes of this research. The themes varied widely and included thinking skills, questioning, parental involvement, creativity, accelerated learning, work with other agencies such as galleries / museums and Creative Partnerships, inclusion, the use of drumming with special school pupils, collaborative learning techniques, the impact of interactive whiteboards on learning and outdoor play. The examples of methods of data collection mentioned were: the use of questionnaires, observation techniques, the use of documents, the use of video/photography and reading of related literature.

Staff are routinely involved as subjects of practitioner research in the case study network schools. Interviews, questionnaires and observations have been the most favoured methods of data collection, with less use made of focus groups. Staff meetings have been the most popular fora for informing staff of research findings and research in progress, and a number of networks have produced multi-media resources for staff. Written reports, newsletter articles and website postings have been used less often. In network B, theme leaders have addressed staff meetings in other schools. The recruitment of staff as researchers in the case study networks appears to have been dependent upon being able to tap into the interests of the potential recruit, the strong messages of support from senior management for practitioner research or the prospect of career development offered by the leadership of a research programme.

Where practitioner research was not embedded in a school, network leaders have created new roles and groups to help in the process. In network A and C mentors have played a pivotal role in moving the enquiry process forward in the schools. A research co-ordinator has been a way forward for several networks, and some of these are external to the network. They may be an advocate and organiser of research activity in the school (Elliott et al. 1979, Hopkins 2000), and as a point of contact for external co-ordinators of network-wide activity (Hopkins et al. 2002a: 41, Wohlstetter et al. 2003, Jolliffe and Hutchinson 2005). The experience of school improvement programmes like IQEA suggest the need for a group of research enthusiasts to kick-start the embedding process (Hopkins 2002:7). This group not only undertakes practitioner research but also involves other staff through research activities, dissemination and peer coaching.

Network C has endeavoured to maintain flexibility with regard to the way in which the researchers share the experience across the network. There have been a number of changes in the membership of the different groups and this has in turn widened the participation in the evidence gathering. The research respondents have become researchers, the original researchers have

become research mentors and research mentors have become steering group members. In this way there has been a steady building of the critical mass of research active staff within the network schools. A further dimension of the changes seen in the attitudes of researchers is that the majority of the independent researchers have become collaborative and now lead theme groups. This is the way in which the enquiry and research capacity of the network has grown and how individuals who have built up their professional competence as practitioner researchers and leaders of evidence based initiatives.   In three of the networks this approach has countered the experience of isolation experienced by some teacher researchers:

The organisation will actually start to thrust you out; it will begin to grow a skin around you and allow you to be a little pearl sealed away and isolated.

(Somekh 1995)

All network schools have someone who is a point of contact for the central coordinating body for the network and in some cases this is a researcher. A number of networks have created semi-permanent structures to facilitate and coordinate research activities. B and E NLCs have school improvement groups (SIGs) in each of its schools. In network C, where a number of research projects are taking place, groups of researchers are allocated a centrally-funded learning mentor, who advises on research methods.

Empowering researchers

Where practitioner research is an accepted and even welcome school activity, where researchers have a vision shared by the whole staff and where there is "a context of trust and respect for each other's professional skills and contributions to the school community" (Louis and Marks 1996), then genuine dialogue around teaching and learning can flourish. In such a context, aspects of teaching and learning can be problematised without threat or upset because the process "establishes particular, concrete relations between people, between people and things, and between people and discourses or ideas" (Kemmis 2005). It "deprivatises practice" (Louis and Marks 1996),

meaning that no colleagues will have objections to being observed whilst teaching.

The following account outlines how a network researcher became involved in collaborative research and subsequently became a facilitator to a cluster of researchers. This process began with the teacher's involvement within her school as a mentor to trainee teachers. Her research was accredited and she subsequently enrolled on a masters programme and through this encouraged the headteacher to become involved with the network. The funding of the research activity enabled the teacher to continue her own research and support wider research activity across the network. She also worked with the university co-leaders to organise events for the dissemination of research findings in her area of interest, the Foundation Stage curriculum.

Network C - The involvement of Mentors

"Time moved on and eventually the dissertation was complete. All the modules were passed and the teacher was in sight of the MA goal. At the same time, the teacher was encouraged to lead a team of Foundation Stage colleagues from other schools in the local area in another research topic [as part of the network activity]. They were given a scholarship and spent this on collecting information from children, parents, colleagues and advisors. They also used some of this funding to develop ideas and new initiatives with regard to outdoor play.

The teachers chose their topic for research and spent 12 months researching the development of outdoor play in the Foundation Stage. The teachers met regularly, shared experiences and good practice. They met at each other's schools and went away thinking, "That's a good idea I could do that". They organised a training day when they learned about their chosen topic. During this day many staff from other primary schools in their local area joined them. They visited a local nursery school and saw outdoor play experiences for nursery children.

The research was completed and presented formally at 'Leading Enquiry from the Classroom" November 2005. However, the story didn't end there. The teachers had enjoyed collaborating and wanted to continue to work together. They decided that their next topic would be sharing experiences and good practice when assessing children in Foundation Stage."


One of the key empowering forces for Network C has been the dissemination of research findings once the research has been complete, or even, as Saywell and Cotton (1999) would support, prior to and during the research activities. Researchers have sometimes been reluctant to explore their work with others before they are convinced that the work is of value. It has been through the introduction of network seminars that a professional dialogue has been generated with the community of interest both across the network and in the wider education community. It has been through these events that researchers have engaged not only with each other to explore the nature and implications of their work but with other key individuals who have encouraged and facilitated the sharing of the work with a wider audience within the local authority or in one case as part of an international conference.

It is clear that staff meetings are the most popular means of disseminating the research findings, with newsletters being the least popular. This could be because the desired content of the newsletters would be inappropriate for research, i.e. they may focus more on school and pupil achievements and school events rather than the research work of teachers. It could also be that not all of the schools involved have a newsletter, something that the questionnaire does not ascertain. Alternative methods of dissemination suggested by the respondents were the use of video footage of pupils' activities to demonstrate progress, and general communication between staff, especially in workshops on training days. The group response schedule asked how research findings are shared within the teachers' own schools.

A culture of mutual trust and respect can also be liberating because it imposes few limits upon the scope of practitioner research. It can allow researchers to prioritise topics to explore (Elliott et al. 1979, Somekh 1995), to challenge conservatism and the status quo in schools (Hutchinson and Whitehouse 1986) and to tell "unwelcome truths" (Kemmis 2005). It prepares the ground and hones the language of critical discourse (Jackson, undated i). It provides a climate in which risk-taking and mistakes are tolerated because they contribute to learning (Hargreaves 2003). Funding for practitioner

research is also identified as a key element in empowerment (Hargreaves 1996, Hopkins 2000, McIntyre 2004, Black-Hawkins 2004).

Fig.6. How are your findings disseminated to other members of staff?
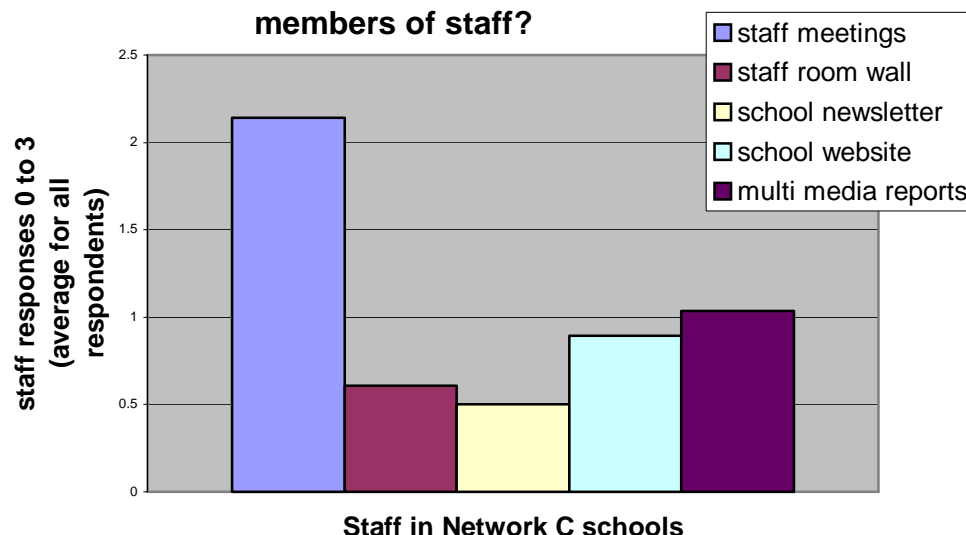
The most important activity for the headteacher and network co-leaders is to facilitate "the sharing of the research internally with staff at various stages in the process and the opportunity to share either the research process or findings in appropriate ways within the network". This is a highly complex matter, which "challenges the most experienced leader because there are so many facets of the research to take into consideration. Three significant sets of factors were identified:

- Initiation

- Development

- Sustainability.

Disseminating research within the respondent's own school is important for the development of that school. However, this would not benefit neighbouring schools and education in general. Thus, it is important that research findings are disseminated outside of the host school. There are a number of methods available for disseminating outside of the school and Fig. 8 shows the stage at which these methods are perceived to be at by the respondents. Presenting

research papers at conferences and sharing findings with other members of the network in meetings appear to be the two most developed dissemination methods, and there is a belief that research being forwarded to the network leader for dissemination and the production of multi-media reports is emerging. Figure 8 would suggest that all the suggested methods of dissemination are recognised as at least emerging in Network C. It is of some concern that the respondents rate the use of websites for dissemination as only emerging, especially as Thelwall (2002) describes the Web as "an important part of research and education in many parts of the world. It is now widely used as one of the primary means of disseminating research findings."

SECTION 5 In what ways are NLCs collecting analysing and informing practice using data in relation to their learning foci?

Networking researchers

Practitioner research has been characterised in the past as "ordinary people participating in collective research on 'private troubles'" (Adelman 1993). We have previously suggested that the troubles within a network may not necessarily be so private, and that they may affect a number of institutions. Networking provides schools with the opportunity "to derive benefits from alliances, partnerships and local linkages" (Hallinger 1999). Shared problems may be better understood and analysed by those who share their context, and shared solutions derived from that analysis may be more effective in bringing change:

> *The immunity of schools to change from outside stems from their cultural uniqueness which is rarely recognised by, or accessible to, external agents …*
>
> (Oldroyd and Tiller 1987)

Where a group of schools is able to develop and sustain the trust and support necessary for learning schools, networked research activity can create a "common stock of professional insights" (Elliott 1984). Where there is a

shared interest and focus, and a clarity of purpose, schools can "work smarter together, not harder alone" (Holmes 2004).

Just as the experience of developing schools as learning communities has seen the need to create new roles and structures in schools, networks have also required the development of some semi-permanent infrastructure in order to function effectively. The Annenberg Challenge in Los Angeles has a central co-ordinating body which collects and disseminates information (Wohlstetter et al. 2003). IQEA has a central organising unit consisting of academics and an administrator that co-ordinates network activities, including research (Hopkins 2002). Centrally-based forums of teachers can discuss possible research topics, techniques and findings (Oldroyd 1985, Lieberman 1995, Somekh 1995, McGregor et al. 2004), and arrange for their dissemination (Black-Hawkins 2004) and archiving (Kubiak et al. 2004).

Network C has a steering group composed of school-based leaders, an academic and an administrator who are all co-leaders. The network shares a steering committee and an administrator with network D. The committee consists of the co-leaders and teacher representatives of each of the participating schools. The administrator manages and services joint events, including an Annual Conference; publishes a regular newsletter; maintains the website; alerts schools to NCSL events, and organises training. Network E is co-led by a teacher in its secondary school, and the head of one of its primary schools. Research advocates from each school meet regularly, and discuss ways to collect data. Facilitators and head teachers also meet to disseminate research findings. There is a network website and newsletter, and the secondary school is setting up a resource depository on its premises.

All the case study networks have moved to a position of some form of shared focus, ranging from loose to very specific. Network G's shared theme was the representation of citizenship in art form: the action research focused upon the media that individual schools selected. Network F has a number of shared themes commissioned by the Local Authority. The main ones have been assessment for learning in history, and the 14-19 history curriculum, although

smaller single school-based projects have also been funded. Network E has an 'umbrella focus' of pupil learning. Network C invites individual teacher bids around four learning areas. Network B originally funded five learning research themes across the network, with a representative from each school as a theme leader. It now funds single school-based themes.

The co-leaders of Network B are both classroom teacher-researchers, highlighting the research basis of the network. This network also has a central administrator who organises and services a termly research and development meeting, which consists of the theme leaders, head teachers, administrator and research consultant. Theme leaders also meet twice a term, with the research consultant in attendance. NLC F has a history Networked Learning Group which meets under the auspices of the Local Authority's History Curriculum Support Team. Network G already had a funded co-ordinator prior to the research project, and was able to fund a creative practitioner to help run it as well as to recruit creative partners for each of the schools.

Networks enable teachers in individual schools to access expertise in a range of diverse educational settings:

> *Groups of schools that celebrate their diversity offer rich contexts for mutual learning.*
>
> (Jackson, undated ii)

They also allow some teachers to "side-step" the limitations of their own school (Lieberman and Grolnick 1996, Wohlstetter et al. 2003) in order to draw upon expertise elsewhere. This may explain the apparent greater willingness of some teachers to undertake research with colleagues in other schools rather than with those in their own (Kubiak et al. 2004). There have been a number of examples in the case study networks of cross-network research. In Network C a special school invited local primaries to join with them on a research programme to encourage inclusion. Special school pupils worked with primary pupils in their classrooms on problem-solving activities related to physical access to school buildings. These lessons were observed

by the class teachers, who made notes on the learning techniques being employed. In the same network a primary science teacher, faced for the first time with a mixed year-group, asked teachers with similar groups if she could observe them teaching. As a result of a number of observations she drew up and piloted a new scheme of work both in her class and in those of her colleagues. Following teacher and pupil feedback, a new scheme of work was adopted by the school.

As well as a cross-network nursery teacher group, Network E also inaugurated Learning Visits for both its head teachers and for pupils on their school councils. Both groups fed back to their peers, and as a result of the visits pupils in Years 5 and 6 in one primary are to be trained in research techniques, while in Year 6 peer coaching is already taking place in the classroom. In Network B substantial research has taken place on pupil attitudes to assessment for learning. This research was analysed by the theme leader for assessment for learning, and a teacher handbook was drawn up which was piloted in the leader's school. The leader has also addressed staff meetings in other network schools on the handbook, and copies have been distributed across the network.

Networks are often charged with developing the capacity to develop learning and teaching:

> *Systems leaders … focus on second order change – improving the system's capacity to improve – rather than on direct interventions in school practice.* (Hallinger 1999)

In terms of practitioner research, this implies the need for a network to progress from a learning exchange, where useful teaching and learning advice is recycled, to a learning network, where research activity, undertaken across a group of schools, becomes part of the planning and improvement cycle of each of its constituent parts (Kubiak et al. 2004).

Support for research activities has been substantial in the case study networks. Network C has funded six school-based Learning Mentors to help groups of researchers. These mentors negotiate research foci with senior managers in the school; give guidance on research techniques; link with other mentors; disseminate research findings, and help with accreditation of practitioner research. The co-leaders have provided training for teachers in the use of Learning Exchange Online (LEO). Network G, as part of its funding, had the services of a research mentor to give advice and reassurance on research techniques. Teachers were also provided with various frameworks for planning their research and for structuring the written report.

Network B has the services of a research consultant who provides advice on research techniques, but who also models data collection techniques and report writing. Reports are made available to individual schools, as well as archived centrally. NLC F teachers were given two half-day courses on data analysis. Research findings are archived by the Local Authority, which has produced a CD-rom teaching resource based upon them, and they are also published on a regular basis in its Key Stage 3 Bulletin.

Network E teachers received training from higher education on practitioner research methodology. What was described by one head teacher as a "scientific approach" led to a general feeling of disillusionment because teachers believed that the type of questions they wanted to ask about teaching and learning did not allow for measurable outcomes. It also made them doubt the strength and validity they felt that their professional judgement provided.

SECTION 6   How are NLCs providing evidence of progress and how does this relate to/differ from their current use of school-based system wide data?

Influencing teaching practice is a major reason why researchers enter into research. This influence can be in the form of teachers and pupils discussing their teaching and learning, teachers gaining accreditation and, importantly, direct changes to practice, such as changes in school policy. Fig. 10 shows that all four of these suggested responses are emerging or developing. It is pleasing that changes made to practice as a result of research are at an advanced stage and, likewise, the respondents feel confident to talk about the theoretical basis of their work. One respondent also mentioned that he/she had been able to speak to governors from his/her school and to those of other schools.

Fig. 7. How are your research findings disseminated outside of school?

Legend:
- Our research is shared with other members of the network via regular meetings with other member teachers
- We produce a research paper that is presented at conferences in the form of a workshop or exhibition
- Reports are posted on LEO (Learning Exchange Online) website and on our network's website
- Reports appear in the network's newsletter
- Research is stored in a special research library held by the network and made available to the public
- Research outcomes are forwarded to to a network leader to pass on
- Multi media reports are made available (CD Roms, vidoes, etc)
- Reports are included in specialist journals / magazine
- Reports are included in local / national press (TES, ets)

Fig. 8. How have your research outcomes influenced practice?

Legend:
- Teachers are confident to talk about the theoretical basis for theie work.
- There are many colleagues seeking and gaining accreditation for their action-research
- We impliment changes into practice as a result of our findings
- Pupils are reflective about how they learn best

Y-axis: Staff responses 0 to 3 (average for all respondents)

X-axis: Staff in Network C schools
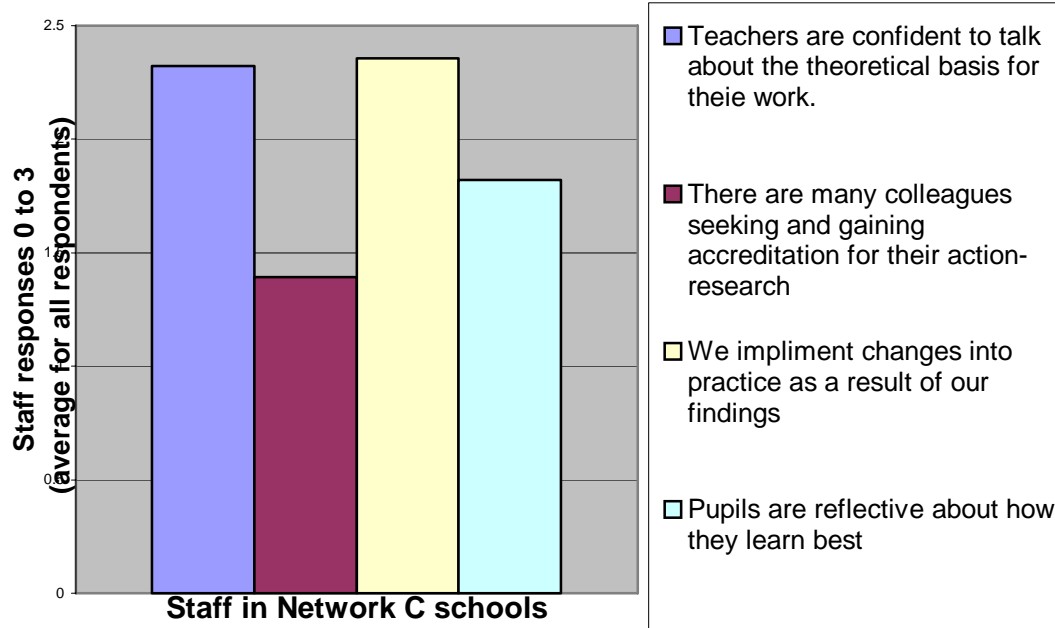
SECTION 7   Commentary

Filtering the collected data and the evidence from the literature on practitioner research through the analysis framework reproduced as Figure 3 (page 16) has enabled us to characterise four distinct types of NLC. Below are descriptors of each type, as well as a table (Figure 9) summarising the main points.

Passive schools

Passive schools are ones where there are low levels of commitment to practitioner research, and therefore low levels of research activity. Any research is undertaken in isolation by single teachers, and there are no opportunities to disseminate findings formally. Staff not involved in research distrust the findings of practitioner research as parochial, class-specific or methodologically flawed. The school responds to those national and local initiatives which it is forced to, but relies heavily upon well-tried, though not necessarily well-tested, methods of teaching. Academic outcomes can be extremely good, and hence staff feel that they do not need to bother with research, or extremely bad, in which case staff may neither have the know-

how or the inclination to undertake practitioner research. In the case of high-achieving schools, networking with other schools provides little benefit. With low-achieving schools, energies are all too often dissipated in trying to solve their own problems themselves, and there is a concomitant sense of shame in seeking out the help and solutions of others.

Learning Exchange

Schools who take part in exchanging learning with other schools have a high commitment to networking, but a low commitment to practitioner research. There may be a high commitment to acting upon research findings, but not necessarily their own. There may be some teacher research taking place, but again it is in isolation from other colleagues. Colleagues may be more interested in hearing about such research than those in dormant schools, and will be readier to hear details of research taking place in other schools. There is no great take-up, however, of offers to undertake such research themselves. Representatives from the school are happy to attend network-wide events, but not to collaborate with colleagues from other schools in joint research activities.

Learning Schools

Practitioner research has a high priority and a high rate of take-up in these schools. The school may have a SIG, and there are regular opportunities to disseminate findings to colleagues in presentations and workshops. Teaching and learning are discussed at staff meetings. Research findings are reflected in schemes of work and school improvement priorities. However, teachers are loath to interact with colleagues from other schools. This may be because they feel that the problems and issues they face are unique to their own school. It may be because teachers feel they are using all their energies for the benefit of their own school, and that they do not wish to benefit what may be regarded in a league table context as rival schools. Trust may not extend to colleagues in other schools.

Networked Learning

Schools in learning networks are learning schools whose teachers also collaborate with colleagues in other schools in research activities. The network provides research support to facilitate this, in the form of research training, advice and modelling. Schools have identified issues key to a number or all of them for joint inquiry. Research findings are jointly discussed and analysed rather than merely exchanged. Colleagues across the network value and trust the professional judgements of each other.

Figure 10 places each of the seven case study networks in an appropriate category for its current stage of development, and suggests the direction in which it is moving.

	Passive schools	Learning Exchange	Learning School	Networked Learning
Status of practitioner research	Low	Low/Medium	High	High
Creation of practitioner research opportunities	Low	Low/Medium	High	High
Prioritisation of practitioner research	Low	Low/Medium	High within school	High within network
Involvement of other staff	Not applicable	Low	High within school	High within network
Level of trust, and empowerment	Low	Low/Medium	High within school	High within network
Dissemination	Not applicable	Low/Medium within school, high in network	High within school, low in network	High
Teacher research interaction	Low	Low within school, low within network	High within school, low within network	High
Support for practitioner research	Not applicable	Low/Medium within school, low within network	High within school	High

Figure 9   Typology and characteristics of orientations of schools towards practitioner research and networking in networked learning communities.

FIGURE 10

ALL STAFF INVOLVED IN RESEARCH

LEARNING SCHOOLS

NETWORKED LEARNING

NO COMMITMENT
TO NETWORK

COMMITMENT
TO NETWORK

DORMANT SCHOOLS

LEARNING EXCHANGE

NO STAFF INVOLVED IN RESEARCH
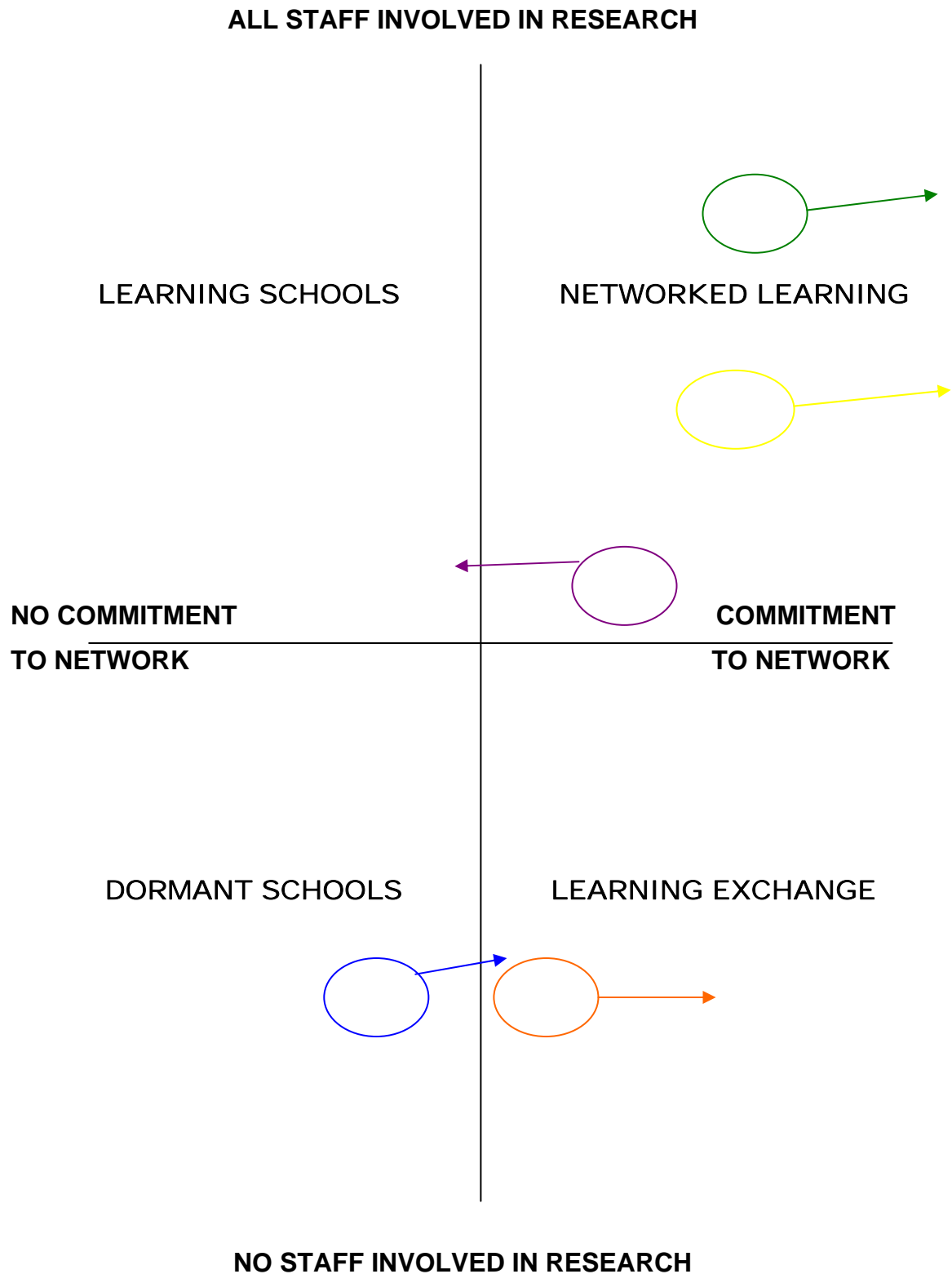
Case study networks according to orientation to practitioner research
and networking, and the direction they are moving

Key
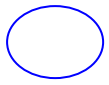
 G

 F

 C/D

 E

 B

 A

It is essential for those that embark on collaborative activities that they do not expect that they will benefit equally, but understand that benefits can be mutual but asymmetrical. This has been the case where those that give time to network steering groups or research programmes may gain more for their school, because they are aware of the network opportunities and have time to assimila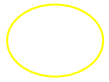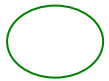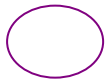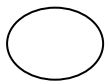te the potential for their staff. They also acquire critical moments for reflection on matters outside the immediate day-to-day running of their schools. School leaders who rely on communication from other members of staff with network responsibility also rely on their interpretation of the information shared.

Working together is not always a smooth and coherent operation: there are points of difficulty and potential disasters. These may include clashes of dates for events when the needs of the school take precedence over the activities of the network. The ability to manage conflict is a fundamental requirement of network leaders, and the will to resolve difficulties and ensure that all parties are achieving together what they cannot achieve alone is fundamental to any form of co-working.

The case study networks have gained significantly from the collaborative enquiry and research process they have shared. They have gained from the journey through the studies they have undertaken, and particularly from the feelings of frustration they have experienced in making their work accessible to others in their network and beyond. The network benefits also lie in the development of the teachers as learners; leaders of innovation; gatherers and users of evidence and disseminators of new relevant and localised knowledge within the network. This new knowledge about practice may not be achieved in all cases, but it is recognised that the least that can be gained from the enquiry is the knowledge and understanding of the research process.

SECTION 8 Implications

If enquiry and research is to have a significant impact on the day-to-day practice of network schools, they must form integrated and recognised elements of professional practice. In this way they can contribute to local educational knowledge by critically appraising relevant literature relating to the area of interest, make a contribution to raising awareness about the issues in this area and engage with colleagues across the network to gather evidence of their current practices and views on their practice in a systematic and rigorous research process. These supported, high quality, visible research activities serve a number of purposes at each stage. In the case study networks they have

- ✓ highlighted an agenda of common interest and possibly concern across the network institutions;
- ✓ opened up a professional dialogue with an identifiable group of participants;
- ✓ engaged a range of respondents (pupils 74%, staff 100%, parents and governors) in evidence gathering activities;
- ✓ led to collaboration with researchers across the network in the evidence gathering process;
- ✓ enabled evidence to be shared widely within the network for the purpose of analysis of the outcomes;
- ✓ allowed findings to be presented at appropriate points with colleagues;
- ✓ led to collaboratively presented research outcomes within the network;
- ✓ engaged teachers in network decision-making processes as 'experts' in their field of study;
- ✓ developed ways forward for network activities with strategic co-leaders;
- ✓ led to a sharing of the findings and the associated outcomes with the wider education community (leading professional development, local, national and international conferences).

The involvement of the researchers has also influenced attitudes to research within some network schools:

The response to research has changed dramatically over the last two years both in our school and in the attitude of the staff across the network. We talk about research now without seeing the defensive behaviours and hearing the negative attitudes of those who did not see research as part of our role in education. Maybe this attitude has gone underground but the least that I can say is that the level of professional discussion has been raised, the quality of evidence used in decision making has improved and we can use the 'R word' in relaxed and informative staff discussions without worrying that we are disaffecting half the staff.(HT-A)

References

Adelman, C. (1993) Kurt Lewin and the Origins of Action Research. *Educational Action Research*, 1 (1), p. 7-24.

Ainscow, M., Beresford, J., Harris, A., Hopkins, D., Southworth, G. and West, M. (2000) *Creating the Conditions for School Improvement.* Second Edition. London: David Fulton Publishers.

Altrichter, H. and Posch, P. (1989) Does the 'Grounded Theory' Approach offer a Guiding Paradigm for Teacher Research? *Cambridge Journal of Education,* 19 (1), p. 21-31.

Bentley, T. and Horne, M. (2003) Incubating 'Real Time Learning': The role and nature of Real Time Learning in Networked Learning Communities. Paper presented at AERA Conference, Chicago.

Beresford, J. (2006) Assessment for Learning: a mutual benefit. *Managing Schools Today,* January, p. 2-7.

Black-Hawkins, K. (2004) Developing and Sustaining School-based Practitioner Research, Enquiry and Evidence within Networks. In *Researching Teachers, Researching Schools, Researching Networks: A Review of the Literature.* University of Cambridge Faculty of Education, July, p. 44-79.

Cocklin, B., Coombe, K. and Retallick, J. (1996) Learning Communities in Education: Directions for Professional Development. Paper presented at BERA Conference, Lancaster.

Cordingley, P. (2003) Knowledge creation and management - building an enquiry and research strategy for a networked learning initiative. Paper presented at AERA Conference, Chicago.

Croll, P. (1986) *Systematic Classroom Observation.* London and Philadelphia: The Falmer Press.

DfEE (2001) *Best Practice Research Scholarships. Review Group Manual.* London: EPPI-centre.

Elliott, J. (1984) Improving the Quality of Teaching Through Action-Research. *Forum,* 26 (3), p. 74-77.

Elliott, J. and teachers (1979) Implementing school based Action-Research: some hypotheses. *Cambridge Journal of Education* , 9 (1), p. 55-71.

EPPI (2001)

Frost, D. and Durrant, J. (1997) Supporting school development through 'reflective action planning'. Paper presented to BERA Conference, York, September.

Gorard, S. (2002) *The future for educational research post RAE 2001.* BERA conference debate. http//:www.BERA.ac.uk.

Habermas, J. (1984) *The theory of communicative action.* London: Heinemann.

Hallinger, P. (1999) Schools as learning organisations: Framework and assumptions. *The Practising Administrator,* 1, p. 6-8, 41-43.

Halpin, D. (2003) *Hope and Education: the role of the utopian imagination.* London: RoutledgeFalmer.

Hammersley, M. (2002) *Educational Research Policymaking and Practice.* London: Paul Chapman.

Hargreaves, A. (1997) From Reform to Renewal: A New Deal for a New Age. In Hargreaves, A. and Evans, R. (Eds.), *Beyond Educational Reform. Bringing Teachers Back In.* Buckingham: Open University Press.

Hargreaves, D. (1996) *Teaching as a research based profession. possibilities and prospects.* Teacher Training Agency annual lecture, London, Teacher Training Agency.

Hargreaves, D. (1999) The Knowledge-Creating School. *British Journal of Educational Studies,* 47 (2), p. 122-144.

Hargreaves, D. (2001) A capital theory of school effectiveness and improvement. *British Educational Research Journal,* 27 (4), p. 487-503.

Hargreaves, D. (2003) *Education Epidemic: transforming secondary schools through innovation networks.* London: Demos.

Hillage, J. (1998) *Excellence in Research on schools,* London: DfEE.

Holmes, D. (2004) United we stand. In *The future is networked,* NCSL, September, p. 6-9.

Holmes and Johns-Shepherd (2004)

Hopkins, D. (1991) A Collection of Classroom Observation Instruments. University of Cambridge Institute of Education.

Hopkins, D. (1994) *A Teacher's Guide to Classroom Research*. Buckingham: Open University Press.

Hopkins, D. (2000) Schooling for Tomorrow: Innovations and Networks. Rapporteur's Report. CERI/OECD, Lisbon, September.

Hopkins, D. (2002a) *Improving the Quality of Education for All*. London: David Fulton Publishers. Second edition.

Hopkins, D. (2002b) *A Teacher's Guide to Classroom Research.* Buckingham: Open University Press. Third edition.

Hopkins, D. (2005) Creating powerful learning experiences: the contribution of the GTC Teacher Learning Academy. Speech to first conference of the Teacher Learning Academy, 7 July.

Hopkins, D., Ainscow, M. and West, M. (1994) *School Improvement in an Era of Change*. London, New York: Cassell.

Hopkins, D and Jackson, D (2003) *Networked Learning Communities. Capacity Building, Networking and Leadership for Learning.* Cranfleld: NSCL.

Huberman, M (1993) Changing Minds: the dissemination of research and its effects on practice and theory in Day, C. et al. (Eds.) *Research in teacher thinking. Understanding professional development*. London: Falmer.

Hutchinson, B. and Whitehouse, P. (1986) Action Research, Professional Competence and School Organisation. *British Educational Research Journal*, 12 (1), p. 85-94.

Jackson, D. (undated i) Collaborative Enquiry for School Improvement purposes. Mimeo, Nottingham University.

Jackson, D. (undated ii) Is the future of reform networked? Mimeo, NCSL.

Jackson, D. and Leo, E. (2003) Knowledge Management in Networked Learning Communities. Paper presented at AERA Conference, Chicago.

Jolliffe, W. and Hutchinson, H. (2005) Implementing Co-operative Learning In a Networked Learning Community. Paper presented at PRAR/CARN Conference, Utrecht. November.

Kemmis, S. (2005) Participatory Action Research and the Public Sphere. Keynote address to PRAR/CARN Conference, Utrecht, November.

Kubiak, C., Hadfield, M., O'Leary, D. and Case, S. (2004) The first year of networked learning: an analysis of the networked learning communities' Year 1 self-reviews. NCSL, October.

Lave, J., & Wenger, E. (1991) *Situated Learning.* Cambridge: Cambridge University Press.

Lieberman, A. (1995) Practices that support teacher development. *Phi Delta Kappan*, April, 76 (8), p. 591-597.

Lieberman, A. (1999) Networks. *Journal of Staff Development,* 20 (3), Summer.

Lieberman, A. and Grolnick, M. (1996) Networks and Reform in American Education. *Teachers College Record,* 98 (1), p. 7-45.

Louis, K.S. and Marks, H. (1996) Does Professional Community Affect the Classroom? Paper presented at AERA Annual Meeting, New York.

McFee, G. (1993) Reflections on the Nature of Action-research. *Cambridge Journal of Education,* 23 (2), p. 173-183.

McGregor, J., Holmes, D. and Temperley, J. (2004) Collaborative Enquiry in Networked Learning Communities. Paper presented at BERA Annual Conference, Manchester.

McIntyre, D. (2004) Schools as Research Institutions. In *Researching Teachers, Researching Schools, Researching Networks: A Review of the Literature.* University of Cambridge Faculty of Education, July, p. 21-43.

McLaughlin, C. (2004) Practitioner Research and Enquiry. In *Researching Teachers, Researching Schools, Researching Networks: A Review of the Literature.* University of Cambridge Faculty of Education, July, p. 4-20.

Morris, A. (2002) *Building effective research.* London: Learning and Skills Research centre.

NCSL (2003)

Newby, M.J. (1995) Educational Action Research: The Death of Meaning? or The Practitioner's Challenge to Utopian Discourse. Lecture to Philosophy of Education Society, Cambridge.

Oldroyd, D. (1985) Indigenous Action Research for Individual and System Development. *Educational Management and Administration,* 13, p. 113-118.

Oldroyd, D. and Tiller, T. (1987) Change from Within: an account of school-based collaborative action research in an English secondary school. *Journal of Education for Teaching,* 13(1), p. 13-27.

PLN/LEARN (2002) Joint Cluster Submission.

Restructuring Collaborative (1997) *Look Who's Talking Now. Student Views of Learning in Restructuring Schools.* Portland: Regional Educational Laboratory Network.

Saywell and Cotton (1999)

Schon, D. A. (1988) Coaching Reflective Teaching. In (Eds.) Grimmett, P. P. & Erickson, G. L., *Reflection in Teacher Education.* London: Teachers College Press.

Sebba, J. and Loose, T. (1997) Examples of Schools' Approaches to Collecting Data. Paper presented to BERA Conference, York, September.

Somekh, B. (1995) Participatory Action Research and the Learning Organisation: problems and possibilities. Paper presented at ECER, Bath, September.

Thelwall (2002)

Tooley, J. and Darby, D. (1998) *Educational Research: a critique.* London: Ofsted.

White, P. (2002) A Shifting UK educational 'research culture'? Paper presented at the annual conference of the British Educational Research association, University of Exeter, 12-14 September.

Wohlstetter, P., Malloy, C.L., Chau, D. and Polhemus, J. (2003) Improving schools through networks: A new approach to urban school reform. Summary. *Educational Policy,* 17 (4), p. 399-430. September.

Appendix 1

Networked Learning Communities
Research Questionnaire

Name of your school:_____

Your role within the school:_____

Q1.   Are you actively involved in research / evidence collection? YES /   NO
(If you are not actively involved, please answer the questions below to the best of your ability, your views are just as important to this research.)

If "Yes" to Q1, what is the focus for enquiry and research in your school?

_____

_____

If "No" to Q1, are you aware of any research being undertaken in your school and what is the focus?

_____

_____

Q2.   Please list any classroom-based research activities that you have been involved with during the last 2 years.

_____

_____

_____

Q3a.   Have you been involved as a participant in research?
**   (please circle as appropriate)**   **Yes   No**

Q3b.   Have you been involved in the collection of data yourself?
**   (please circle as appropriate)**   **Yes   No**

If yes to Q3a or Q3b, have any of these data collection methods been used?

	Yes or No
Interviews	
Questionnaires	
Observations recorded	
Pupils / staff responding to research questions	
focus groups	

Any other form of research participation you have been involved with:

_____

_____

Give these statements a score between 0 and 9 (unless otherwise stated), where
0 = this does NOT happen
1 = this activity is emerging
2 = this activity is developing
3 = this activity is at an advanced stage

Q4. How is your research integrated & supported within the school context?	Score 0-3
Staff time is allocated to evidence collection	
Research findings are shared with all staff	
Research findings and recommendations influence lesson planning	
Post graduate study is encouraged by the school	
Total	

Please comment on any other way the school integrates and supports your research and how ell you do any of the above

_____

_____

_____

Q5. How do you decide upon the focus for a research project in school?	Score 0-3
Research focus is governed by the school improvement plan	
We discuss the focus in staff meetings	
Individual teachers initiate the research focus	
In response to LEA initiatives and targets	
In response to national directives	
Total	

Any other methods of deciding the focus:_____

_____

_____

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Q6. How are your findings disseminated to other members of staff?	Score 0-3
The findings are presented during staff meetings.	
A research report is pinned to the staff room wall	
They are included in the school newsletter	
They are put on the school website	
Research outcomes are forwarded to a network leader	
Multi-media reports are made available (CD Roms / videos, etc)	
Total	

Any other means of dissemination to staff_____

_____

Give these statements a score between 0 and 3 (unless otherwise stated), where
0= this does NOT happen
1 = this activity is emerging
2 = this activity is developing
3 = this activity is at an advanced stage

Q7. In order to increase awareness / knowledge of research in your school, are any of the below statements relevant?	*Yes or No*
We share and talk about articles in the *TES* and other journals which deal with research relevant to our school	
Useful books on pedagogy/learning are known to staff	
There is a staff library that is regularly used and updated	
We often access research electronically	
Researchers talk to us about their work	
For any improvement area we consult research findings	
Total	

Any other methods of increasing awareness_____

_____

_____

***

Q8. Activities which lead to engagement in research	Score 0-3
Training in the skills of research is part of our professional learning	
Subject leaders/departments frequently identify enquiry projects	
There are strategies/resources we can give to support colleagues engaged in research	
We frequently work in pairs or teams on a common area of enquiry and research	
We collaborate with other schools in reflective practice	
Pupils are involved in reflection and research	
Support staff and governors are involved in research with us when appropriate	
INSET sessions involve the latest research	
Total	

Any other activities leading to engagement_____

_____

_____

***

Give these statements a score between 0 and 3 (unless otherwise stated), where
0 = this does NOT happen
1 = this activity is emerging
2 = this activity is developing
3 = this activity is at an advanced stage

Q9. How are your research findings disseminated outside of the school?	Score 0-3	Please give examples where applicable
Our research is shared with other members of a network via regular meetings with other network member teachers.		
We produce a research paper that is presented at conferences in the form of a workshops or exhibitions		
Reports are posted on the LEO (Learning Exchange Online) website and on our network's website		
Reports appear in the network's newsletter		
Research is stored in a special research library held by the network and available to the public		
Research outcomes are forwarded to a network leader to pass on		
Multi-media reports are made available (CD Roms / videos, etc)		
Reports are included in specialist journals / magazines		
Reports are included in local / national press (TES, etc)		
Total		

Any other means of disseminating research outside of the school_____

_____

_____

Q10. How have the research outcomes influenced practice?	Score 0-9
Teachers are confident to talk about the theoretical basis for their work	
There are many colleagues seeking and gaining accreditation for their action-research	
We implement changes into practice as a result of our findings	
Pupils are reflective about how they learn best	
Total	

Any other activities that reflect the impact _____

_____

Give these statements a score between 0 and 3 (unless otherwise stated), where
0= this does NOT happen
1 = this activity is emerging
2 = this activity is developing
3 = this activity is at an advanced stage

Q12. How do you benefit from being part of a Networked Learning Community?	Score 0-3	Please give examples where applicable
We have the support of experienced researchers (mentors) who offer guidance and advice with regard to research		
We can work collaboratively with other schools within the network		
The network provides us with a means of disseminating research in the following ways: (please give each method a score 0-3) - access to conferences to present research - an online based dissemination facility - a newsletter distributed locally - an accessible resource centre holding completed and proposed research	_____ _____ _____ _____	
The network meets regularly to discuss research issues and share findings.		
We have the opportunity to meet with members of other networks to discuss research issues and share findings.		
We have access to training workshops offered to members of networked learning communities		
Being part of a NLC enables us to communicate with other teacher researchers to share any issues		
Total		

Any other benefits of being part of a NLC:_____

_____

_____

Appendix 2

Networked Learning Communities
Researcher Interview Schedule

Name of your
school:_____

Your role within the school:_____

Q1. What is the focus of your research?_____

_____

Q2. Are you aware of any research being undertaken in your school and what is the focus?

_____

_____

Q3. Please describe any classroom-based research activities that you have been involved with either as a researcher or a participant during the last 2 years.

_____

_____

_____

Q4. What form of evidence has been collected?	Yes or No
Interviews	
Questionnaires	
Observations recorded	
Pupils / staff responding to research questions	
Focus groups	

_____

_____

_____

Q.5 How is your research integrated & supported within the school context?	
Staff time is allocated to evidence collection	
Research findings are shared with all staff	
Research findings and recommendations influence lesson planning	
Post graduate study is encouraged by the school	

_____

_____

_____

Q6. How do you decide upon the focus for a research project in school?	
Research focus is governed by the school improvement plan	
We discuss the focus in staff meetings	
Individual teachers initiate the research focus	
In response to LEA initiatives and targets	
In response to national directives	
Other	

_____

_____

_____

***

Q7. How are your findings disseminated to other members of staff?	
The findings are presented during staff meetings.	
A research report is pinned to the staff room wall	
They are included in the school newsletter	
They are put on the school website	
Research outcomes are forwarded to a network leader	
Multi-media reports are made available (CD Roms / videos, etc)	
Other	

_____

_____

_____

***

Q8. In order to increase awareness / knowledge of research in your school, are any of the below statements relevant?	
We share and talk about articles in the *TES* and other journals which deal with research relevant to our school	
Useful books on pedagogy/learning are known to staff	
There is a staff library that is regularly used and updated	
We often access research electronically	
Researchers talk to us about their work	
For any improvement area we consult research findings	

_____

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_____

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***

Q9. What are the activities which lead to engagement in research?	
Training in the skills of research is part of our professional learning	
Subject leaders/departments frequently identify enquiry projects	
There are strategies/resources we can give to support colleagues engaged in research	
We frequently work in pairs or teams on a common area of enquiry and research	
We collaborate with other schools in reflective practice	
Pupils are involved in reflection and research	
Support staff and governors are involved in research with us when appropriate	
INSET sessions involve the latest research	
Other	

_____

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_____

***

Q10. How are your research findings disseminated outside of the school?	
	Please give examples where applicable
Our research is shared with other members of a network via regular meetings with other network member teachers.	
We produce a research paper that is presented at conferences in the form of a workshops or exhibitions	
Reports are posted on the LEO (Learning Exchange Online) website and on our network's website	
Reports appear in the network's newsletter	
Research is stored in a special research library held by the network and available to the public	
Research outcomes are forwarded to a network leader to pass on	
Multi-media reports are made available (CD Roms / videos, etc)	
Reports are included in specialist journals / magazines	
Reports are included in local / national press (TES, etc)	

_____

_____

_____

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Q11. How have the research outcomes influenced practice?	
Teachers are confident to talk about the theoretical basis for their work	
There are many colleagues seeking and gaining accreditation for their action-research	
We implement changes into practice as a result of our findings	
Pupils are reflective about how they learn best	

_____

_____

_____

Q12. How do you benefit from being part of a Networked Learning Community?	Please give examples where applicable
We have the support of experienced researchers (mentors) who offer guidance and advice with regard to research	
We can work collaboratively with other schools within the network	
The network provides us with a means of disseminating research in the following ways: - access to conferences to present research - an online based dissemination facility - a newsletter distributed locally - an accessible resource centre holding completed and proposed research	
The network meets regularly to discuss research issues and share findings.	
We have the opportunity to meet with members of other networks to discuss research issues and share findings.	
We have access to training workshops offered to members of networked learning communities	
Being part of a NLC enables us to communicate with other teacher researchers to share any issues	

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_____
____