



## Participants' reflections on their experience in the ICT Test Bed evaluation

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## Introduction

This report describes and explores participants' reflections on their experience in the ICT Test Bed evaluation.

The ICT Test Bed project, funded by the department for education and skills (DfES) over four years from 2003-06, was tracked by an evaluation team conducting both quantitative and qualitative research. The qualitative aspect of the evaluation was divided into two parts, an external strand and an action research strand. At the end of the project, in October 2006, a weekend conference was held in York and a number of practitioners from across the project who had participated in the action research strand came together to check the findings and engage in a final reflection.

As a visiting scholar at Manchester Metropolitan University, I was invited to participate in the weekend and subsequently given the role of facilitating the final session of the conference. While most of the weekend was focused on what had been learned about ICT, the final session was an opportunity to reflect on the experience of being an action researcher. The evaluation team thought that inviting a person who was external to the project to facilitate this session was valuable in terms of creating some distance between the participants and the evaluation team. I also thought it gave the evaluation team an opportunity to reflect on their experiences too.

The session, which was divided into three activities, involved small group discussions, an opportunity to write personal reflections and then a final session to bring people's ideas together. The session description and the pro forma used for documenting the personal reflections are included as Appendix 1. The twenty two reflective responses focused on five questions:

- What went well?
- Where to go next?
- What are the questions?
- What are the issues and ideas?
- What was a memorable moment?

A month later, at the annual collaborative action research network conference (CARN 2006) one member of the evaluation team, together with four of the participants in the York weekend, presented their reflections on the ICT Test Bed evaluation. They provided a rich picture of their experience and so in preparing this report I have also drawn on their presentations and the notes I took during the session.

Combined, these two sources of information – the reflections from the York weekend and the presentations from the CARN 2006 conference – became the basis for this report.

As an outsider to the ICT Test Bed evaluation, it is not surprising that what I have seen, and therefore the way I have shaped this report, is informed by the theoretical ideas that I use to understand my work and by the questions that are of particular interest to me at the moment. As a consequence, when considering the reflections on the ICT Test Bed evaluation I have asked myself:

What does this project tell us about workers, work and workplaces?  
(Kemmis, 2001:92)

What is the geographical scale of activity? (Smith, 1993)

What quality of communicative action has been achieved? (Habermas, 1996:131).

Has this action research achieved Stenhouse's call for systematic inquiry made public? (Stenhouse, 1985)

Using these questions as a framework, the first section of the report examines how participating in the ICT Test Bed evaluation changed practitioners' work in the classroom.

The second section examines the way in which the ICT Test Bed evaluation expanded the scale of the workplace out from the classroom in a ripple like effect, to create new opportunities for collaboration in local teams, regional clusters and a national network.

The third section explores the changing patterns of professional communication by focusing on research writing, focused dialogue and finally presenting and publishing.

The fourth section then argues that when considered together, changed classroom practices, the expanded scale of activity and the new patterns of communication, achieved significant movement in responding to Stenhouse's call for systematic inquiry made public.

## **Changed classrooms: combining focus and freedom**

The ICT Test Bed evaluation led practitioners to shift their approach to professional practice in the classroom. They noted the development of a culture of innovation and reflection, which gave them the freedom to try things out, to be more observant and time to think more deeply about the things that were taking place in their work environments. For some it was a completely new way of working, yet for others it was an opportunity to build on prior experiences:

- “My background is in sociology and action research was a godsend to me as I’d been teaching for two years and was beginning to want new challenges in the classroom. I felt able to do action research and was confident to use my analytic skills from sociology to help me.”

When practitioners were asked to recall their most memorable action research moments, many documented stories of changed practice. For instance, one nursery classroom assistant recalled:

- “...Seeing two children who never normally played together collaborating on drawing a picture on the whiteboard. Their expressions when they had finished the picture and were pleased with the end result were priceless. This would never have happened with pencil and paper. The picture involved discussion, turn taking, compromise, mark making skills and creativity. For two three year olds this was quite an experience for them and me.”

And another teacher remembered:

- “...the time when I realised that others were able to go on from what I had started. Teaching assistants and children used the starting point I had created and were able to build on this. This was most apparent when we started using the [digital] video cameras. The children were shown how to use them and then experimented themselves and were able to progress their own learning. I realised that children could be in charge of their own learning especially in this area. If they could be in that position where did this leave me?”

This intimate detail about practitioners' experiences, together with the questions that emerge when introducing new technologies, was central to the inquiry process. As they investigated their work they became keen observers and analysers of their successes, testing and developing personal theories about ICT, learners and learning.

- “As well as being supported by action research time to investigate what was happening I had many moments when I caught a glimpse of claims coming to life before my eyes... confident learners, independent learners sketch books crammed full of research which had been self directed.”

As one teacher noted, a highlight was '*thinking about what I was doing and why*'. Highlighting the nature of the process, one teacher recalled watching an autistic child, who was normally non communicative:

- “[He was]...drawing a picture of himself and his friend and then saying to his friend ... 'look it you – my friend'. Action research enabled me to reflect on this moment and analyse how ICT [interactive whiteboard etc] had enabled this to happen and to share my findings with others.”

In addition to observing shifts in ICT usage participants in the evaluation also observed a shift in the quality of engagement in their classrooms. They reported changing their approach to students; instead of telling they found themselves listening to 'what they were saying about how they like to learn'. There was also evidence of a connection between expectations, observations and listening. For example, one teacher noted: 'I became more observant of the responses of the children to equipment. They didn't always do what I expected or planned. Their ideas [were] often better.' Also indicating the emergence of students' voices, a support staff recalled 'listening to a child relate his experiences' using digital video and then incorporating the new knowledge as part of his research into technology and history.

Interestingly, some practitioners observed a parallel shift in their experiences and the experiences of the pupils in their classrooms. As one teacher recalled

- "...seeing [the pupils] become 'experts' and watching their enthusiasm which mirrored the process I myself was going through – teacher as learner and pupils as learners, teachers as researchers, pupils as researchers – giving them a voice even if they were not specifically involved in research, gaining their permission to share their work, making them feel special and listened to."

The ICT Test Bed practitioners felt valued as action researchers and had a sense that their work was both recognised and legitimate. They found that the project allowed personal and professional development, in contrast to other experiences, where they felt like cogs in a machine. They found that having time to reflect and think more deeply not only had an impact on innovations connected to ICT, but that what they were learning fed into other areas of teaching too. They observed how their continuing professional development led to a feeling of empowerment and greater self-esteem. Another teacher noted how the opportunity had given her an identity beyond being a class teacher and how important this was in a big school, where she was unlikely to get a promotion or specific role. This personal dimension grounded the project in individual practice and therefore changed what had started as a government-led initiative into a 'bottom up' model of change where the participants had a sense of ownership. Practitioners felt they had a 'space to play with things' and 'to take risks' – 'to work it out in practice'.

But looking to the future, practitioners had a number of concerns: would they be able to sustain change and work towards ICT becoming an integral part of the curriculum; would they be able to continue innovating and finding new ways to use ICT; and would they be able to sustain ICT creativity?

## **A new scale of activity beyond the classroom**

The ICT Test Bed evaluation was successful in 'clearing a work space for teachers' and creating three new and distinct locations for research engagement beyond the classroom. This meant that during the project, participants were not only involved in collaborating in workplace teams, but also made connections with other teams in regional clusters and participated in national activities. In their reflections practitioners referred to each of these locations, indicating the significance of each and pointing to the differences afforded by each opportunity.

### **Local teams**

Taking one step away from the personal experience of the classroom, the ICT Test Bed evaluation established teams in primary, secondary and further education (FE) settings. As well as the local practitioners, each team included one of the external evaluators, and over time significant research relationships grew between the practitioners and the evaluators. The practitioners' reflections indicate that they saw the external evaluators as co-researchers and co-presenters, initiators and brokers as well as supporters and mentors. Together they were involved in describing practice, explaining practice, theorising practice, changing practice (Cherednichenko & Kruger, 2006) and finally they worked together to achieve the goal of making their practice public. Practitioners felt that the external evaluators were enthusiastic, supportive, respectful and challenging and in their work together the practitioners felt visible, valued, respected and listened to. As a result, they experienced a significant degree of ownership and professional development.

At the beginning of the project, participants in the workplace teams felt wary about the expectations and daunted by the idea of action research. However, on reflection they acknowledged the personal value of conducting action research, and reported benefits for both children and teachers. As one headteacher recalled:

- "When [our external evaluator] first mentioned that we may like to produce a piece of action research I felt quite angry. Didn't she realise how much work and worry we already had? Did she really think we

would want more work? Of course when I had calmed down and talked to the senior management team about it I began to see how useful action research could be for the school but I still didn't want to take part myself... [then after a while] Several members of staff told me what they were doing and I began to feel rather jealous that they were 'action researchers' and I wasn't. Writing my research was very liberating and gave me time to reflect. Until then Test Bed had been a hassle but I realised just how beneficial it had been for the children and also for the staff, particularly the action researchers. So thank you..."

Many teams not only included teachers but also classroom assistants, support staff, advisers, head teachers and content developers, and the possibility for whole staff involvement was highly valued. But participation was not consistent and in some locations people wondered how they could encourage greater participation, especially from headteachers. In other settings, inspired by the new collegiality, participants began to think about the future and indicated the importance of expanding involvement out to other agencies including speech therapists, school nurses and those who have input into children with special educational needs (SEN). This desire was driven by a belief that their experiences and insights would help and that by

- "...involving as many people as possible [it] would raise the profile of the school and improve teaching and learning."

At one school where a number of staff were involved, they reported gaining a sense of identity as a research team and realising that in creating a research community it had changed how people felt about themselves in the school.

As the project drew to a close, many wondered if and how it might be possible to allow staff time and support to continue action research. They wondered whether their desire to continue action research was too idealistic or impractical, but seemed keen to avoid 'getting stuck in a rut', instead indicating a desire to maintain the impetus and build on their experience and achievements.

## Cluster and national activities

The ICT Test Bed evaluation was structured to take individual and team work beyond the workplace and participants noted the significance of being able to take their work to a range of professional forums. They had a sense of 'being part of a bigger picture'. For many, the opportunities to share their valuable research at regional gatherings and further afield were memorable moments. As one teacher noted:

- "Having practice endorsed outside the school...provided professional stimulation and invigorated the learning and teaching that occurred."

In their reflective comments, ICT Test Bed practitioners revealed a number of reasons for wanting to discuss ideas and spread knowledge to other schools. One teacher linked dissemination to his institution's search for 'something incredible' which would distinguish it from other institutions. Other motivations were indicated in a number of practitioners' questions: 'How will we share action research findings in school/beyond?' and 'Can we generate a need for similar projects in other educational areas?'

Completing the ripple effect which began with the classroom and extended out to workplace teams and regional clusters, the ICT Test Bed evaluation provided a number of opportunities at the national level. For example, there were project workshops which brought people together to present and discuss issues of shared concern. These were highly significant opportunities for professional exchange:

- "A colleague in the content workshop, [who was] also undertaking research, asked me a number of questions about how some of his materials were used in the classroom, and how effective they were. His questions caused me to see new insights into what I was doing in my lessons."

Participants were also encouraged to produce pieces of research and were amazed when they had the opportunity to present them at events within the broader education community. They particularly mentioned CARN

conferences, Becta events and the ITTE conference in Dundee. As one teacher/leader noted:

- “Without a doubt I cannot go back to where I was and now I feel part of a bigger picture and am more aware of broader developments and issues.”

Each of these situations provided an opportunity for participants to network with likeminded action researchers. One teacher was clear about the shift in his work:

- “It is as a result of being involved in Test Bed, which made me network more with colleagues, that I eventually gained the confidence to do action research for myself and the project as a whole. I'd raised my eyes from seeing myself as a teacher responsible to the school, to being a teacher within the whole community of teaching.”

The national opportunities seemed to have a greater impact on the practitioners than the regional activities. In fact, the further the activity was from the classroom, the more amazement there was about the opportunity and the greater the sense of achievement and self esteem. People had never had this opportunity before and imagined that they would not have this chance again.

## **New patterns of communication**

Looking from a different perspective, three distinctive communication activities were evident in the work of the ICT Test Bed evaluation: research writing, professional dialogue and presentation and publication.

### **Research writing**

The ICT Test Bed evaluation provided an opportunity to write. Many participants commented on the value of 'actually writing it' and made a connection between writing and having a chance to 'develop and reflect upon thoughts and actions'. One practitioner associated the beginning of the ICT Test Bed evaluation with feeling a positive atmosphere filled with expectation and a sense, both from the school and the LA, that the products of the research would be judged in terms of creativity rather than perfection. Indeed, the expectation that practitioners would produce a written report about their action research was a significant motivating factor.

- "I signed up to do something and then felt morally obliged to write up some form of project/experience, which I did. I enjoyed capturing the experience I'd had, but I wouldn't call it particularly robust research. I don't think writing my report raised my self esteem, in fact I felt like I'd cobbled a bit of a substandard effort together. What I didn't realise was that even if mine felt substandard, at least it was done and very few other people across the project had written anything. My self esteem began to rise, a bit..."

However as one teacher noted 'the last thing I had was time to write down what we were doing'. Even in their final reflections, practitioners questioned whether writing should be part of action research. Finding time was only one issue; not everyone found writing easy and as one practitioner observed, 'at the beginning of the project almost everyone...in my school felt daunted by the idea'.

Colleagues within workplaces were significant in inspiring others to get started. Indicating a connection between the extended scale of activity and writing, practitioners noted that various individuals and relationships

encouraged and supported their writing in the classroom, in teams, in the clusters and in the national network. They specifically mentioned the support provided by enthusiastic practitioners, the research leaders, the leadership teams, the ICT Test Bed evaluation team and the wider audience.

Recalling the process of getting started, one head teacher noted how an enthusiastic member of staff took a leadership role by highlighting the financial incentive and adopting a 'personal touch' that 'didn't make it feel like a struggle'.

- “[She] was very upbeat and positive and told members of staff that they would be paid for writing a short piece of action research which really amounted to just writing down what they were doing as part of the Test Bed project – with the children – as part of their admin role.”

For those who assumed this kind of leadership, it became one of the most memorable aspects of the ICT Test Bed evaluation – persuading others that it was possible to become action researchers and important to share and reflect on experiences. Practitioners also provided leadership for their peers by working through from inquiry to presentation, so that others could see the process. This modelling meant it was possible for others to imagine undertaking research and therefore feel more confident about taking a risk. As one teacher noted:

- “At the very beginning, one member of our staff had done some action research. She had worked with [our external evaluator] and had presented her research at a conference. When she returned she was empowered by the experience – professionally, with self esteem and meeting others just like her. She persuaded me to have a go and seeing the way she had grown it didn't take much. Slowly more and more staff members developed confidence to try. The support that...our first researcher...gave is what made it work. People noticed what she had achieved and could see themselves doing it too.”

Commenting on the ICT Test Bed evaluation team, many practitioners noted that the opportunity to work with an external evaluator to write up and 'tease

out' individual pieces of action research had worked well. From one evaluator's perspective it felt like he was stalking people until they began to write. However, he was clear that in the beginning it was important to respect the participants and value the first things that were written. One teacher recalled the external evaluator quoting something she had written and thinking 'Wow! He read it.' Practitioners also saw a connection between making observations and then having time to reflect with the support of colleagues.

Others were motivated by the chance to engage in a different kind of research, one in which their voices would be heard and where there would be an opportunity to produce something for both the ICT Test Bed evaluation report and a wider audience – 'somewhere to take it'.

- "Once we got started, we really enjoyed the focus of the research. [The external evaluator] was very helpful in the design of it, because it was different from the 'harder' research I had previously done on science topics. It was good to feel that we were producing work that others would see, and that our voices were heard and taken seriously."

Some practitioners managed to connect the writing with other aspects of their work and find a significant audience within in the workplace:

- "I was the only staff member who wrote an action research report from my school. I was encouraged to do this as a part [of the] development of our curriculum and medium term planning."

In many situations the writing provided a starting point for focused professional conversation.

### **Focused dialogue**

Participants in the ICT Test Bed evaluation noted that the project had provided an opportunity to talk with and listen to a range of people. Different conversations were possible in different locations and with different people; practitioners reported diverse one-to-one conversations and 'the stimulus of theoretical debate'.

In the first instance, having a research focus seemed to change the nature of conversations between those who worked together in classrooms. People who would not usually discuss teaching and learning with each other began to share information and ideas. This represented a shift in practitioners' work as pupils, parents, assistants, support staff, teachers and a range of practitioners from outside the workplace talked with each other. One nursery classroom assistant noted how it had been good that all school staff had 'been able to get involved in the research. Usually assistants are excluded. It has given us a level plane to work on.' Indicating that the appreciation was mutual, a teacher recalled how she had become more reflective in her practice, 'sharing and discussing ideas with colleagues especially my nursery nurse.'

Another relationship that bore the fruits of new conversations was between support staff and content developers. They noted that cooperation led to the production of tailor made software resources and 'maths resources for low ability children to use confidently'.

The opportunity to collaborate with parents and grandparents also indicated a dialogic shift which helped teachers to think about what they were doing and why. One teacher noted how collaboration with parents had provided an extra dimension to the research, as they were able to offer insights into the work, including things that had not previously been thought about. In another situation there was a shift from communicating with parents by letter to approaching them face-to face in the school yard, and it wasn't until these conversations began that new relationships were forged. In this situation the relationships were the most important aspect of the engagement and participants only embraced ICT once 'they were confident that their other skills and contributions were valued.' In one setting, 'parenting skills were celebrated, discussed and enhanced.' The program was responsive to the needs articulated by participants, and while dubious at the beginning, the ICT coordinator noted that by the end of the process:

- "...those ladies used computers for scanning, making lists and games and even to record their own CDs so it has had an impact on Test Bed. We have also encouraged their involvement in school and they have become part of the team."

Many ICT Test Bed practitioners reflected on the value of working with the evaluation team describing how the support of an external team provided an opportunity to learn 'from and with each other in real situations'. One nursery classroom assistant observed how sharing ideas became possible when you were researching issues with another researcher. From their perspective, when you have a chance to engage in supportive and encouraging conversations with outside facilitators, the constant enthusiasm keeps you going. Looking ahead, practitioners wondered about the possibility of organising research support for schools and one person referred to a situation in Canada where a researcher was linked to a school to work with teachers on school improvement. However, despite the overwhelming respect for relationships that were built between all the ICT Test Bed evaluation participants and the evaluation team, there continues to be a lingering awareness of a divide between practitioner researchers and 'hard core' researchers.

Not only were there new conversations between different people, but a range of interests were evident. The ICT Test Bed evaluation encouraged practitioners to describe their practice, to share and discuss experiences and ideas, to challenge and develop personal theories and to persuade others. In this way, private thoughts and experiences were brought into the public realm. The closely observed and documented experiences in various learning environments gave the ICT Test Bed evaluation participants something of mutual interest to talk about. In the local workplace teams, the chance to share and discuss ideas about ICT innovations with a group of researchers became possible and practitioners valued this support. As one participant noted:

- "Collaboration with colleagues/parents provided an extra dimension to my research. They were able to offer insights into work that I had not thought of."

Common themes in the recollections about professional dialogue included an appreciation of challenge, feedback and affirmation. Looking back, practitioners made connections between the opportunity to reflect on their practice, being given time to write, discussing thoughts and ideas and the

support and enthusiasm they gained from colleagues. Teachers reported that the experience of getting feedback on their teaching and children's learning was a memorable experience.

- “Meeting other action researchers at conferences, [and other] gatherings was great. It enabled more reflection, more chances to discuss ideas and in turn created changes in my own practice at school.”

Practitioners appreciated the opportunity to be part of a group of researchers, to have their views challenged, listened to and aired. As one leader reflected, it gave practitioners an opportunity to analyse things that they could see were working well and to test their theories about why things had happened in a particular way. They found that working together supported the process of reflecting on practice and generating ideas. In all the reflections there seemed to be a strong message that together they formed an evaluation team – sharing information, observing, thinking, documenting, discussing, checking, negotiating and theory building.

Teachers also noted that having opportunities to engage in conversations outside the workplace provided professional stimulation. Indicating the value of having different locations for dialogue, they observed that having a choice is particularly important when there are difficulties within the workplace.

One outcome of the professional dialogue enjoyed during the ICT Test Bed evaluation seems to have been an expanded interest in engaging with broader ideas, trying to come to grips with ICT buzz words such as ‘harnessing’ and ‘embedding’, and a desire to work out what these ideas might mean in practice. Applying their newfound confidence, participants became involved in debates about ‘personalisation’ and ‘innovation’ and found that ‘the action research process helped with this...it has helped us to make informed decisions’. Sensing the importance of this level of engagement, ICT Test Bed evaluation participants articulated a belief that it was important not to lose enthusiasm, by continuing to read and updating their knowledge about new ways of learning.

Despite the great value associated with the multiple opportunities for professional dialogue, practitioners were concerned about the future. They questioned whether it would be possible to sustain the relationships and find time to 'unite' or engage in professional dialogue within workplaces or with other schools and groups.

### **Presenting and publishing**

The third significant dimension of communication in the ICT Test Bed evaluation involved the creation of opportunities for sharing work with others and having an audience. Practitioners made a connection between observing, reflecting, analyzing and sharing. For one teacher this local-global connection was the most memorable aspect of the work and she recalled watching a (normally non-communicative) autistic student:

- "...drawing a...picture of himself and his friend and then saying to his friend ... 'look it you – my friend'. Action research enabled me to reflect on this moment and analyse how [the] interactive whiteboard had [allowed] this to happen and to share my findings with others. Presenting at an international conference and having work published raised my confidence and self esteem."

Practitioners wanted their voices and views to be heard and to tell others about their experiences, their findings and the knowledge they had gained. Indicating a desire to engage with others across the ICT Test Bed project, participants saw the audience for their work as extending from within their workplace, then beyond the workplace to practitioners and researchers in other educational settings including regional, national and international gatherings. One teacher recalled the moment when

- "... I was asked if I would like to share and discuss my research. I was initially unsure and I am so pleased I rang [the external evaluator] back to say 'Yes I would love to!' Presenting to an audience helped me to gain confidence to speak in a variety of situations and it was an experience I will never forget."

ICT Test Bed evaluation practitioners, having belief in the value of the research they had conducted, appreciated the opportunity to present their research alongside other researchers from their region at gatherings on a wider scale. They highlighted the connection between developing and reflecting upon thoughts and actions, actually writing them up and the responses they received upon completion and presentation. For one teacher:

- “The most memorable moment was the ‘relieved’ feeling when it was all over and published...Showing the finished copy to my colleagues and receiving positive feedback and accolades...from significant individuals – both professional and personal. Thanks ICT Test Bed.”

ICT Test Bed practitioners – including teachers, leaders and support staff – felt that opportunities to present their documented research at conferences meant that their voices were heard. For many, presenting was one of the most memorable moments in the ICT Test Bed evaluation. The significance of the experience seemed to be multifaceted and included working together, having something to say and having an interested audience. One of the content developers recalled

- “...being with [members of my team] at the ITTE conference in Dundee. We were there to present our ideas and experience to hard core researchers/academics. [Both] the preparation for this and the process of presenting were daunting [and it was] also a great compliment that we had information that others wanted. The whole process of action research for me has been one of reflection and confidence building.”

Practitioners indicated that they had never had the opportunity to present their work at conferences before and believed that it may never happen again. Participation in action research makes practitioners feel as though they are part of a bigger picture, more aware of broader developments and issues. They were amazed at how the opportunity to share their experiences, particularly at international conferences increased their self esteem and self confidence. Participants also had a sense of being able to have an influence on policy making.

In reflecting on their experience in the ICT Test Bed evaluation practitioners placed emphasis on the possibilities for publishing their work. Many recalled what a proud moment it had been when their report had been added to the ICT Test Bed evaluation web site.

Practitioners make a connection between focusing on practice, having something to write about, and having something share with others. From the practitioners' perspective there is a connection between publishing their work and engaging others in professional discussion.

- “The experience of being an action researcher has been positive and has [had a] far reaching impact for me. Self esteem and self confidence increased to share experience and to be given opportunity to present at an international conference was amazing...to have work published and to engage others in professional discussion.”

While there is evidence of the significance of presenting across the scale of locations, the strongest connections seemed to be within local teams and, at the other end of the scale, in national and international forums.

Interestingly, practitioners wondered about the lack of interest or opportunity for their ideas to be circulated within their workplaces and across their regions. In discussion at the CARN conference, one participant suggested that the 'curriculum tunnel' restricted the development of a culture of sharing at both the local and regional levels. In Australia they talk about a 'tall poppy syndrome' where it is shameful to promote your success – maybe this dynamic was at play, resulting in reluctance on the part of ICT Test Bed practitioners to promote their new knowledge in their own workplaces. Alternatively, there may not have been any clear spaces or opportunities to facilitate school-wide or regional presentation of findings. One teacher made the surprisingly simple suggestion that staff meetings might be a forum for sharing findings and good practice. Whatever the explanation, there seems to be a need for leadership in this area, together with the creation of particular opportunities for presenting practitioner knowledge.

Looking to the future, dissemination of findings and ideas was articulated as the greatest area of practitioner concern. People expressed a clear view that their action research was not only important for those involved and applicable to their current workplaces but relevant in other educational situations. They argued that it was important to share the outcomes and findings from the 'successful' pilot project in order to influence teaching and learning and affect change. From this position they extended their thinking to question what could be done to maintain the potential for a wider audience. Practitioners were clearly thinking about who would want to know, who might be informed and how the sharing might happen. One person suggested using CARN as a motivation and a forum and another specifically considered what success they might have in taking the ideas with them as they moved to new locations. Practitioners also considered how they might go about finding places for publication and several indicated that they were exploring the possibility of connecting research with gaining further qualifications.

## **A shift in teachers' work: towards systematic inquiry made public**

- What does this work tell us about workers, work and workplaces?
- What is the geographical scale of activity?
- What quality of communicative action has been achieved?
- Has this action research achieved Stenhouse's call for systematic inquiry made public?

Returning to my original questions it seems that a number of observations might be made. Broadly speaking, I would argue that when considered in combination, the changed classroom practices; the expanded scale of activity; and the new patterns of communication described above, represent a shift in teachers' work and provide one interpretation of 'systematic inquiry made public'. In order to explore this argument and connect the different dimensions of the ICT Test Bed evaluation experience the remainder of this report is divided into three sections: practitioner inquiry, being systematic and going public

### **Practitioner inquiry**

The practitioners who participated in the York weekend and shared their reflections at the CARN conference valued the chance to engage in innovative practices associated with introducing ICT into their classrooms. They enjoyed 'a new identity as active researchers' and the chance of 'working it out in practice'. Each practitioner initiated inquiry was based on his/her interests, but was also necessarily within the context of government concerns about the introduction of ICT into educational settings. Being asked to focus on ICT and having the freedom to try things out seemed important, and while the innovation was associated with a government agenda, it was clear that this group of participants had a sense of ownership and were committed to exploring classroom change. Many connected the introduction of ICT to local challenges, such as increasing parent participation and catering for non-traditional learners.

Practitioners were clear that a significant aspect of the project was being provided with an opportunity to take an inquiring, reflective and critical approach to practice followed by a chance to describe their efforts in pieces of research. Knowing that the writing was intended for a wider audience gave participants a sense that they were doing something valuable not only in their classrooms but in relation to the wider educational community. In different settings participants became aware of the value of action research in terms of managing change, school improvement, raising standards, developing a reflective ethos and challenging preconceived ideas.

Throughout the project, practitioners were supported by a network of professional relationships which were enjoyed both locally and in the newly extended workplace. Numerous opportunities for professional dialogue ensured a collaborative approach to innovation, which both challenged and supported the practitioner-researchers to think about their efforts, articulate new knowledge and engage in the writing process. Further, once completed, the documented accounts of practice provided a focus for new professional conversations and the impetus for further innovation. Looking forward, practitioners indicated the value of this work by questioning how they might continue to build a research community.

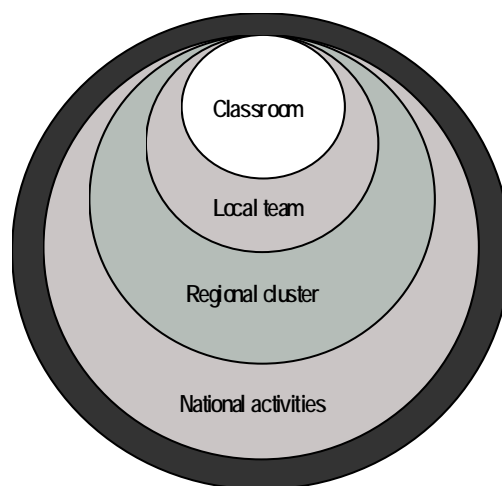
The opportunity to analyse data and use the evidence to demonstrate what had been learned, instead of just having a hunch, was also very satisfying. Looking back, practitioners observed that the research gave support to their claims and could be used to 'prove' why or how something should or should not be done.

Despite these observations, a number of participants' reflections pointed to a belief that action research is 'soft' in comparison to other kinds of 'hard' scientific research and further that there is a gulf between the knowledge generated by practitioners and 'hard core' researchers. However, it seems to me that the detail of practitioners' reflections challenges these perceptions, making it possible to argue that this research has indeed been systematic and therefore more robust than practitioners might expect.

## Being systematic

The systematic nature of the ICT Test Bed evaluation might be understood as having two dimensions – a geographical dimension and a communicative dimension.

The evidence provided in the practitioners' reflections indicates the importance of structuring action research to make connections between the classroom and the wider educational community, in effect expanding the location of teachers' work. Using Smith's (1993) ideas about geographic scale this might be represented diagrammatically as a ripple-like set of locations for activity which begins in the classroom and expands outwards to voluntary local teams, regional clusters and national events (see Figure 1).



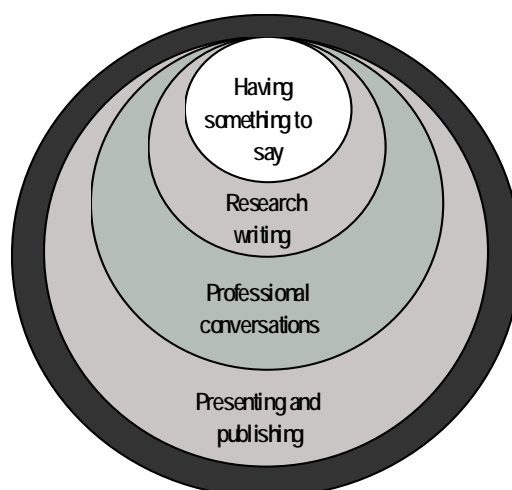
*Figure 1: A scale of locations*

In the ICT Test Bed evaluation each location seemed to provide a different kind of opportunity and play a different role in supporting research. In combination, the relationship between the different locations gave shape to the conduct of the inquiry. The work in classrooms grounded the research in practice, while dialogue and other interactions in local teams both challenged and supported the research process. The regional clusters provided an opportunity for sharing and further exploration and various national activities enabled wider dissemination of findings. There is strong evidence to suggest that this is a strong framework for ensuring a systematic approach to action research.

Having said this, the weak link seems to have been the regional clusters, which were mentioned infrequently and only in one region. In order to gain a deeper understanding about this situation and to therefore know how to act, there are a number of questions that might be asked: Is there evidence to indicate the significance of regional clusters elsewhere in the project documentation? Is there a role for regional clusters? What can be achieved in a regional cluster that might not be possible in another location? What factors might lead to a stronger role for regional clusters? What kind of activity might be appropriate for a regional cluster? What support would be necessary to achieve a successful regional cluster?

Presenting the work of individuals and teams to the whole staff seems to present another challenge and, as one practitioner observed, there is a need to explore the contrast and tension between external collaboration and internal isolation. Again a number of questions are implied: What strategies might be used to share ideas in the workplace? What is the role of leadership teams in supporting the dissemination of inquiry and facilitating professional dialogue?

The second dimension of the ICT Test Bed evaluation that shaped the inquiry involved creating particular opportunities for communication. Once again this might be represented diagrammatically, to show how the communication that supported inquiry began with practitioners having something particular to say, and was extended by opportunities for research writing, professional dialogue and presenting and publishing (see Figure 2).



*Figure 2: A scale of communication*

In combination, these practices enhance communication both within and beyond the group. Further, it is clear that the new patterns of communication looked different and fulfilled a different role in each location. It was, for instance, important to provide opportunities for dialogue in the classroom, in local teams, in clusters and in national activities. Each opportunity was a different kind of opportunity, which provided an ever expanding audience for checking and disseminating ideas.

Looked at from the perspective of Habermas' (1984, 1987) theory of communicative action the conjunction of writing, dialogue and presentation in each of the different locations provided a systematic framework for expressing ideas, engaging in professional interaction and working towards a deeper understanding about ICT in education.

At the end of the ICT Test Bed evaluation there seemed to be a shared view about the value of disseminating action research, in terms of professional development, school improvement and the generation of new knowledge. However, sustainability seemed to be a question in everyone's minds – this was significant both in terms of the expanded scale of engagement and the new patterns of communication. In looking to the future, practitioners seem aware that if they are to embrace action research in a continuing way then a number of challenges must be met. The questions which seemed to underpin thinking about the future included: How can we sustain this way of working – identifying issues, thinking and reflecting on practice? How can we fund this kind of work? How do we keep connected to a wider audience?

### **Going public**

Finally, the ICT Test Bed evaluation gives us at least three clues about what it means to go public with systematic inquiry.

The first involves getting to a point where you have something to say. The practitioners involved in the ICT Test Bed evaluation were asked to inquire into a broad issue of interest to the government, but were also given some freedom to construct their own research questions and design. The possibility of personal agency in the context of broader interests was a strong match. It

resulted in diverse examples of changed practice, accompanied by systematic observation and reflection geared towards a deeper understanding and the generation of new knowledge about what to do in the future. For the participants who attended the York weekend at the end of the ICT Test Bed evaluation, this situation meant that they felt as though they had developed some expertise, and therefore had something to say both to the government and to fellow practitioners. Even when they were nervous about reporting their learning they took the risk, because they had worked through a practice to theory process of generating new knowledge.

The second significant aspect of going public was connected to the opportunity to draft and craft pieces of research writing. At the end of the ICT Test Bed evaluation there were over one hundred public documents reporting the inquiry into ICT in educational settings. In this regard it seems that being expected to document accounts of practice added an extra dimension to the way practitioners usually work. Through this process of documenting their experiences and opinions, practitioners were able to shape and refine their ideas. Writing in the context of collaborative inquiry provided both support and challenge, which meant that research writing evolved and was tested in a safe environment. As a result, individuals and groups became increasingly confident about the quality of their work and therefore more comfortable about presenting and publishing their ideas.

The third aspect of going public revolved around having somewhere to take the stories and the new knowledge. Interestingly, practitioners had a sense from quite early in the project that other people wanted to know about what they were doing and what they thought. They had a sense that what they had to say would make a difference both in terms of policy and practice. This meant that there was an audience for their reports. Surprisingly for the participants, the audience expanded over the four years of the project. At the beginning of the project it was assumed that the government would be interested in the research outcomes, but as the project progressed practitioners began to realise that their peers were also interested. While the patterns of presenting varied from one individual and group to another, participants found themselves sharing their ideas in ever-expanding contexts,

which provided multiple opportunities for testing ideas. By the end of the evaluation, ICT Test Bed practitioners had disseminated their findings to both the government and the profession; they had not only gone public at the local level but also regionally, nationally and internationally.

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## Reflecting on being an action researcher

### **Introduction**

The purpose of this sequence of activities is to reflect on the experience of being an action researcher.

### **1. In small groups... (20 minutes)**

This is a time for telling and listening.

As we sit in staffrooms, walk down the corridor and make our way to the car park there are stories that we tell about our work. These stories often have an emotional dimension...delight, frustration, excitement, fear, joy, guilt, elation...and they usually tell a lot about the nature of our work.

So, thinking back...

What has been our experience of being action researchers?

What are the stories we can tell about this experience?

What surprised us?

What did we discover?

What were the highs and the lows?

Was there a critical moment when...

Was there an incident that you'll never forget?

What are the memorable moments?

What made them memorable?

...emotion?...people?...conversation?...ideas?...learning?...

### **2. Individually... (20 minutes)**

This is a time for documenting some of your experiences, an opportunity to record some of the ideas that you talked or thought about in your small group. This is a quiet time for individual reflection and writing.

The first way of doing this is to think about your experience in four ways:

The things that went well

What the future might hold

Questions that have surfaced about being an action researcher

Issues and ideas about being an action researcher

The second way is to write a story that highlights an aspect of your experience. It might be a story that you told in your small group or it might be another that you'd prefer to write about.

**3. All together... (20 minutes)**

Together in the whole group let's celebrate our work as action researchers.

Select one part of your reflection to 'throw into the circle' to create a composite story.

Thinking about my experience of being an action researcher, a memorable moment was...

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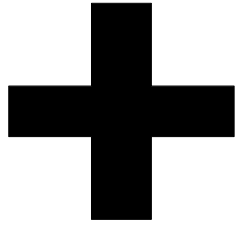
**I am a... (please circle)**

**Support staff      Classroom assistant**

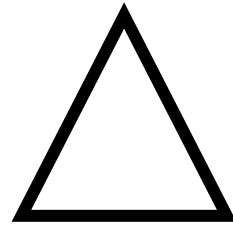
**Leader      Teacher**

**Project evaluator .....**

**Thank you so much for participating and giving your feedback about action research!**



What went well?



Where to go next?



What are  
the questions?



What are the  
issues and ideas?