

**Innovative Teacher Communities
in Local Authorities**

**A Microsoft/SQA
Partners in Learning
Project 2006 – 2008**

**An independent
evaluation by
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TABLE OF CONTENTS

Section	Title	Page
	Executive Summary	3
1	Introduction	3
2	Aims of Project	4
3	Key Performance Indicators	4
4	The pilot phase – February to June 2006	5
5	Securing engagement from Local Authorities and agreeing projects	7
6	Benefits to Local Authorities	7
7	Supporting the LA projects – Input from Local Authority and Partners in Learning	8
8	Links between Innovative Teacher Communities and other LA Initiatives	8
9	Communities of Practice	10
10	The broader context for Communities of Practice	11
11	Sharing good practice	12
12	Communities of Practice in operation	12
13	Self-evaluation	15
14	Incorporating the learner voice	15
15	Sharing good practice – VCTs	16
16	Themes	16
17	Conclusions	17
18	Recommendations	18
	Appendix 1 – Links to National and Authority Initiatives	19
	Appendix 2 – Participating teachers by sector	20
	Appendix 3 – List of VCTs	21

Innovative Teacher Communities in Local Authorities

Project Evaluation

Executive Summary

The PIL Innovative Teacher Communities in Local Authorities project has been successful in helping to foster innovation among classroom teachers within most of the participating authorities, with over 200 teachers involved. The resources contributed by PIL were matched within each of the local authorities (LAs) and further supplemented in most LAs to ensure that teachers received advice, training and support that enabled them to realise their personal goals of using ICT effectively in their classrooms. The resulting exemplars of good practice were shared firstly within each community and then to successively wider audiences of all teachers in the LA, all teachers in Scotland and all Microsoft Innovative Teachers in the UK. By the end of the project around 80 Virtual Classroom Tours had been produced by participating teachers and LA secondees. The mechanisms used to disseminate these included LA intranets, the SQA website, and the Microsoft Innovative Teacher website. A few were showcased at both national and international events.

The mechanisms used for supporting innovative teachers were mainly the traditional ones of face to face meetings, training events, and the provision of printed resources. Each LA secondee complemented these with online channels for communication and collaboration, but with only limited success. In most cases it proved difficult to sustain an online community, even where the LA secondee invested considerable personal resources to promote these methods and maintain an active community. At the end of the two year period of the project there were only a few project areas where there was a thriving online community. Very few of the LAs had engaged in internal evaluation of their project. Three LAs experienced difficulty with fulfilling the project aims and targets in the first year and did not proceed into the second year of the project.

1. Introduction

1.1 Partners in Learning (PIL) is a Microsoft education investment initiative, delivered in Scotland as a partnership between the Scottish Qualifications Authority and Microsoft, and guided by an Advisory Council with representative from LTS, HMIE, ADES and others. The formal partnership agreement was reached in the summer of 2005 and the Advisory Committee met and agreed the terms of reference for each of the partnership projects in September 2005. The project examined in this report – Innovative Teacher Communities in Local Authorities – was one of six projects envisioned by the Advisory Committee. The first phase of the project was a pilot, carried out in East Ayrshire Local Authority between February and June of 2007. The second phase involved the roll-out of the model to 9 additional Local Authorities (making ten in all) from August 2006 to June 2007. The third (and final) phase of the project re-appraised the status of each Local Authority's contribution to the project and continued with seven active participants for the period August 2007 to June 2008.

2. Aims of Project

- 2.1 The overall aim of the project was to build a sustainable community of Innovative Teachers in each Local Authority that supported an aspect of that authority's own educational aims and objectives. For example, in the pilot project in East Ayrshire, the focus of the teacher community was on the work of the *Determined to Succeed* team, developing an enterprising ethos in schools that made learning more relevant to life beyond school.
- 2.2 It was recognised from engagement with interested Local Authorities in the early stages of the project that there would be no single theme common to their various interests. In order to ensure that the needs of the stakeholders were being met, the Advisory Committee decided that the PIL coordinator would agree with each Local Authority the focus and direction of the community of practice to be supported by PIL. These are described in Section 12.
- 2.3 Within each Local Authority the project aims followed a similar pattern: to provide the Local Authority with support in the process of appointing a local coordinator (hereafter referred to as *secondees*); support the secondees with advice and training to enable them to initiate their community of practice; provide on-going mentoring and facilitation for community events; and to identify and publicise good practice to the rest of the teacher community in Scotland and beyond.

3. Key Performance Indicators

- 3.1 The key performance indicators for this project were:
- Each LA has appointed a suitable secondee within the agreed timescale
 - Each LA has agreed a detailed project plan with the PIL coordinator within the agreed timescale
 - Each LA has a programme of activity for their secondee
 - Each community of practice has an established means of online communication and sharing
 - Each community of practice has at least three face to face meetings over the duration of the project
 - Each community of practice has completed one or more VCTs describing innovative practice by participating teachers
- 3.2 The PIL coordinator had additional performance indicators relating to:
- The management of the overall budget within the project allocation
 - The organisation of events, travel and accommodation as required during the project
 - The organisation of an annual conference for secondees

4. The pilot phase – February to June, 2006

- 4.1 A 'proof of concept' pilot was carried out in East Ayrshire Local Authority in the period Feb – June 2006. The elements under scrutiny included: the impact that a 1 day per week secondee might bring to the community of practice (COP); the level of commitment that could be expected from participating teachers; the level of ICT skills that they brought to the COP; the training needs of the participating teachers; and the level of support that the secondee and COP would require from the PIL team.
- 4.2 Around 30 teachers expressed an interest in participating across East Ayrshire and most attended a project initiation meeting in the major town of the LA, some travelling a considerable distance to do so. All sectors of the authority's schools were represented. Use was made of the e-skills Passport scheme to have participating teachers self-assess their competence across some or all of the 14 elements of the e-skills National Occupational Standards for IT Users (ITQ). From this it was established that most were comfortable with basic IT use, but that skills in relation to web design/ Internet and on-line communication required further training. This (and other, more general) training was provided through several routes – a training CD supplied by Microsoft, a licence to use on-line training resources at www.atomiclearning.com, and hands-on training delivered at subsequent twilight meetings of the COP. Although participating teachers were encouraged to revisit and update their e-skills Passport profile, very few did so and as a result evidence about improved levels of ICT skill remained mainly anecdotal. The overall conclusion was that the most effective learning for the teachers came from the hands-on sessions and from demonstrations given to them individually by the secondee during her school visits.
- 4.3 The initial level of commitment by teachers was not sustained through the duration of the pilot. A combination of changed priorities on the part of individuals and the inconvenience of travel across a largely rural LA limited the extent to which individual teachers could participate. However there remained a core of teachers for whom the twilight sessions were a suitable arrangement for coming together to celebrate good practice, engage in discussion and interchange, and receive training.
- 4.4 The secondee brought a considerable amount of energy and enthusiasm to her role. She sought out examples of good practice both in and beyond the LA and circulated these by email or other means to interested teachers. She made good use of staff and other resources within the authority's *Determined to Succeed* (DTS) team to support her work. For their part, the DTS team embraced the project as a means of further engaging young people in schools with aspects of ICT that would be beneficial to them in later life. However, the secondee also had a position of some responsibility in her own school (Depute Head) and from time to time priorities in her own school had to take precedence. The conclusion about this aspect of the pilot was that the role of the secondee was crucial to the project success and required good skills of communication, team-working and flexibility as well as ICT competence and a belief in the power of ICT to improve learning and teaching.

- 4.5 There were difficulties from the start of the pilot with email communication within the LA. Some teachers had to revert to their personal email to be confident of receiving communications about the COP. In addition, the LA firewall sometimes blocked communications with important attachments, or even prevented access to websites of good educational value. As a result most interactions in the pilot phase were through group meetings, email contacts and personal visits to schools by the secondee (although at a later stage a wiki was set up for community use).
- 4.6 The PIL team maintained a close watching brief for this pilot project, ensuring that resources were made available as required (such as the training CD) and supporting twilight sessions. The PIL team helped celebrate the successes of the COP, and around 10 VCTs were produced and showcased at the end of the school year. In addition, the secondee represented Scottish interests at a Microsoft ITN event in Hungary in 2006.
- 4.7 The conclusions from the pilot were in the main positive, but some lessons were noted.
- A secondee working on a 1-day per week basis was capable of initiating and maintaining a COP, but care should be taken in future appointments where the secondee had a position of major responsibility in their school.
 - The East Ayrshire email and internet facilities were not sufficiently user-friendly or accessible to allow an online COP to develop, to the detriment of the participating teachers who found the twilight session hard to reach.
 - In the post-McCrone arrangements, most teachers were anxious that their attendance at COP meetings and participation in training should be recognised as Continuing Professional Development (CPD). The LA responded positively to this concern to ensure that appropriate recognition would be given.
 - Most participating teachers come to the COP with competence in basic ICT skills (such as word processing, presentation software, using email and the internet), but will require support in the use of communication/collaboration tools required to sustain online COP, such as blogs, wikis, and discussion forums.
 - The method of sharing good practice was mainly through showcasing at meetings. There was very little in the way of collaborative working among schools (although this may have developed with a longer pilot).
- 4.8 The outcome was that the Advisory Committee determined that, subject to making the improvements identified above, a further 8-10 LAs should be brought into the Innovative Teachers Communities project for the two periods 2006-07 and 2007-08.

5. Securing engagement from Local Authorities and agreeing projects

- 5.1 The Microsoft Education Skills Manager (Scotland), Bob McGonigle, engaged in a set of discussions with the Local Authorities who had responded positively to an initial trawl. All of those involved in the discussions were enthusiastic about a collaboration to move forward innovation in teaching and the use of virtual networks for sharing of best practice. They recognised that there would be variation in the way that delivery would be achieved, with some authorities combining the project with existing initiatives using present or planned secondments, and some using the approach of the pilot LA (one day per week teacher secondment).
- 5.2 For management purposes, all agreed to appoint a lead contact to take forward and to form a local manager for the secondee, working in conjunction with the PIL coordinator. A cohort of 20-30 participating teachers was agreed as a reasonable starting point to form a sustainable nucleus, with the composition of the group depending on the nature of the COP. It was agreed that it would be reasonable to expect participating teachers to put aside 1-2 hours per week during the programme for study, participation and reflection.
- 5.3 While this process of negotiation was concluded fairly quickly, the next step – that of agreeing the details of the individual projects – was not. It was close to the end of 2006 before agreement was reached between all of the LAs and the PIL coordinator. The main contributory factors to this slow progress related to the time taken to select and appoint the secondees, the identification of the local project objectives and the cohort of participating teachers, and the fact that secondees were only available for 1 day per week.
- 5.4 At the end of the first year of operation of the project, an interim evaluation of progress was carried out by the PIL team. While most LAs had been able to demonstrate progress in relation to their aims and targets, three LAs had not. After some discussion with these three LAs agreement was reached that they would not continue with the project (Aberdeenshire, Glasgow and Falkirk).

6. Benefits to Local Authorities

- 6.1 All ten local authorities were asked to specify how their involvement in the Innovative Teacher program would assist in reaching their goals. The most common answers indicated that their expectations were that involvement in the Innovative Teacher Communities program would:
- create a cohesive network of teachers who would share best practice and expertise
 - naturally lead into the introduction of Glow where teachers will be encouraged to add to a repository of resources
 - improve teaching and learning and ultimately, attainment

- help raise the skill level of teachers
- create links between local authorities
- give the authority long-term experience of the contribution from the secondee.

6.2 The aspirations of one authority sums up much of the above:

'(this project is) the start of an on-going program for teachers which will motivate and excite those involved and create innovative, forward thinking teachers who will make the process of learning exciting and rewarding for our pupils'.

7. Supporting the LA projects - Input from Local Authority and Partners in Learning

7.1 PIL provided resources and funding to the Innovative Teacher Communities project in each LA based on the principle of 'match funding' with the LA. The LA component included provision of the services of an officer from the LA to manage the project locally, and a secondee who had day-to-day responsibility for the project. Additionally, LAs gave further support to their projects through contributions such as: new infrastructure and IT systems, training for staff in specific aspects of ICT (including use of collaboration software), support from external consultants, support from other LA officers engaged in school improvement, and underwriting the cost of meetings and travel.

7.2 In their project proposal, each LA was required to indicate how they would support the secondee and their COP. This resulted in well-defined mechanisms aimed at ensuring continuity and progression for each project, although in some cases these did not turn out to be wholly effective. The effectiveness of these inputs are considered in Section 12 (Evaluation of individual LA projects)

7.3 The role of the National Project Officer (PIL coordinator) for the first period of the project (2006/07) was specified as:

- support each LA in the management of its project
- organise a two day event in October 2006 for the LA manager and secondee
- provide and manage an online community for LA managers and secondees to participate in a COP and share practice
- organise a progress event for managers and secondees in November 2006
- organise an awards event in February 2007

7.4 The PIL coordinator also played a key role in mentoring the secondees, encouraging participation, and channelling available Microsoft resources to the groups. The PIL coordinator used her individual contacts with secondees and feedback from community events to assess where additional support might be required and this became a regular item in her reports to the PIL management group.

7.5 Additionally, as part of the progress monitoring of the projects, LAs were invited to consider any further resources they would wish to be provided by the PIL team. Suggestions brought forward in the first year of the project included:

- an evaluation exercise that focused on issues of Impact and sustainability
- a clear statement of expectations for continued involvement in Year 2
- access for secondees and participating teachers to Microsoft products and training that were relevant to the project
- support for ICT department to set up virtual medium
- a VCT workshop led by Microsoft/SQA
- an online community for project participants in addition to that for LA managers and secondees

7.6 The notable aspect of this set of proposals is that they suggest that LAs were not confident about how to provide online collaboration tools for their local COP, nor were there well-developed plans for the evaluation of their projects

7.7 One immediate set of resources to help secondees establish their COP was a report from the East Ayrshire pilot, along with the Microsoft training CD and the set of VCTs produced by the East Ayrshire COP. The immediate need, however, was to provide secondees with the tools and dispositions necessary for the creation and maintenance of their COP. To this end a residential conference was arranged in October 2006 for secondees and their LA managers, and a world-leading authority on communities of practice, Etienne Wenger, engaged to lead the conference.

8. Links between Innovative Teacher Communities and other LA initiatives

8.1 As already indicated, a key concept of the project was that none of the Innovative Teachers COP should sit in isolation from the mainstream of development and innovation in their LA. To this end each LA engaged in a dialogue with the PIL team to ensure that the resulting project specification met their requirements. The proposed linkages for each LA project are detailed below: The majority of links involve Glow Groups or its forerunner, Masterclass (see Appendix 1).

8.2 Aberdeenshire

Link to Aberdeenshire's classic Masterclass community that had promoted Interactive Whiteboard (IWB) technologies and their use across the LA. The community would help provide expertise, training and resource advice to schools equipping teachers with IWB technologies and create resources for incorporation into *Glow Content*.

8.3 Angus

Links to overarching initiatives being implemented in Angus, including: *Co-operative Learning* (Angus Council's new Learning and Teaching Policy and Guidelines), work being carried out in *Assessment is for Learning* (AifL), and initiatives in mathematics linked to a project with Learning and Teaching Scotland.

8.4 *Dumfries and Galloway*

Links to a major investment by the LA in Autodesk Inventor software for its technical education departments in secondary schools. A need was identified for staff to be trained in the use of this software and for exemplars to be produced on its use within the Scottish curriculum.

8.5 *Dundee*

Link with a previous initiative based on LTS's Early Years MasterClass program that had brought together a community of early years practitioners in Dundee City. This would now be incorporated as an Early Years *Glow Group* in the piloting of *Glow* within the LA.

8.6 *Falkirk*

Links to existing initiatives by the LA to develop its use of collaborative and interactive teaching methodologies. The LA had established the Falkirk Virtual Teacher Centre, an online resource for staff and pupils in Falkirk Council schools. The focus was on boys who underachieve in writing and a small community with a specific focus on the use of blogs to improve writing would be set up.

8.7 *Glasgow*

Links to existing work accomplished through the Masterclass programme, an existing electronic community – the Glasgow Education Network (GEN), and the online training provided by the training provider EdICT. These would be combined into a program of advancement in ICT for a group of willing and committed teachers.

8.8 *East Ayrshire*

Link with the LA's Determined to Succeed initiative to bring real-life contexts to help young people plan their transitions to working life, and the LA's existing portal for electronic collaboration (SmartGroups).

8.9 *East Lothian*

Link with an ongoing initiative in East Lothian to develop Curriculum for Excellence approaches through a set of projects known as *Extreme Learning*. The aim is for pupils in the P6 to S2 range to create personal projects, arising from an existing strong personal interest, and develop these using research and new technologies. There was an existing *Extreme Learning* community and an associated set of wikis and blogs.

8.10 *North Lanarkshire*

Link with an existing project using the Marratech video conferencing system to teach the Higher Computing course across several secondary schools. The benefits would be extended to collaboration within the LA and with schools abroad.

8.11 *West Dunbartonshire*

Link with the existing West Dunbartonshire group of *Glow Mentors* to create a forum for them and build a dynamic community of practice. A pre-requisite of becoming a

Glow mentor was to undertake a project using ICT. As a result, the participants in this project have already demonstrated innovative uses of ICT in their teaching and learning.

9. Communities of Practice

- 9.1 The PIL residential conference in October 2006 was also the launch event for the project. Secondees and their managers were able to learn what the other projects were, and in the communities of practice workshops with Etienne Wenger they were encouraged to develop models and plans that related to their own proposals. One of the aims of the conference and workshops was that each project would take away from the event a reasonable first draft of their COP principles and practice. However, most delegates found the pace of the workshops challenging and did not fully complete this part of the planned activity. At the time this was not seen to be too important, and no follow-up activity was planned to have the workshop proformas completed and a sound basis put in place for the understanding and management of each COP. This has had consequential effects for the projects overall, with some COPs failing to thrive (see later).

10. The broader context for Communities of Practice

In parallel with the PIL activities, a major national initiative (Glow) was underway that aims to revolutionise the way in which teachers accessed online materials, used ICT in the classroom and worked with like-minded groups of teachers across the country. Glow is a national schools intranet, digitally linking Scotland's 800,000 educators and pupils. Glow is funded by the Scottish Government and managed by Learning and Teaching Scotland (LTS) in partnership with RM. A key aspect of Glow implementation are the functions offered by Glow Groups available for use by online communities of people with shared interests, as meeting places, as a virtual classroom and as shared areas for learning and collaboration. This is complemented by Glow Meet – a web conferencing tool.

- 10.2 However, Glow was at an early stage of implementation and the functions described above were only piloted in early 2007. During the life of the pilot only 3 of the LAs in the PIL project (Angus, Dundee and North Lanarkshire) had signed up to participate in Glow. The uncertainty surrounding Glow implementation in each of these authorities had implications for their fledgling COPs, and also for the PIL project overall.
- 10.3 LTS has been the main national agency supporting the development of ICT in teaching and learning in Scottish schools. From 2002 LTS managed a programme of ICT staff development known as Masterclass, which has had well recognised success across Scotland by creating a cadre of “Masterclassers” in each LA who practice and promote the use of ICT in learning and teaching. In some LAs the PIL project built on its experience with its Masterclass teachers. These Masterclass

teachers have been supported as a community by LTS through discussion forums and shared files. These LTS-provided online collaboration tools also offered the PIL projects a means of supporting COPs. In the PIL projects it was hoped that the existence of the LTS discussion forums would provide exemplars to inform their development.

- 10.4 A further channel for collaboration was offered by Microsoft's own Innovative Teacher Network (ITN). For reasons that are not clear, but which were probably technical in their nature, many participating teachers found it difficult to enrol as a Microsoft Innovative Teacher through the ITN and access shared information with other UK Innovative Teachers. The PIL management group made a decision to use the readily available LTS facilities to establish a Scottish COP for the secondees and managers of the PIL projects. These facilities were subsequently used to plan meetings and engage the group in discussions.
- 10.5 It was unfortunate that Glow piloting and associated uncertainties occurred just at the point of establishing the PIL COPs with the result that the potential for synergy between the particular PIL project COPs and the wider ambitions of LTS and Glow was not realised.

11. Sharing good practice

- 11.1 The identification and sharing of good practice took place at several levels in the project. Within each authority there were opportunities for individual teachers to promote their innovative practice to other teachers and for the secondee to also spread good practice by taking it from one school to another. At the PIL project level there were several events at which each LA secondee could showcase the best work from their project to the other secondees, largely through the presentation of VCTs that described the work of innovative teachers. In addition the PIL coordinator arranged for particular VCTs to be presented to a wider audience than the PIL project participants, such as through an SQA showcase event. At national level, all project VCTs have been made available on a microsite within the SQA website and publicised to teachers at events such as the Scottish Learning Festival (attended by over 7,000 teachers and school managers).
- 11.2 A Scottish representation has attended each of the following Microsoft ITN Forums: Budapest (2006); Philadelphia (2006); Paris (2007); Helsinki (2007) and Zagreb (2008). The work of the Scottish PIL Innovative Teacher Communities has been presented at these forums to an international community of innovative teachers.
- 11.3 It is the stated aim of the PIL Advisory Group that all the examples of innovative practice recorded in VCT format should be made available to as wide an audience as possible. It is recognised that the most effective mechanism for this in Scotland would be through Glow, but at the time of evaluating this project there were as yet no clear mechanisms in place whereby this might take place. For a more international

audience the effective mechanism would be through Microsoft ITN, and a plan was in place to upload all VCTs to an appropriate area of the ITN.

- 11.4 In a few LAs there was a provision for teacher resources to be shared through an online repository, typically available through the LA intranet. This enabled locally-produced VCTs to be shared and promoted to all teachers in the LA. Examples of this were found in Dundee (through its DC2 education website), East Lothian (through its Exc-el website) and East Ayrshire (through a locally-supported wiki).

12. Communities of Practice in operation

- 12.1 As mentioned elsewhere, each project has taken its own route to create an environment in which teachers can work together in a COP, sharing ideas and resources, contributing to discussions and establishing good practice. For each of the projects, face to face contact has been an important aspect of establishing and maintaining the COP. This has involved attendance at CPD events, twilight meetings and visits by the secondee and other ICT support workers to individual schools. LAs have variously used email, LTS Discussion Forums, Glow Groups (in pilot form) and LA intranet discussion forums, blogs and wikis. These are described in further detail below.

12.2 The PIL Community of Practice

The PIL coordinator set up a discussion forum for LA managers and secondees on the LTS Discussion Forum facility. This was used successfully for a short period to help establish the project groups and plan future meetings, but quickly reduced in volume of activity. By the end of the first year it was moribund and was discontinued in favour of email and telephone contact.

12.3 Aberdeenshire

The Smartshire Blog was set up to support the community of teachers using Smartboards across the LA, and this was used to support the Innovative Teachers community initially. The proposal was that this would be subsumed into the LA's Glow Groups pilot in late 2007. However by this point the LA had agreed to leave the programme.

12.4 Angus

An innovative teachers blog was set up on the edublogs.org site. In the period Nov 2006 to June 2007 a total of 14 posts were made relating to the Angus Innovative Teachers project, but activity ceased thereafter. Two of the teacher groups supported by the project (Maths, Science) had made better use of their respective blogs to share experiences and resources, but even here the volume of communication and participation was low. These had been recently transferred to the Glow Groups pilot and this had presented an opportunity to regenerate the groups. The best success had come with a group of "Transition" teachers for whom the use of a blog was a requirement for monitoring and evaluation of their progress.

12.5 *Dumfries and Galloway*

There was a well defined community of technical studies teachers in the LA's secondary schools. However, there is no reported use of an online forum or similar by the LA secondee.

12.6 *Dundee*

There was a pre-existing community of Early Years Masterclass teachers, so the first group discussion was hosted on the LTS Early Years online forum. Thereafter the LA had signed up for Glow and used the pilot Glow Groups as a means to host two further group discussions. However, the secondee reported that the level of contribution to these online discussions was overall disappointing and that the initial momentum and enthusiasm for online engagement has diminished.

12.7 *East Ayrshire*

A seconded teacher created a wiki for Innovative Teachers and promoted it at twilight sessions and LA training events. He has also produced successful wikis for other initiatives. However, the community of innovative teachers did not respond positively to the wiki as a means of communicating and collaborating.

12.8 *East Lothian*

This LA had a well established track record of using blogs and wikis to support its education managers and teachers, and to provide an avenue for communication for all pupils in the LA. Individual school wikis continue to thrive, along with those of a few teachers. However, the wikis associated with communities of teachers have tended to become moribund, and so the prime engagement of the secondee with teachers is through face to face meetings, training and support.

12.9 *Falkirk*

The LA had no specific proposals as to how its community would be supported, and agreed not to continue into the second year of the project

12.10 *Glasgow*

An electronic community was set up on the Glasgow Educational Network. This provided support for sharing of ideas and resources. In addition the community of teachers had access to an online CPD resource provided by the LA's contracted provider for training (EdICT). However the LA did not continue into the second year of the programme so the success or otherwise of this approach is not known.

12.11 *North Lanarkshire*

The LA secondee had made full and effective use of the proforma provided by Etienne Wenger at the Communities of Practice workshops to define the three COPs in the project and determine how they would be formed and maintained. The two mechanisms used were the LA intranet for communication and sharing resources, and the Marratech video conferencing system for online meetings. The outcomes for this project are positive, with the three groups of teachers engaged in an active COP.

12.12 *West Dunbartonshire*

The LA intranet was used to provide a forum for communication and has worked well for the group of Glow mentors that from the COP of interest. A website was also established to facilitate the exchange of resources and Glow mentors trained in website editing. However, difficulties with IT systems in the LA has reduced the effectiveness of this approach, and each of the two secondees had set up their own group on a commercial website. Neither of these had any significant level of activity at the time of writing.

13. Self-evaluation

13.1 All LA education services make use of a national framework for school improvement (HMIE's How Good is Our School?). The fundamental principle of improving schools is that of self-evaluation, at several levels from school departments to the school itself and then to the functions of the LA education service. There is a well established body of self-evaluation approaches, some of which cover the use of ICT in teaching and learning. Their usefulness for this type of project are limited however, as they generally start from the perspective of an individual school and its policies, procedures and outcomes for ICT in and across the curriculum. One LA (Dundee) had incorporated in its COP project the dissemination of a well-developed evaluation tool for ICT use in Early Years education (pre-school and early primary).

13.2 The PIL coordinator developed a proforma for LA secondees to use in preparation for her regular monitoring visits or conversations with them about progress. The proforma invited the secondees to reflect on the progress being made by their project and identify the next steps required to overtake the project aims and targets. This also helped secondees identify areas where they might require additional support from the PIL team (such as training in how to create a VCT), or from their LA (such as improved infrastructure, or access to training or resources).

13.3 At the time of review of the two-year project, very few LAs had carried out any formal self-evaluation of their experiences of their COP project. One LA (Dundee) had produced two summary reports on how its COP had responded to items of discussion raised in an online forum. East Ayrshire had produced several reports on aspects of the work of the secondee (visit to see good practice in England, visit to ITN in Budapest) and one on the pilot project experiences.

14. Incorporating the learner voice (EMIT)

14.1 As part of another PIL project the EMIT (Evaluation and Monitoring of Innovative Teachers) system had been developed to enable teachers to capture the views and experiences of pupils who had participated in ICT-enhanced learning. This approach used a portable video booth to capture video clips of pupils' responses to simple

questions about their experiences of the project, and also to allow the teacher to provide background information about the innovation they had introduced into their classroom. The PIL team responded to a request from the LA secondees to have access to this resource and this further information about project experiences from the pupil perspective is currently being collected and collated. One LA had purchased a portable video booth for its own project evaluations. These video excerpts will eventually accompany the VCTs as a record of the innovative practice.

15. Sharing good practice – VCTs

- 15.1 At the time of writing, the Innovative Teacher Communities projects had between them created a total of 54 VCTs. The full list is presented in Appendix 3. In addition, the secondees intimated at the May monitoring visit that they expected a further 28 VCTs to become available before the end of the session. While most VCTs related to innovative practice by a single classroom teacher, in some cases they described a much more substantial project, usually one led by the LA secondee. An example of this would be the use of Marratech video conferencing to link North Lanarkshire schools with Spanish schools.
- 15.2 Some VCTs were fully developed (ie a “blue” VCT) while others were at outline or planning stage (“yellow” or a “green” VCTs). A common theme from each of the project secondees was the difficulty that teachers found in using the VCT Powerpoint template. Some secondees resolved these through providing training for teachers either at twilight meetings or at CPD sessions, while others personally edited and packaged material into the correct template format.
- 15.3 A wide range of innovative practice was described in the VCTs – from the use of digital media in nursery education, through the creation of animations in primary school, to the use of podcasts for language revision in secondary school. The level of detail provided in the VCTs varied also, with only a few providing comprehensive coverage of all of the elements of the “blue” VCT. The most common shortfall in the VCTs presented was the level of detail provided regarding the assessment of outcomes arising from the described innovative use.

16. Themes

16.1 *Impact on teachers and teaching*

Over 200 teachers (see Appendix 2) were “touched” by this initiative which provided both encouragement for them to become innovative in their teaching through the use of ICT, and the practical support, advice and exemplification of good practice to make it happen for them. The production of around 80 VCTs has produced a legacy of good practice for all Scottish teachers. Teachers have been able to showcase their work on the national stage, and in a few cases on the international stage.

16.2 *Impact on learning and learners*

From the PIL perspective it was more difficult to establish first-hand the impacts on individual learners. From the VCTs produced and the information placed on the various blogs and forum postings it was possible to deduce that teachers were satisfied that their use of ICT had been successful in improving pupil motivation and engagement in their learning. In some cases the blog entries were by pupils themselves, and testified to their enjoyment and progress in their learning experiences. The use of the portable video booth produced further direct evidence on pupil experiences and their perceptions of their impact on their learning.

16.3 *Barriers to further improvement*

Most secondees reported that the most common barriers for their participating teachers related to the lack of time for their personal development (professional learning). They were often reduced to acquiring new ICT skills on a “just in time” basis as their ICT project required, and did this using peer support rather than taking a formal route through organised CPD. They also reported continuing issues with technology constraints at school and LA level, such as blocked access to COP forums and other useful websites, and incompatibilities of desired educational software with school systems. For some LAs the existence of contractual arrangements for the management of school ICT systems introduced a further layer of policy constraints.

17. **Conclusions**

- The project complemented well the individual LA aspirations for ICT development in their education systems
- The project was also synergistic with national initiatives regarding ICT (such as Glow, Masterclass training, and Curriculum for Excellence)
- Individual teachers responded well to the support and practical advice and help available to them through the LA secondee and from the Community of Practice
- Authority-wide projects enjoyed the substantial benefits of scale and collaboration to spread innovative practice
- The project was successful in promoting and supporting innovation in the application of ICT in a considerable number of schools
- Communities of Practice were difficult to sustain, especially those that depended on maintaining online communications
- Teachers lacked time to develop the competencies and behaviours necessary to participate in thriving online communities
- The several blogs and wikis associated with these projects followed the familiar pattern of initial interest followed by a rapid decline in activity
- The opening up of the repository for VCTs and its publicising to teachers in Scotland had been successful in promoting good practice in ICT

18. Recommendations (for future projects involving multiple authorities)

Prerequisites. The project should:

- where possible, provide opportunities for activities that are congruent with authority-level priorities and initiatives;
- address sustainability issues as early as possible and avoid deferring these to the concluding phase; and
- anticipate the likely delays associated with identifying secondees from schools and securing their release.

Plan and monitor. The project should:

- encourage formal record keeping of progress, and of the resources created by the innovative teachers;
- plan to capture the learner voice (eg using digital video technology) as an essential part of evaluating the effectiveness of the learning experience; and
- align the evaluation of project outcomes to the self-evaluation processes at authority level.

Professional development. The project should:

- allocate resources to ensure that sufficient support is available for teachers in the preliminary stages to ensure that issues with ICT (such as Local Authority firewalls, email systems and server outages) are quickly resolved;
- make it a requirement of teachers participating in the project to develop their ICT skills in a format that contributes to their formal CPD record (eg through certification);
- where possible, implement a consistent approach to establishing and maintaining online communities of practice, including a common software platform, with a view to sharing good practice.

Dissemination. The project should:

- establish, as early as possible, a repository for good practice and teaching resources to be shared initially by the community and subsequently by a wider audience; and
- allocate resources to support participating teachers who promote the work of the community of practice to other audiences (such as seminars, conferences, journal articles).

Appendix 1 - Links to National and Authority Initiatives

Local Authority	ACfE	AiFL	GLOW	Local Policies/Initiatives	Other National Initiatives
Dundee			✓	- Dundee City Council's ICT Development Plan	- MIICE: Managing the Impact of ICT on Children's Education - Improving Scottish Education
East Lothian	✓			- East Lothian's 'Extreme Learning' Project	
North Lanarkshire	✓		✓	- North Lanarkshire's 'Co-operative Learning' Initiative	
West Dunbartonshire	✓	✓	✓	- West Dunbartonshire's Glow Mentor community	
Angus		✓		- Angus' 'Co-operative Learning' Initiative - Maths initiatives linked to a project with LTS	
Dumfries and Galloway				- Dumfries and Galloway's Curriculum Leaders Program	
Falkirk	✓			- Falkirk's Collaborative and Interactive Teaching Methodologies	
Aberdeenshire	✓	✓	✓	- Aberdeenshire's Interactive Whiteboard technologies	
Glasgow	✓		✓	- Glasgow's vision for 'e-specialist teachers'	
East Ayrshire	✓	✓		- East Ayrshire's ICT Strategy	- Determined to Succeed - Schools of Ambition - Arts Across the Curriculum

Appendix 2 - Participating teachers by sector

Local Authority	Participating teachers	Nursery	Primary	Secondary	Comments
Dundee	14	✓	✓		14 different establishments involved in project. Eventually staff from all 12 free-standing establishments and the 21 primary schools with nursery provision will participate.
East Lothian	50		✓	✓	Students from P6 to S2 level including a wide variety of subject teachers. Innovative Teacher project is part of a Council wide initiative.
North Lanarkshire	15		✓	✓	10 different establishments involved in project; teachers from Mallorca involved in language project.
West Dunbartonshire	16		✓	✓	Glow mentors from 4 secondary and 12 primary schools involved.
Angus	35		✓	✓	Different secondary subjects and various primary levels involved.
Dumfries and Galloway	45			✓	Technical teachers from all 16 secondary schools in the authority
Falkirk	14		✓	✓	3 secondary and 4 primary schools involved - from P5 to S3.
Aberdeenshire	30		✓	✓	Potentially a teacher from every school - 17 secondary schools and associated cluster groups.
Glasgow	12	✓	✓	✓	One Learning Community which includes 4 nursery schools, 6 primary schools and one secondary school.
East Ayrshire	20		✓	✓	East Ayrshire has 20 consistent participants rising to potentially 34 participants from both the primary and secondary sectors. Not all participants are actively creating VCTs but are interested in shared expertise and opportunities to develop skills.
	251				

APPENDIX 3: List of VCTs (as of March 2008)

Centre Name	Name of VCT	Summary (where different from VCT Title)	Level of VCT	Local Authority	Sector
Cumnock Ac	Use of ICT to enhance P7 Transition	Pupils using IT skills to create presentations aimed at new S1 pupils.	Blue	East Ayrshire	Primary
Doon Ac	Non-fiction circles	Pupils (in small groups) read texts and present their interpretation to whole class.	Green	East Ayrshire	Secondary
East Ayrshire Enterprise in Education	Paper Bag Story Challenge	Encouraging literacy and story reading/telling in early primary.	Blue	East Ayrshire	Primary
St Andrew's HS	Co-operative Learning using an online Learning Environment (Marratech)	Teaching Higher Computing Course through video conferencing (Marratech)	Blue	North Lanarkshire	Secondary
St Andrew's HS	Problem Solving	Using PowerPoint to present mathematical puzzles and problems.	Blue	West Dunbartonshire	Secondary
St Andrew's HS	Videoconferencing and Probationers	Using video conferencing to support the development of professional knowledge and understanding of probationer teachers in Computing.	Blue	North Lanarkshire	Secondary
Macmerry PS	Solar System	Primary pupils worked in groups to find out information about a chosen planet; used a variety of sources to produce a piece of work with text and graphics about the chosen planet.	Blue	East Lothian	Primary
Macmerry PS	Eco School	The children took photographs of Eco School Activities and made a slideshow to show to the Eco School Assessors. Green Flag status was achieved in September, 06.	Green	East Lothian	Primary

Macmerry PS	Enterprise Activity - Christmas Cards	The children worked in groups of two to produce Christmas cards using i-photo	Yellow	East Lothian	Primary
Soneyhill PS	Victorian Christmas CD	Pupils extended their studies of the Victorian period, by researching songs, and music from the period, then creating a CD for sale.	Blue	East Lothian	Primary
Ormiston PS	Extreme Learning - WikiSpaces	The children used the digital equipment and ICT resources individually and at home. The children developed their own projects according to their own levels of expertise, and different curricular areas as the projects developed.	Blue	East Lothian	Primary
Stoneyhill PS	Digital Imagery as Oral Fluency Stimulator	Nursery children, in a free choice setting, opted to come to the computer in turn, to describe and comment on a series of pictures. They were then asked very open ended questions, and stimulated to create a story about the picture.	Green	East Lothian	Nursery
Aberdeen City	WordTalk	Spotlight on a piece of software that enables children with literacy difficulties to engage in language work independently.	Blue	Aberdeen City	Special
Dundee ICT	Measuring the Impact of ICT in Children's Education	Project evaluates ICT practice in early years settings and informs the effective planning of staff development to follow on from the Early Years Masterclass initiative.	Blue	Dundee City	Nursery
Tranent PS	Christian Creation Story	The objectives of the project were to both teach, and to explore the Christian Creation story, and use ICT to enhance the learning, embed the concepts, and support the presentation of knowledge to the rest of the school.	Blue	East Lothian	Primary
Gullane PS	Alien Animations	The pupils made a short story about an alien, created that character as 3D plasticine models, then animated the story, adding	Blue	East Lothian	Primary

		sound or music. They then created a CD or DVD, and marketed the product, advertised it, and organised a premier.			
Longniddry PS	Anti-Bullying Film Project	Pupils made films about strategies to deal with bullying, as part of anti-bullying week. They then used technology creatively to produce an informative and educational video.	Blue	East Lothian	Primary
St Andrew's HS	Videoconferencing in Modern Languages	Using videoconferencing to promote links between secondary and primary schools in North Lanarkshire and Mallorca and appropriate learning and teaching methodologies based on co-operative learning techniques to deliver the Spanish course at both primary and secondary level.	Blue	North Lanarkshire	Secondary
Our Lady of Loretto PS	Pop Art - Andy Warhol Style	Pupils learn about the life and style of the artist Andy Warhol and then learn to use a digital camera and editing software to create their own art work in his artistic style.	Blue	West Dunbartonshire	Primary
Dumbarton Academy	Podcasting	Pupils recorded the theory content of the Computing course. The completed work was then available in mp3 format for pupils to listen to.	Yellow	West Dunbartonshire	Secondary
Carleith PS	ICT Animation	The children planned a short story sequence, made models and then working together used these models to create a short animation film	Yellow	West Dunbartonshire	Primary
Vale of Leven Ac	Online homework	The teacher makes up the homework task and uploads it to a web server. The pupils log on to the online homework website from home (or school), complete the task and the system marks the homework and gives an instant result.	Yellow	West Dunbartonshire	Secondary

Lockerbie Ac	Invenor 10 - Constraints	The objectives of this lesson are to teach the pupils in the use of the constraint tools offered by Inventor 10.	Green	Dumfries & Galloway	Secondary
Lockerbie Ac	Inventor 10 - Boat Project	The pupils build a wooden boat as one of their projects. By following this folio they will be able to create a 3D model of their wooden boat using Inventor 10.	Green	Dumfries & Galloway	Secondary
Lockerbie Ac	Inventor 10 - Berol Marker Pen	The pupils will be able to create a 3D model using Autodesk Inventor 10 software.	Blue	Dumfries & Galloway	Secondary
Lockerbie Ac	Invenor 10 - Pyramid Game	The plan for this project is an introduction to Autodesk Inventor software. By the end of the project pupils should have a good basic understanding of Inventor.	Blue	Dumfries & Galloway	Secondary
Dundee ICT	Shape Walk	Nursery children went on a walk in the area around the nursery. They were looking for shapes they recognised. They took a digital camera with them to record what they saw.	Yellow	Dundee City	Nursery
Webster's HS	Vedic Maths: Maths or Magic ?	Pupils are able to carry out otherwise difficult mental calculations using Vedic Maths techniques.	Green	Angus	Secondary
Montrose Ac	German Blog Site	Using a blog to communicate with pupils and display their work	Yellow	Angus	Secondary
Arbroath HS	Energy	Pupils are made aware of the need for energy and the different forms of energy	Yellow	Angus	Secondary
Montrose Ac	Alcohol Challenge	Using Critical Skills approaches in the classroom to make young people aware of the dangers of alcohol.	Yellow	Angus	Secondary
Angus EDS	Reading for Excellence	To teach higher order reading skills in the early stages in a more explicit, fun, interactive co-operative way.	Yellow	Angus	Primary
Liff PS	ECO Audit	Co-operative lesson involving groups of children in reviewing their school's work in	Yellow	Angus	Primary

		relation to Eco schools.			
Webster's HS	Fossil Fuels	To give pupils an understanding of the problems associated with the use of fossil fuels.	Green	Angus	Secondary
Kirkriggs PS	Co-operative Learning in Maths	Pupils worked co-operatively to solve mathematical problems by analysing all the information available. Pupils then presented their findings and explained their thinking to their peers.	Yellow	Angus	Primary
Monifeith HS	Rugby Posts	The students were split into the groups of 4 and were giving a ruler, a metre stick and a picture of school's rugby posts. Each group was then challenged to calculate the height of the actual posts.	Yellow	Angus	Secondary
Muirfield PS	P5 Electronic Dinner Register	The whiteboard is set up for children to take responsibility for compiling the dinners for that day. Children save the daily flip chart to appropriate drive on server and account for monies.	Green	Angus	Primary
Montrose Ac	Book Maps	The lessons involve using mind mapping software to 'map' out a book. Using an interactive whiteboard pupils start creating blooms relating to areas of the book, like characters or setting. This is developed on the whiteboard by the pupils using 'mind genius'.	Green	Angus	Secondary
Andover School	Our Greenhouse Project	The primary pupils built a greenhouse using plastic bottles. This project raised awareness in pupils of the need to recycle materials and developed teamwork and other skills.	Yellow	Angus	Primary
Carmyllie PS	Practical Maths - Contextualised Play	The children will learn maths skills through play activities. The children will work co-	Yellow	Angus	Primary

	Activities	operatively in teams to complete maths/play activities. The children will link their maths skills to real-life contexts.			
Angus EDS	Tartan Tam	Schools in Angus link up with schools abroad to share their learning via e-mail, blog, etc	Yellow	Angus	Primary
Edzell PS	Thinking Maths	To improve pupil's understanding of maths by talking and working in groups. Young pupils solve practical problems in groups by talking and making explicit their thinking.	Yellow	Angus	Primary
Borrowfield PS	Mathematics in Space	Diameter and radius were explored, with a focus on circles and circular patterns. The relationship between radius and diameter was further explored in connection with the class Environmental Studies Topic, Earth and Space.	Blue	Angus	Primary
Muirfield PS	P1 Creating Story Books	To create a joint story based on The Very Hungry Caterpillar. The children used clip arts, scanned images and word processing text and handwriting mediums to create books.	Green	Angus	Primary
Carnoustie HS	Co-operative Learning in CDT	To work as a team, and assess own and other teams' work. To produce a product based on an everyday object and present the product to the rest of the class.	Yellow	Angus	Secondary
Rosemount PS	Maths in Context	Pupils were given challenges and asked to solve them in co-operative learning groups. Groups were given roles and tasks were set, solutions were evaluated.	Yellow	Angus	Primary
Carnoustie HS	Seed Dispersal	Pupils were directed to internet sources of information about seed dispersal and presented this material as a PowerPoint presentation. Examples of their work are demonstrated in this project..	Yellow	Angus	Secondary

Dundee ICT	Children using Digital Cameras	Nursery children learn how to use the new Digital Blue Snap! Education Camera to take photographs and print them.	Blue	Dundee City	Nursery
Abronhill HS	Use of SMART Airliner in Science	Use of SMART 'Airliner' to enhance co-operative learning and consolidation group work in the class. The technique involves using small groups to brainstorm certain areas of a topic to be revised, and deciding on the most important points. The 'Airliner' is also used in a quiz format in the class.	Blue	North Lanarkshire	Secondary
St. Aidan's HS	Auditing 5-14 ICT Curriculum	In order not to duplicate work completed by other departments in the school or by associated primary schools, it was decided to audit current practice and develop a themed approach focussing on the 5-14 outcomes for Information and Communications Technology.	Blue	North Lanarkshire	Secondary
Jessie Porter Nursery School	Using ICT to support transition from nursery to primary	A Dundee Nursery School created interactive, multimedia presentations of and by children in their pre school setting to be passed on as CDs and hardcopies to primary schools, parents and carers to support the transition from the pre school setting to the new primary school.	Blue	Dundee City	Nursery
Dens Road Primary School	Using ICT toys to ease transition in Primary 1	ICT toys were introduced into the P1 classroom to help transition for pupils moving from Nursery into Primary 1. To create a fun environment where they are using familiar toys to build confidence and therefore support learning.	Blue	Dundee City	Nursery