

# Computer-Mediated Collaborative Projects as Professional Development Opportunities for Teachers

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## Abstract

New technologies now offer teachers alternative models of collaboration with schools overseas, but how effective are they as professional development opportunities? The experiences of 18 specialist primary and secondary teachers in the Teachers' International Professional Development Programme who visited schools in the USA were investigated as they set about establishing collaborative projects with their hosts. The focus was on the potential of such collaboration to engender professional development outcomes and to investigate the circumstances enabling or impeding success. Data were collected by means of questionnaires and interviews, both during the visit and for 20 months after return. A surprising result was the small number of teachers who managed to start a collaborative project. One of the more frequently cited reasons for lack of progress was technical problems, and this was with a group of teachers who were information and communications technology specialists. Other inhibitory factors were lack of time and lack of funding. However, additional examination reveals other benefits arising from the exercise (e.g., in terms of professional development of a broader kind), including a range of factors that could maximize the success of future projects.

## International Professional Development Opportunities for British Teachers

For over a century, British teachers have had opportunities to engage in professional development through organized international visits and exchanges. The League for the Exchange of Commonwealth Teachers (LECT, 2001) began facilitating such visits in 1901, with a variety of other organizations offering similar placements in subsequent decades.

A major recent development is the Department of Education and Skills' Teachers' International Professional Development (TIPD) Programme. Established in May 2000 and administered jointly by the British Council, LECT, the Best Practice Network, and the Specialist Schools Trust, this program has since facilitated 10,000 short-term individual visits and exchanges. Education policy makers and the teachers, themselves, have traditionally placed a high value on the professional development potential of these experiences, specifically to experience new working practices and refresh old ones (Purves, Jackson, & Shaughnessy, 2005). They require significant resourcing, however, in terms of the cost of the visit and the cost of staff cover. Received wisdom is that they provide opportunities for teachers to learn from other educational cultures and valuable time for them to reflect on professional practice in workplaces far removed from their own.

Although this kind of program can clearly offer an exciting and stimulating experience, the lasting effect is not so clear nor is there evidence of benefits to colleagues and pupils by association. Although the TIPD Programme requires participants to provide feedback on the visit and reflection on future outcomes, this data is gathered a maximum of only 6 months afterwards.

When LECT and others began facilitating international visits in the first half of the 20th century, travel abroad was the only option available to teachers wishing to engage in depth with foreign education systems and cultures. By the time TIPD was established almost 100 years later, information and communications technology (ICT) had revolutionized the speed and richness of international communication. The term ICT has become increasingly prevalent in UK education since the 1990s with its inclusion in the school curriculum.

Guidance notes for those taking part in TIPD placed a strong emphasis on the supporting role of ICT, encouraging pretrip contact with host schools via email, the use of digital cameras and Web sites to document visits, and posttrip follow-up using email and video conferencing (Department for Education and Skills [DfES], 2001).

Evidence suggests that teachers taking part in TIPD have heeded this advice. A review of 113 posttrip reports on TIPD visits suggests that teachers frequently document their experiences with digital stills or video cameras (British Council, 2007). The majority had also exchanged email addresses with their foreign hosts either before or after their trip. A smaller but significant number of reports mention the exploration of video conferencing as a means of establishing ongoing links with host schools.

Thus, ICT now appears to offer a new dimension in enhancing teachers' experiences of international school visits and exchanges. It may also offer alternative models of collaboration with schools overseas that have yet to be fully explored. In recent years, British schools have received encouragement to seek out international partners and establish projects between teachers and pupils. Routinely, policymakers and other commentators cite technology as the tool by which these goals can be met, suggesting that it will act as a facilitator and provide an easy means of communication.

November 2004 saw the publication of the UK government's international strategy for education, skills and children's services, which argued that international partnerships between schools "can contribute in a very real way to school improvement" (DfES, 2004, p. 20). ICT is a central theme of the strategy: "The UK ... which is a world leader in terms

of e-readiness and in the use of ICT in schools, colleges and universities, is poised ready to engage with, and potentially lead, this new phase of learning” (p. 17).

Others currently promoting the concept of ICT-facilitated international links between schools include the British Broadcasting Corporation (2005), which launched a major new online initiative called World Class. This Web-based forum seeks to enable schools around the world to organize collaborative projects and share good practice.

Government interest in schools’ international collaboration is itself part of a much wider strategic emphasis on teachers’ professional development in recent years. Most notably, the TIPD scheme was established as a result of proposals contained within the 1998 Green Paper, *Teachers: Meeting the Challenge of Change* (Department of Education and Employment, 1998). Along with subsequent documents and policies presented by the government and its agencies, these proposals have led to much interest amongst UK professional, policy-forming, and research communities about the range and effectiveness of current INSET (in-service and education training) provisions. In particular, studies, such as those by Wood and Anderson (2003) and Boyle, While, and Boyle (2004), suggested that the traditional idea of offsite, one-hit INSET activities (such as short course and conference attendance) may not be sufficient to promote a cultural shift toward the wider and more embedded professional learning communities, as currently envisaged by the government and others.

This result is, perhaps, not surprising, as short-duration experiences are unlikely to result in more profound, longlasting changes. Moreover, a study carried out in 2004 by the General Teaching Council and the National Union of Teachers supported the idea of professional development as a continuum (Adams, 2005). An important question is how this professional development can best be achieved.

International visits may well satisfy some of the criteria now seen as desirable for more effective and longer lasting professional development. For instance, they offer teachers the possibility of significant “immersion in enquiry,” where they might “engage in the kinds of learning that they are expected to practice with their students” (Boyle et al., 2004, p. 48).

Furthermore, exchanges and visits can promote networking and the sharing of information by bringing together teachers with similar interests and aspirations within “regular, structured and collaborative interactions” (Boyle et al., 2004, p. 47). As ICT-mediated communication between teachers becomes a reality and, indeed, receives strong official endorsement and encouragement (Selwyn, 2000), its potential to promote alternative models of international collaboration and professional development requires further exploration.

### **Teachers’ Professional Development Through ICT-Mediated Communication**

Among the various potential uses of technology in teachers’ professional development, it is “perhaps the capacity for online contact and dialogue that has provoked the most enthusiasm” (Selwyn, 2000, p. 751). Moreover, as Hawkes (2000) proposed in his review of a series of Internet-based initiatives taking place in the USA and Hong Kong from the late 1980s through the mid-1990s, a period of significant technical innovation within education, the main potential of such technologies for teachers could lie in providing “a ‘professional community’ where true collaboration can take place” (p. 270) and by “reducing isolation, providing access to broader sources of information, and encouraging

collaboration with peers” (p. 271). Hawkes promoted a second assumption that teachers will easily adopt the new technology.

By the turn of the millennium, however, some teachers in countries perceived to have well-developed school computer networking infrastructures appeared to have still been unaware of, or at least unable to best exploit, the prospective benefits of such a virtual professional community. A questionnaire study of 845 Canadian primary and secondary teachers carried out in 2000 found that only one third used the Internet to communicate with other professionals, with just over 1 in 10 participating in email discussion lists or online chat rooms (Gibson & Oberg, 2004).

In addition, only 22% used the Internet to locate professional development information at all. The majority of participants cited a lack of time in which to engage in these types of activities. Other significant factors included unreliable equipment, a lack of funding for newer, more reliable facilities, and limited access to networked computers.

An overarching finding from existing research is that the mediating technology itself plays a disproportionately large role in determining the success of ICT-based professional development activities. Technical inadequacies, along with a lack of computing expertise required to troubleshoot, appear to have limited the impact of many otherwise well-designed and innovative projects documented in the literature.

Problems with the technology can result in teachers becoming disenchanted with the whole concept of computer-mediated professional development, and the more so because many teachers do not possess the technical skills to solve them. For instance, Foley and Schuck (1998) designed a Web-based conferencing system that enabled 165 Australian preservice mathematics teachers to discuss philosophical and pedagogical issues in small groups. Longitudinal data relating to their experiences in using the conferencing system were collected using questionnaires and reflective journals. This study revealed that two thirds of participants had experienced problems with the technology, mainly related to the design of the conferencing system itself. The study identified an associated significant decrease in the perceived value of such Web-based conferencing between pre- to postintervention data collection. Foley and Schuck tentatively concluded that such technical problems can lead to a “downward spiral in the calibre of discussion” (p. 123).

Moreover, even minor technical hitches can result in teachers reducing their reliance on technology. For instance, for many of the teachers taking part in the Gibson and Oberg (2004) survey, the role of the Internet was reduced to a convenient means of locating useful information and “rarely as a tool to support innovative teaching and learning practices” (p. 581) because of unreliability. This reality contrasts with the optimism expressed by Hawkes (2000), for example, at the end of his review.

With technological problems looming so large for teachers, one potential danger is that simply getting the technology to work replaces the original professional development goal as envisaged by the designers. As Foley and Schuck (1998) cautioned, “The role of technology must be examined – if it is merely a tool, then it should not obstruct the pedagogy or the content being learnt. Or is the technology itself driving the pedagogy and content?” (p. 139).

A number of commentators have sought to address this concern by recommending that teachers first undergo training in the use of the communication technologies (Gibson & Oberg, 2004; Hawkes, 2000). With such work taking place outside the main area of collaboration and discussion, teachers are, perhaps, more likely to improve their own

skills and be able to deal with more of the technical problems they encounter. This expertise can then provide the foundation for subsequent collaborative activities.

A related recommendation is to ensure that the technology facilitating collaboration is carefully matched to the intended professional development outcome (Ohlund, Yu, Jannasch-Pennell, & Digangi, 2000, amongst others). Overly complex or poorly defined systems can result in confusion over the intended purpose of the activity. This concern was certainly important for Bowman et al. (2000), where email was selected as the mediating technology precisely because it placed few technological requirements on participants, and other, more complex, ICT was viewed as less accessible and user friendly.

In addition to the need for reliable technology, other nontechnical factors play an important role in the outcomes of ICT-mediated professional development activities. Hawkes' (2000) study of 28 Chicagoan middle school teachers collaborating on a curriculum development project via an email discussion forum revealed that, despite some evidence that the forum encouraged reflection on practice, the depth of the generated discussion was often limited. For example, email postings reflecting too many contrasting perspectives (e.g., differing educational philosophies, backgrounds, and professional circumstances) could lead to stalemate in the discussion, a situation, perhaps, less likely to occur in structured, face-to-face encounters. Thus, Hawkes conceded that ICT-mediated communication "guarantees neither quality discussion, nor the reflective and sustained dialogue that is necessary to bring teaching theory and practice into the critical view of teachers and their peers" (p. 271). As in Gibson and Oberg's (2000) study, another major limitation was the amount of time available to read and reply to postings, with many participants able to dedicate their energies to these tasks only when at home.

In a similar vein, Selwyn (2000) tracked the usage of an email discussion forum set up by the UK National Council for Educational Technology to support the work of Special Educational Needs Coordinators (SENCOs). Many messages simply requested or provided factual information of particular relevance to SENCOs, while others compared professional circumstances and approaches. Some were humorous or alluded to a sense of collegiality within the forum. Nonetheless, overall, the messages remained formal, and any collaborative culture was characterized as transitory. "A willingness to extend help outside the carefully negotiated boundaries of the group in this study was rare, with much apparently collaborative discussion really taking place for personal and individual reasons" (Selwyn, 2000, p. 773). Rather than resembling the often lighthearted and relaxed debate of a school classroom, Selwyn concluded that discussion within the SENCO forum was closer to a formal, academic conference.

The findings of Selwyn (2000) and Hawkes (2000) suggest that ICT-mediated collaborative projects may stand the greatest chance of success if they have more clearly articulated frames of reference, with all participants able to participate on equal terms. As well as carefully selecting the technology to be used, Bowman et al.'s (2000) project, which provided an email-based support group for ESOL (English to speakers of other languages) teachers, ensured members took it in turns to pose questions, coordinate responses, mediate feedback, and respond to the issues raised:

By conversing online as individual teachers, not as institutions or experts, we can examine topics that may be unacknowledged or even controversial at our individual work sites, and the responses we offer one another are non-judgemental, sincere and thought-provoking. (p. 15)

When ICT-mediated projects bring together suitable, effective technology, clear aims, and frequent opportunities for communication, they can provide important benefits at different levels. For example, Austin, Abbott, Mulkeen, and Metcalfe (2003) investigated the impact of a joint governmental initiative intended to promote curriculum-based, ICT-mediated collaboration between schools in Northern Ireland and the Republic of Ireland. A key intention was to foster cultural awareness amongst pupils through school-determined projects. However, the researchers were also concerned with the potential for teachers' professional development.

Projects were devised following an initial face-to-face conference, with pupils at paired schools subsequently developing topic material using multimedia tools such as Microsoft PowerPoint. Collaboration was achieved via email, video conferencing, and a specially provided online discussion forum. Retrospective questionnaires and interviews revealed unanimous agreement amongst participant teachers that the initiative had resulted in significant professional development benefits.

Perhaps unsurprisingly, teachers felt that ICT skills related to the implementation of the projects had improved substantially. Arguably of more significance, however, was an associated increase in the teachers' confidence to employ a more facilitative, less didactic approach to ICT and a desire to integrate these skills within the curriculum. Teachers also reported improved abilities to moderate pupil conferences, heightened cultural awareness, and sense of professional collegiality. With improved self-perceptions of their ICT abilities, many teachers felt more relaxed about letting pupils' own, often considerable ICT expertise influence the direction of learning. Other factors that might have contributed to the success of this project were the initial face-to-face meetings and the involvement of pupils and teachers across paired schools.

### **Background to the Present Study**

The literature suggests a number of possible factors important in the success of any ICT-mediated collaborative project, including experience and expertise with well-matched technology, clear frames of reference, and opportunities for regular communication with peers. Given the amount of funding annually allocated to professional development, an important question and the focus of this research is how to maximize the success of such opportunities and facilitate long-term benefits.

In this paper, the experiences of 18 ICT specialist primary and secondary teachers from South London schools are investigated as they returned from a TIPD-facilitated visit to schools in the USA and set about establishing collaborative projects with their former hosts. The focus was on the potential of such collaboration to engender professional development outcomes and to investigate the circumstances enabling or impeding success. Like the participants in Austin et al.'s (2003) study, these teachers could be seen to have had the best of both worlds, in that they embarked on ICT-mediated collaborative projects following face-to-face meetings with their partners.

Moreover, since they were already acknowledged as experienced and innovative ICT practitioners before the project, they could be said to have been in the best possible position to exploit the potential of the technological resources available in their schools. Although in many ways this cohort was atypical of teachers intending to establish such international collaborative projects, considering the experiences of those best-placed to ensure the success of such endeavors is profitable.

The international visit that provided the focus of this study was organized at a local level by The Learning Circuit (TLC), an organization dedicated to developing and promoting ICT in education and based at a London University with a long tradition of teacher education. TLC approached the British Council to fund a study visit within the TIPD Programme. The key aims of this program were to develop national and international networks and partnerships, to examine good models of practice and to engage and share in professional opportunities for reflective practice (British Council, 2004). A strong theme within the TIPD Programme is the importance of teachers looking at their practice and developing as lifelong learners.

With these intentions in mind, applications were invited from teachers already doing outstanding or innovative work in ICT, thereby providing opportunities to further enhance skills, practice, and insights. With funding provided under the terms of the TIPD Programme, TLC had to work within a framework specified by the British Council. Beyond these predefined parameters, however, it had the role of organizing the details of the study visit, as well as the selection of the teachers to be involved. TIPD visits normally involve small groups of teachers, but TLC had promoted the idea of wider development opportunities involving a much larger group of teachers from primary and secondary schools.

TLC approached researchers with whom it had links to carry out this independent evaluation. However, unlike many studies in which the scope and nature of the research undertaken can be largely directed by the researchers themselves, this investigation had to work within a structure already set in place by both the British Council and the TLC. Thus, by the time researchers were engaged, the focus for the study—productive use of ICT—had already been chosen.

TLC had already selected the participants, and the standard TIPD timeframe of 2 weeks' duration (for long-haul visits) was established. In addition, the British Council had already selected a school district in the US state of Louisiana for the study visit. The framework for the visit—and thus, indirectly, for the independent evaluation—had to adhere to the British Council requirements, which included providing a report both 6 weeks and 6 months after the visit.

## **Methodology**

### **Study Activities, Data Design, and Collection**

Teachers were encouraged to form working relationships with their US counterparts with a view to developing collaborative projects involving themselves and their classes/schools once the visit had ended. Thus, frames of reference were clear for the visit and thereafter. As part of a larger, longitudinal study of the effects of the visit on teachers' experiences, attitudes, and practice, the researchers monitored the development and success of these projects from the beginning, before teachers departed for the USA, during the visit, and over a 20-month period after the teachers had returned.

The data collection was comprised of quantitative and qualitative measures, designed to capture ongoing experiences as they happened (e.g., through daily journals) and to provide baseline and comparative data for longitudinal analysis through a series of semistructured interviews and questionnaires. This information could be used to track the development of collaborative projects amongst participants and to determine the factors contributing to the outcomes over time. Qualitative questionnaire and journal data were transcribed and imported into Nudist (also known as N6) for analysis and to

track emerging themes across the experience. Data collection focused on three phases: previsit, visit, and postvisit.

*Previsit.* Before the visit commenced, the 18 teachers met as a group on one occasion, providing an opportunity for the researchers to describe the data collection, distribute journal materials, and explain ethical considerations. Once in Louisiana, the School District Technology Team was provided with the teachers' profiles and placement preferences. The UK teachers were then assigned to 18 different schools by the School District Technology Team, which also took responsibility for assigning US partner teachers within these placements. The schools were spread across the district, with inner city, small town, and rural settings all represented. The age phases of the placements ranged from elementary to high school.

An email chat room was set up as a means of introduction between partners. A previsit questionnaire solicited additional background information on each participant's school and, in particular, its ICT provision and usage. It also explored teachers' previous ICT professional development activities and views on the role of ICT in teaching and learning. With participants' permission, responses to these questionnaires were then shared between partner teachers as a further means of introducing each person to their UK/US counterpart.

*Visit.* The visit took place over a 2-week period with a program planned by the School District Technology Team to provide opportunities for teachers to work alongside their US partners in their classrooms and develop ideas for postvisit collaborative projects. Teachers were provided with a daily journal to complete either in hard copy or electronically. Semistructured interviews were conducted with each teacher either during the final days abroad or the first few days back in the UK. Teachers were also asked to outline their plans for collaborative projects.

*Postvisit.* As part of their obligation to the British Council, teachers were required to submit a report 6 weeks after the visit and then again 6 months later. Additional questions were added by the researchers to explore various aspects, including the success of collaborative projects, contact with fellow participants (planned or actual), and future personal and professional plans. One year later, a sample of teachers was interviewed, and the remainder completed a 12-month questionnaire exploring the same key areas as the 6-month questionnaire. Finally, 8 months later, participants were given a 20-month questionnaire. In addition to covering the same key areas as the other questionnaires, additional questions were included (reported in Purves et al., 2005).

*Opportunities to develop collaborative projects.* The basic design of TIPD-facilitated international study visits could be seen to offer opportunities for developing collaboration between teachers. However, this particular visit provided some additional aspects which could, arguably, enhance the likelihood of successful outcomes in certain respects.

The participants underwent an additional selection process (by TLC), which possibly resulted in these participants being more highly motivated than is typical, and in turn, possibly more likely to benefit from the visit. An exchange of previsit questionnaire information between partner teachers prior to the visit and the setting up of the chat room enabled participants to find out more about each other in advance and possibly facilitated the development of professional relationships and later teaching and learning opportunities. The provision of personal profiles to the School District Technology Team to assist placement choices possibly increased the likelihood of appropriate placement.

## **Participants**

The UK participants (8 women and 10 men) comprised 15 teachers (9 ICT coordinators, 4 other subject coordinators, 2 class teachers with additional responsibilities), 1 ICT suite manager/teaching assistant, and 2 primary school head teachers. Their minimum numbers of years in teaching was 2 and the maximum 32 years, with a mean of 14 years. Their minimum numbers of years using ICT in teaching was 2 and the maximum 21 years, with a mean of 9 years. They came from 4 secondary phase schools (for children aged 11 to 16/18 years), 1 special school for moderate learning difficulties (for children aged 5 to 11 years), 1 middle school (for children aged 9 to 13 years), and 10 primary phase schools (for children aged 5 to 11 years). The schools were all in the same broad geographical area across three adjacent local authorities, encompassing a wide range of socioeconomic situations, school resourcing, and student ability.

## **Results**

This study generated a large amount of data (see Purves et al., 2005), and this paper can focus on only a part of it. All participants provided data from the previsit period and from the visit itself (i.e., daily journal, notes from discussion groups, lesson observation, and interview). However, the postvisit period was a time when there was, understandably, some reduction in compliance. This paper will focus on only the data relevant to setting up collaborative projects, the ideas that appeared to work, the technological factors involved, the problems encountered, and the factors contributing to the success of projects over time. A general summary of this information will be followed by some case study data.

## **Participants' Aims**

Participants were each asked to specify their expectations and aspirations for the trip. Unsurprisingly, the vast majority of participants (15 = 83%) were looking forward to making connections and sharing good practice with the US teachers. Also, 14 (78%) were expecting to observe good ICT practice and explore different ideas and approaches, and the fact that only 4 (22%) saw it as a two-way opportunity (i.e., to pass on their good practice) suggests that they were hoping to be stretched and challenged.

Although setting up collaborative educational projects was one of the goals of the visit, only 4 (22%) mentioned this goal explicitly, yet it may have been implicit in their responses. Only 2 teachers thought the visit would be useful as a means of linking up with other UK participants. The benefits therefore, of working alongside colleagues on a collaborative project seemed to be implicit rather than explicit within the teachers' motivations for participating in the study.

## **Placement of Participants**

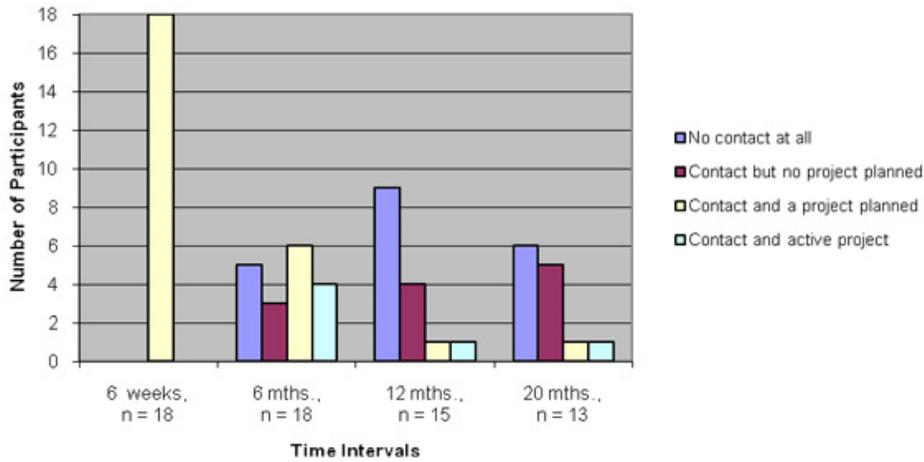
Considerable effort was made to place participants with US teachers of the appropriate age phase and subject specialism. Of the 18 UK teachers involved, 15 (83%) were placed in schools of the same or similar age phase. Four secondary phase teachers were placed in four high schools, 1 middle school teacher in a middle school, 4 upper primary phase teachers in four middle schools, and 6 primary phase teachers in six elementary schools.

Of these 15, 10 were partnered with teachers of the same or similar subject. Thus, over 50% were well matched for age phase and subject specialism. The 5 participants who did not share the same subject specialism still had areas of contact, given the similar age

phase, and links were possible across subjects, such as one pairing where a design technology specialist was paired with an English specialist. However, 3 teachers were not so well placed: a secondary music specialist was partnered with an elementary school teacher, a teacher of primary phase moderate learning difficulties was partnered with a middle school science teacher, and a secondary phase design and technology specialist was partnered with a middle school science teacher.

### Collaborative Projects

The objective of developing collaborative projects was made explicit to participants both before and during the visit. At the end of the visit, participants had to submit reports in which they were asked to indicate their plans for collaboration. Information as to the status of collaborative projects was also collected during the follow-up periods. Figure 1 shows the status of projects over this time period. These figures are taken from the questionnaires. Where none were returned, a no contact category could be entered for some participants where the situation was known to the researchers.



**Figure 1.** Collaborative projects over time.

Unsurprisingly, soon after their return from the US all UK participants reported that they were planning a project. Responses were upbeat, reflecting considerable enthusiasm, and details were given about what would be undertaken, ranging from large-scale ideas of combining UK and US students in a virtual classroom with online conferencing to smaller scale ideas of exchanging weekly class diaries via email. To encourage project development, both TLC and the School District Technology Team asked their respective teachers to provide a brief outline of the project planned, and their responses were posted on the group's Web site.

Six months later, nearly half the participants (8) had either lost contact completely or had dropped any idea of a project, just remaining in email contact. A third were still at the planning stage. Four participants had turned their plans into active projects: one involved a virtual classroom, where US and UK students worked together on a joint Web site focused on cultural differences; one school had been inspired to bid for a grant (and had been successful in obtaining £5,000) to facilitate a communication project with their US

partner school and some local UK schools, exchanging Microsoft PowerPoint slides and other resources; and two were actively exchanging emails between pupils.

A year after the visit, a third of participants still had some contact with their US partners, but only 1 had an active project. This picture remained unchanged at the 20-month stage. Nonreturn of questionnaires was interpreted as lack of involvement.

Of the three active projects that had wound up, two had ended because one of the participants had changed jobs, and one had fizzled out due to lack of time and other commitments. Significantly, the 6-month stage was in April and the 12-month stage in October. Thus, the long summer break and a new school year are likely to have been factors in the loss of momentum. The one remaining project was gathering momentum because a return visit had been organized to enable a group of children from the UK school to visit their pen pals in the US. This visit had been financed by a successful fundraising exercise involving local businesses.

To some extent the scope and scale of the projects could have been more clearly defined. The data suggest that the open-ended nature of the project brief, although on the one hand it encouraged teachers be innovative and think outside the box, was for some a step too far in terms of devising an achievable project. The data would seem to suggest that the teachers who were still in contact after 12 months but with no active projects might have benefited from a more specific brief, in terms of scope, scale, and parameters for collaboration.

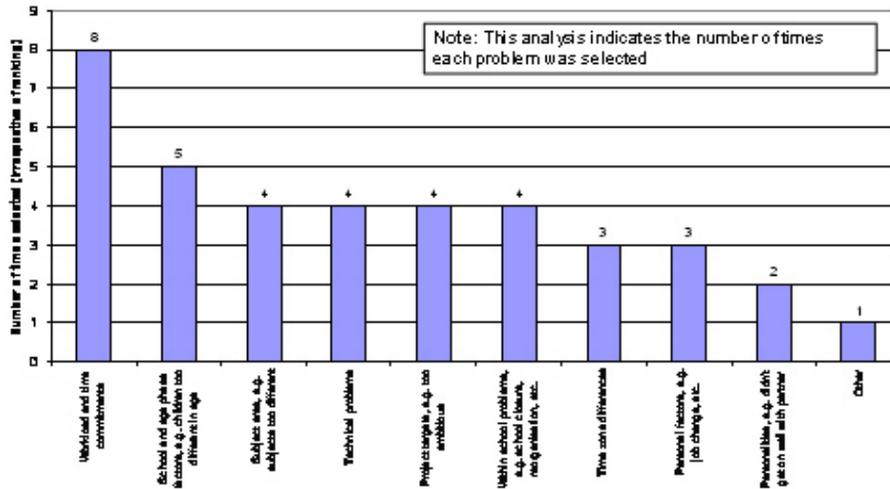
### **Other Links**

Ongoing contact with US partners was not successful for the vast majority, but other, previously unanticipated links were established between UK participants. Initially, a Web-based chat room was set up, which provided a forum for people to exchange information on their return. At the end of the study, 8 teachers reported that they were still in touch with other UK participants, and 2 teachers also arranged exchange visits to each other's schools in their own time. Furthermore, 5 had initiated contacts with other UK colleagues who had not been on the visit, and 2 had set up contacts with teachers in France and South Africa.

Thus, the visit to Louisiana had provided them with the knowledge of how to go about forging links, even if it proved too difficult to progress the original project with US partners. Such knowledge could, therefore, be utilized more carefully within the scope of setting up future collaborative projects. For instance, a greater focus could be placed on the degree of necessary professional learning prior to, during, and after the experience.

### **Problems With Collaborative Projects**

It is important to examine why so many teachers were not able to sustain their initial enthusiasm and follow through in the implementation of collaborative projects. In the 20-month questionnaire, they were asked to state why they felt such projects had not worked. A number of possible reasons were listed, based on previous responses to earlier questionnaires. Teachers could indicate one or more further reasons if they wished. Figure 2 shows the frequency of different types of problems cited at this 20-month stage.



**Figure 2.** Problems restricting opportunities for partnership projects at the 20-month stage. [Click on image for full-size graph.](#)

Unsurprisingly, the most frequently cited reason for lack of success was workload and time commitments. Even though participants had been fairly well matched, problems with age phase and subject specialism were the next most frequently cited problems. The fact that these teachers were technically skilled did not prevent technical difficulties from inhibiting success. Some projects failed because they had been too ambitious to start with; others because teachers had moved on to other schools, age phases, or districts; and others because the individuals had not got on well with their partners.

### Case Studies

These findings provide information as to general issues throughout the whole cohort, but obscure some of the detail that contributed to the outcomes of collaborative projects within each partnership. The collated interviews, diaries, and questionnaire responses from each UK/US teacher pair provide a rich source of case study data. Four pairs were selected for the purposes of this paper: two examples of projects where good links were established and collaborative work was undertaken including both the teachers and their classes (these are called successful projects for the purposes of this paper, although success is obviously not limited to the development of collaborative projects); and two where, despite initial enthusiasm, the partnership did not progress and nothing came of the original plans developed during the 2-week visit (these are called unsuccessful projects, although they might have been successful in other ways).

## Two Successful Projects

*Case study pair Adam (US-based) and Bill (UK-based).* One of the successful and more ambitious projects was conducted between two secondary/high school teachers who developed a virtual classroom. Although they were matched by age phase, they differed in subject specialism (Adam was an English specialist and Bill was head of design and technology) and experience (Bill had been teaching 23 years and Adam 9). These differences, however, did not prevent them from finding common ground and cannot be considered to be of prime importance in determining success. This project ended only because Adam was promoted and moved to another school district.

In terms of personal characteristics, Bill already had experience with international collaboration via a European Community funded project. He expressed a strong interest in establishing collaborative initiatives at the outset of the project. Both teachers had taken advantage of local ICT training initiatives and had experience with a similar range of general hardware and software. They shared similar beliefs in the value of ICT in pupil learning and promoted independent and collaborative learning in their teaching. Both were involved in teacher training activities and could be seen as able to participate on equal terms in the project.

Bill and Adam made use of the Web-based chat room before the visit commenced, and the tone of each message was warm and welcoming.

I am really excited about your expertise in these areas. We will definitely have to pick each other's brains in order to swap ideas on the use of technology. (Adam)

It is interesting to hear about your software, it will be great to share a few ideas. I had a chat with some friends at work today about the fact that you are studying Romeo and Juliet, unfortunately it is not a set text for us this year but it was last year. If any of your students are interested in taking part in an email discussion with some of our students that could be arranged. (Bill)

Diary extracts show that the planned project grew from successful technology already used by Adam but new to Bill. This created teaching and learning opportunities for both students and teachers.

The use of [the Web-based chat room] and the benefits of setting up a virtual class linking unseen students and getting them to work together and sharing ideas is a new concept for me. (Bill)

The improvement in ICT skills and the challenge of communicating online without the benefit of body language and the need for teamwork creates an interesting challenge for students. It encourages improved ICT, Communication and teamwork skills. (Adam)

At the end of the visit, Adam commented that he found having someone else critique his practice useful and that "the sharing of ideas [is] wonderful...building this bond...we're going to be able to pull together and sort of be a lead....sharing ideas across the ocean." At the 6-month report stage, Bill described working with Adam and his students: "The year 10 students have really enjoyed the experience. The use of digital drop boxes has been particularly successful. The experience has improved their ICT skills. It will influence my department ICT strategies in the long run."

Although a change in jobs ended their 6-month collaboration, the visit and ensuing project yielded many positive effects. Bill went on to train others to use these technologies in his school, and some of the students continued to communicate via private email. Moreover, Bill and Adam kept in contact and planned to link again when the situation was appropriate.

Factors important to the success of this project were the mutual enthusiasm, the commitment and energy of the pair, the quick development of a good working relationship, a workable project that had been trialed during the visit, and the complementary experience of both parties in both using the technology and in working collaboratively with overseas partners.

*Case study pair Carl (UK-based) and Diane (US-based).* Possibly the most successful and definitely the longest running project was conducted between a primary school head teacher (Carl) and an elementary school teacher of gifted children (Diane). Both had high-level responsibility for ICT, a similar time in teaching (both over 20 years) and in using ICT in education (15 years), and both saw technology as a tool to support regular curriculum work. There were a few differences, notably Carl's school was smaller and PC-based and Diane's was a larger, Mac-based school. Carl was mainly self-taught in ICT, whereas Diane had a higher degree in technology. Again, they were not closely matched, but the differences were clearly not overriding factors in determining the success of the project.

As with Bill and Adam, this pair had an existing experience in and enthusiasm for collaboration. Carl, whose school already had links with six European counterparts, commented on the benefits for pupils, parents, and staff. Diane had a long-held interest in online, international projects, which she had found rewarding.

In the daily diary and interview, both Carl and Diane were positive about the project, and a key feature of this partnership was the shared energy and enthusiasm for their work:

A final planning day, openness and bond of both friendship and professional support and understanding, like I have known [Diane] for some time and happy to discuss most issues. Confirmation that we have a very good relationship on which to build a successful partnership long-term. (Carl)

But, I mean, the reason why it's actually working is because—it's the personalities that have clicked. (Diane)

They clearly found the idea of international collaboration exciting, and it added a new impetus to their work:

It's a good pick-me-up for me because I've been teaching for a long time and often times, you're burned out and you need something refreshing. (Carl)

The exchange of information for the students, so that our students now perhaps will think more globally than just right here. We're excited when we—we have key pals from Ohio and we just got some from a couple of the other States, and that's exciting. But, to actually say that we have someone over there, we looked at his website and he showed us the children and it's going to be—it's just going to be unbelievable.... I'm just beside myself. (Diane)

In addition, pedagogical issues came to the fore. Diane saw the partnership as a way of providing active engagement in critical thinking and technology skills for her gifted pupils. She commented that their proposed projects would contribute much to curricular objectives, connecting her pupils to the “real world and other people,” which “adds relevance to the curriculum.” Similarly, Carl felt that the project “will increase my pupils’ cultural awareness and technical skills...will provide opportunities for pupils to learn from teachers in other countries.”

Factors important to the success of this project were the development of a good working partnership in a short space of time, as for the previous case study pair. Again, mutual enthusiasm, commitment and energy were evident in their various communications with the researchers. They were experienced in working collaboratively on projects. Moreover, they believed that such projects must support realistic curriculum goals and be closely targeted to needs and experiences.

They were realistic in timescale, too, noting in their posttrip emails that it might take 2 years for their project to “bed down.” They made explicit plans for what was needed, including participants’ roles, budgeting, ICT resources, and pupil involvement. Importantly, this pair went on to organize a return visit, where a group of UK children travelled to the US to spend 2 weeks working with their counterparts, accompanied by the teacher involved. At the time of writing it is our understanding that this link between schools and teachers continues still.

### Two Unsuccessful Projects

*Case study pair Enid (US-based) and Frank (UK-based).* Enid and Frank were quite well matched in terms of age phase. Frank taught 11- to 16-year-olds, while Enid taught 13- to 14- year-olds. Both were of a similar mind with regard to the pedagogical approach to integrating ICT into the normal curriculum. However, Frank had been teaching far longer (28 years) than Enid (8 years) and had been using ICT longer. Neither partner had a great deal of prior experience of working collaboratively on projects of this type. They were not well matched for subject specialism, with Frank teaching Design Technology and Enid teaching Earth sciences, but this difference did not seem to put them off initially (and did not seem to hinder other successful partnerships).

Had good discussion with [Enid] about what we could develop between Earth science in USA & design Technology in UK. Thinking about looking at buildings – homes in particular. (Frank)

Even though [Frank] and my classes are very different we had a lot of common ground. Curriculum is not what makes us excellent teachers but our personal commitments and desires to help our students be successful with anything. (Enid)

Diary extracts revealed that Frank was sometimes critical of aspects of the US school system, but he was positive about the working relationship. The visit also provided Frank with learning opportunities and new ways of looking at his teaching, as well as his use of technology: “Really informative, I have gained an understanding of the system.... Off task students allow others to work (the respect thing) how can I achieve this in [his school]?”

The visit ended with positive comments from both parties, but there seemed to be little joint planning of any projects beyond the initial discussion. Frank seemed more concerned with the differences between the two schools, and there was none of the

overwhelming enthusiasm existing in the successful experiences previously described. Interestingly, there were no posttrip emails, but in the 6-week posttrip report, Frank noted plans for a project to compare environments through joint Web pages. This was intended to provide students with cultural insight and the opportunity to communicate via email.

In the posttrip interview, only a couple of weeks after their return (when, arguably, enthusiasm should still have been high), Frank appeared negative about the value of the visit in terms of his learning:

I suppose, I felt I didn't learn enough about computer technology. I was disappointed that I didn't see something that was going to knock my socks off. But, on the other hand, I thought, well perhaps you're not that far behind them. It's just kind of like the other side of the same coin....I can honestly say, I did exciting things but I don't know how educational you would say the good things were that came out of it.

The difficulties in getting started as a result of the visit came to the fore:

When, [another participant from the same school] and I came in on that first Monday morning, we came in and we were, like, really fired, this is, you know, we're going to make such a difference. By break-time, we weren't.

Frank's equivocal experiences in the US appear to have been subsequently compounded by a series of practical difficulties in school, specifically, a lack of a policy for email exchanges between children and various technical problems: "We'll...get on the Internet. Oh, it's not working today. Well, can we e-mail—no, you can't e-mail and we still can't e-mail. I have asked him every day since I've got back."

The planned environmental project, centered upon a comparison of pupils' living conditions, was intended to enable Enid to approach the collaboration from a geographical point of view and Frank from an architectural/drawing point of view:

We really thought we were going—not make a difference, but we were—going to take it on. And really, by break-time we just went, ooh, it's just...that quagmire of [their school] that kind of prevented it. (Frank)

Interestingly, Frank also cited a lack of enthusiasm on the part of his pupils as another reason for the project fizzling out:

But, of course, the other thing that I noticed...was the enthusiasm the kids had over there....I don't know whether it's the fact that we're a boys' school. The fact that we're inner city. The fact that they're reaching that awkward age. But, I haven't even sort of like flagged it up with them yet, as something that we might do. Because, I think—they'll just say, what do I want to do that for?

At the 6-month data collection phase, Frank commented that his emails did not reach the US due to problems with a firewall and that his school still had no access to email. Furthermore, few students had Internet access at home. At the 12-month phase, Frank commented that there was "sadly nothing" in the way of collaborative projects developed as a result of the trip. Nonetheless, he did feel that the experience had offered personal benefits:

The trip gave me the much needed push back towards using ICT regularly with classes. I have developed my own skills in using spread sheets & graphs with pupils and developing data based studies. As well as increasing the amount of graphics. The main learning or was it just a reminder was—if you don't use ICT in class you'll never improve.

At the end of the data collection period, Enid reported that a change of jobs potentially offered better opportunities to collaborate. As a result, she was hoping to start a new project with Frank, whom she described as having been a “great partner.” She also highlighted a series of factors that might have affected the success of the initial project. These included a regret that she did not have greater notice of the teachers' visit. Had this been available, she could have worked on more focussed goals for the experience and reaped greater rewards. Furthermore, she voiced a belief that this particular pairing might have worked better if the schools concerned had been economically similar with pupils at a similar level.

I believe supportive administration is needed for visits. The participants must be open and eager to share knowledge and gain knowledge from others....You must be willing to put in extra time and effort for the partnership. Any time in their career works, it's their attitude that makes the difference. When choosing participants look for teachers who have actually accomplished what they stated and not just all talk and no do! Often in technology I find people who talk about all they do but they actually planned the project but never implemented the project.

These comments are revealing in terms of why this project did not work. Personal factors played some part here, because although there was initial enthusiasm, this pair did not develop the same kind of enthusiastic working partnership evident in the successful case study pairs. Moreover, this pair was not as experienced in working collaboratively and, consequently, did not have the experience of planning, staging, and budgeting (time and money) to enable a project to develop on a more secure foundation.

Nonetheless, an overriding negative factor in this pairing was the significant, school-based, technical difficulties faced by Frank on returning home to the UK. An additional, related conclusion drawn by Frank was that to be successful in ventures such as these, participants need to be able to influence school policy “in a big way.”

*Case study pair Gill (UK-based) and Holly (US-based).* Gill and Holly were both experienced teachers of 22 years and 13 years' teaching experience respectively. They had both taken advantage of government/state training schemes for ICT, although Gill mainly was self-taught. They also had broadly similar views on the use of ICT in education. However, in most other respects, Gill and Holly were not well matched. Gill was a senior primary school teacher with 20 years' experience of using ICT. Holly was a mathematics specialist, teaching 13- to 16-year-olds, with only 1 year's experience using ICT. As in the previously described pairing, neither had much experience working collaboratively on projects of this type.

Gill and Holly started out with a positive outlook, and the lack of preparation on the side of the US teachers (which was common to most pairings) did not dampen initial enthusiasm:

Today was fantastic, but I wish I would have known more about how wonderful it was going to be. I did not have a very good understanding of what was actually

going to take place. This was a fantastic experience. As the week progresses, I am sure I will have many, many more questions. I am so very excited. (Gill)

Moreover, both Gill and Holly found the experience of working with different age groups interesting and rewarding:

Today was acclimatising myself [sic] to the US systems and also seeing what 13/14 year olds are doing – I've only taught 5 – 11 ... A very good day – I loved working with older kids! (Gill)

I am inspired to push my students because [Gill] has younger students who are actually producing web projects at the age of 5-7; whereas, our middle school students many times do not feel like they can complete these tasks. It is very inspirational to me. If a student that young can achieve this we should push our students much harder. (Holly)

At the end of the 2-week visit, both felt challenged to come up with something that could bridge the age gap:

Thinking of ways in which 8th Grade and Year 3 can be linked has been a challenge as their lifestyles are totally different due to age as well as culture. We hope that we have come up with enough ideas for students with different interests and IT skills to be involved—e-mail, [Microsoft] *Word*, *PowerPoint*, Web pages. (Gill)

Nonetheless, they were still able to formulate plans:

I am constantly trying to tie my teaching into real life experiences. What better way to do this than to have a real person to correspond with through the internet. For example, I do a bit of currency exchange and we are going to have the students type a list of items they would wish to purchase and I will email them to Gill who in return will email the UK prices for these items and we will convert them to US dollars. (Holly)

After the visit had ended, Gill noted in her 6-week report that the age differences had necessitated much more detailed project planning. For example, simple email exchanges were not appropriate. By the 6-month stage, Gill reported,

The difference in age group between my own class and the US pupils has meant that a collaborative project, although possible on paper, has not come to fruition. I am however actively seeking a class in another country for my class to link with.

Furthermore, the links between UK participants had been useful in providing sources of technical advice:

The links formed with the UK teachers have been useful in terms of having a network of people to seek advice from and this has been useful in respect of knowing what to buy to convert PC signals for use on TVs and which type of digital video camera to buy.

At the 20-month stage, Gill was still trying to get a project going:

I'm now in touch with another US school via the ePALS website and we are trying to get a project together – still difficult on both sides due to time available for contact. Things have tended to fizzle out after initial contact and enthusiasm.

She was highly motivated but time and lack of support also got in the way:

Thoroughly enjoyed the trip, got a lot out of it initially but disappointed that nothing has really come out of it long term. As soon as we got back it seemed that we were then left to our own devices without any co-ordinated support to keep the enthusiasm going....Just keep plugging away and see what turns up.

Holly was still similarly keen to collaborate at this stage of the data collection. However, she had experienced difficulties due to teaching in a temporary classroom.

Although the collaborative project was never realized between this pair, both partners seemed to have benefited significantly. For example, Gill commented in the final questionnaire,

Although I didn't end up with a viable project I did bring a lot back to school. All of our classes now have a big screen TV to deliver PowerPoints etc. We all have 2 PCs in class and the staff have taken up my ideas and use of PowerPoint to varying degrees. As far as I'm concerned the trip was worthwhile. The networking with others hasn't really come off really because I'm lousy at keeping in touch with others! I did however pick up ideas from several of the UK staff during, and in the first few months following, the trip.

As in the other unsuccessful case study pair reviewed here, it appears that the partners did not need to have a project running in order to take a fresh look at their work and introduce new approaches and resources. Both Gill and Holly were clearly keen to get something going, but pupil age differences, amongst other factors, stood in their way. Had both been teaching the same age phase, this partnership, conducive to collaboration in many other respects, might have produced a successful project. That Gill had started to look elsewhere for a partner school suggests great keenness. As in the other unsuccessful partnership, this pair was not as experienced in working collaboratively on projects, which may have made a difference when the going started to get hard following the return of the UK partner.

### **Discussion**

In contrast to the assumptions of positive outcome included in the aims of this visit and widely held as a basis for other projects of a similar nature (e.g., DfES, 2004; BBC, 2005), perhaps one of the most surprising results is the small number of participating teachers who actually managed to get a collaborative project started and develop it for any length of time. Moreover, among the most frequently cited reasons for a lack of progress, and consistent with the existing literature (e.g., Foley & Schuck, 1998; Gibson & Oberg, 2004), were a variety of technical problems—an alarming finding considering that the UK cohort of teachers were selected, at least partly, on the basis of their computing and technical prowess. This observation is made not to denigrate the abilities of these teachers, but rather to emphasize the scale of the technical hurdle that must sometimes be tackled. Moreover, this issue could clearly not have been solved by further training in ICT, an aspect that has been suggested by authors such as Hawkes (2000).

Other factors identified in the literature, such as a lack of time and funding to develop ideas (Gibson & Oberg, 2004), were also apparent here. Given that the focus of TIPD is on the international visit itself and not on the follow-up period back in the UK, this result is unsurprising. However, as this research shows, the follow-up period plays a key role in ensuring a lasting impact, a result little documented in previous studies. Several UK participants complained of inadequate posttrip support, as they attempted to maintain links and foster innovative pedagogical ideas. However, beyond these relatively self-evident conclusions, many, less obvious benefits arose from the exercise. For most participants, this professional development activity was broader and less clearly defined. Moreover, the experience highlighted a range of factors that could maximize the success of future collaborative projects.

### **Professional Development Opportunities Within the Format of a Collaborative Project**

*Reflection on practice.* The opportunity for immersion in another cultural setting was highly valued by the UK teachers in terms of encouraging reflection on aspects of practice, an attitude mirroring the findings of other research in this area (e.g., Boyle et al., 2004). The opportunity to share professional perspectives within both a pair-supported peer review and a larger group was much appreciated. In both such fora, there was evidence of mentoring through shared discussion of teaching episodes (see also Purves et al., 2005).

The time- and geographically limited nature of the visit also offered the UK teachers a collective focus within which to examine and share their practice. The sometimes stark contrasts between their own teaching contexts and those of their US counterparts enabled many to be more explicit in their pedagogical considerations for the use of ICT within classroom-based learning. The resulting knowledge exchange encouraged discussion and debate surrounding some of the more conventional and taken-for-granted aspects of their own teaching and learning practices. The international immersion, at least, had the potential to move the UK teachers away from local constraints within their own countries and schools to a temporarily less-restricted space in which to develop ICT and classroom innovations.

In the most successful partnerships, collaboration before, during, and after the visit was a powerful vehicle to support personal growth and foster understanding. Even those who were unable to sustain an international collaboration often sought further contact with their fellow UK-based travelling companions.

The collective responses also had huge benefits in terms of developing collegiality, which increased teacher confidence, a finding also reported by Austin et al. (2003). The teachers were encouraged to take risks and explore ideas within a collaborative network, reflecting the findings of research by Bowman et al. (2000). Furthermore, the opportunities presented for observation, feedback, and group discussion proved stimulating and challenged professional discussion. The General Teaching Council/National Union of Teachers research (see Adams, 2005) highlighted the importance of professional development activities, including opportunities for peer review, observation and feedback, expertise, and a structured planned dialogue between parties. The positive effects of involving teachers collectively and within pairs also enhanced confidence in many cases. The cultural exchange, therefore, was a powerful tool to encourage reflection on practice, one of the key aims of the TIPD, and provided indications that such activities have the potential to “contribute in a very real way to school improvement” (DfES, 2004, p. 20).

*Exploration of effective pedagogy.* In the best examples of the collaborative partnerships observed during this research, teachers' pedagogical approaches to the purpose and integration of ICT within the curriculum were explored, challenged, and revised. This said, many UK participants had commented in advance of the visit that they valued ICT because of a belief in the possibilities of providing rich contexts for learning. Similarly, many alluded to ICT's potential to extend pupils' thinking beyond the classroom, exploring the world and other cultures. Discussions about the role of various technologies in supporting situated learning experiences, at least, offered the potential to broaden horizons and provide information sources beyond the participants' existing professional boundaries, and this belief reflects predictions in the existing literature (e.g., Hawkes, 2000; Selwyn, 2000).

Even though most of the UK teachers did not actually succeed in establishing active collaborative projects on their return, the initial planning and discussion of possibilities, as well as the experience of observing and teaching in a different ICT and pedagogical setting, provided many opportunities to reflect on similarities and differences. In a significant number of cases, participants changed and updated both ICT resources and teaching methods and even explored alternative funding sources for equipment (see also Purves *et al.*, 2005). Moreover, the visit to Louisiana provided the participants with the knowledge of how to go about forging international links between schools, even if it proved too difficult to progress a project with their original US partners.

*Knowledge of different perspectives.* The UK teachers had varied management responsibilities within their own settings and, although there was much common ground, clear differences were observed in how their professional roles and status in school impacted upon their work as ICT specialists. Inevitably, expectations of the lasting benefits of the US visit varied in line with the amount of time available to develop ICT, the expectations of participants' roles within schools, and the degree to which they were expected to provide technical expertise and support for others, thus, mirroring the difficulties inherent in computer mediated professional development (Gibson & Oberg, 2004).

Concerns relating to the delivery of what were perceived to be basic curriculum requirements were also widespread, perhaps with the implication that additional resources for nonstatutory, extracurricular projects—such as collaborations with overseas schools—were harder to secure. In one of the more successful collaborative projects, the UK participant (Carl) was a head teacher and expressed clear confidence in his ability to establish the necessary resourcing and senior management impetus from an early stage. He was, thus, able to codesign this project secure in this sense of professional and technological efficacy.

In their attempts to develop collaborative projects, participating teachers were required to sustain their momentum and involvement beyond the experience of the visit to the US. This task proved challenging for some because of the school setting in which they worked. For others, such a continuous approach to continuing professional development was a novelty, suggesting the need for a paradigm shift, both in the structuring of such activities at the planning and funding level and in understanding and commitment at the participant level.

As Wood and Anderson (2003) noted, teachers have traditionally been accustomed to models of professional development where short courses and information sessions are the norm. This international visit encouraged the teachers to engage with new ideas about practice and, in the most successful cases, moved them beyond such traditional models of professional development to a more study-based, self-determined, and self-directed

approach. For some, making this shift meant that they experienced difficulties in fulfilling the aspirations for international collaboration. For others, however, it provided the springboard for this and other wider-ranging activities, such as applying for funding to develop other school-based projects and having the confidence to apply for new, more demanding jobs.

### **A Recipe for Success?**

*Planning collaborative projects.* The data suggest that, although such international collaborative projects need to take account of scope and scale, they also need to consider what foci might be suitable to investigate within practice settings. Prior reading and investigation of issues emerging from practice may guide future participants in similar projects to themes that might be usefully employed to support a successful project planning. Our findings also highlight the likely individual commitment required in both researching a potential topic of interest and, subsequently, responding with a project brief.

Moreover, the advantages of a more defined brief seem to go hand-in-hand with a need for teachers' expectations of their collaborative projects to be managed. This finding reflected the conclusions presented by other projects, such as described by Selwyn (2000) and Bowman et al. (2000), where clear frames of reference were recommended.

In the present study, the open-ended nature of participants' project briefs, while on the one hand encouraging an innovative, outside-the-box approach, was for some a step too far in terms of devising an achievable activity. The data suggests that the teachers who were still in contact after 12 months but with no active projects might have benefited from a more specific brief and parameters for collaboration. It is, therefore, unsurprising that the successful projects (as illustrated by the two case studies) were developed by individuals who already had experience of this type of work and knew the potential pitfalls. Both pairs had the experience to know that projects must support realistic curriculum goals and be closely targeted to existing needs and experiences.

*The importance of preparation.* The extent to which project preparation includes prior knowledge, activity preparation, and a learning sequence appears to have implications for success (Saunders, 2003). The importance of carefully matching themes and placement schools was also seen to be a key factor by the National Foundation for Educational Research evaluators of TIPD (Easton, Whitby, & Harris, 2003), and the restriction on project development caused by too many contrasting perspectives has also been raised elsewhere (Hawkes, 2000). In the present study, knowledge of the backgrounds of the participants and the consequent matching of expertise, experience, and interests proved to be vital in developing effective working relationships. Several participants complained that too little thought had gone into the selection of their placement schools, resulting in mismatched expertise and fewer opportunities for postvisit collaborative projects.

Although it can require considerable time and effort from the organizers, close matching of age phase and subject specialism in partner schools enables participants to engage in more in-depth networking of ideas and practice and to see a clearer purpose in the collaboration itself. However, differences in personalities can also have an impact on the success of the partnership, a factor clearly much harder to control. In this particular study trip, because of the size of the group, the School District Technology Team had the mammoth task of finding 18 different placements. Some placements took time and persuasion to arrange. Not all partners were as willing and enthusiastic as they might have been, which also had an effect on the success of the partnership. Finally, several weeks were available previsit for preparations to be made but, due to time constraints and

work commitments among teachers on both sides of the Atlantic, it was difficult for much, if any, planning to take place beyond initial introductions and exchanges of ideas.

*Follow-up support.* Sustaining this momentum beyond the visit was challenging for some in that it depended upon time, the strength of the partners' relationships, and the teachers' own knowledge and expertise to support the development of the collaborative projects. The distances involved meant that, although this experience was potentially powerful, its sustainability was personally and professionally demanding. At least four of the participating teachers were critical of what they perceived to be a lack of coordinated follow-up activities after the return to the UK. Some felt that the TIPD could do more to promote resulting, nascent collaborative links, for instance, by providing the finance for required communications technology and repeated, relationship-sustaining visits. A common view was that, if visit participants maintained contact with each other at all, it was due to considerable personal commitment rather than any official facilitation. These participants were proactive, skilled practitioners. Even they felt the need for more in the way of coordinated, follow-up activities to keep the momentum going, and this study supplied an additional 14 months of engagement over and above the usual requirement to complete a 6-month report.

The high expectations of technology as a means of bridging this gap could not overcome the importance of support for individuals' professional development on returning to their own setting. In the penultimate interview 1 year after the visit, one pair commented on the lack of support from outside to help sustain the process. There was a view that, although reports were furnished to the TIPD by participants, it was not clear who read them, perhaps leading to a perceived lack of accountability on both sides.

*Time to maintain and develop links.* One of the most commonly cited constraints was a lack of personal time to maintain communications with other participants. For some, the sheer effort of maintaining trans-Atlantic partnerships, often in their personal time, was too much. The structure and approach to supporting this varied group of teachers needed to consider the initial motivation for participation and continuation.

Important issues relating to continuation seemed to focus on teachers' existing roles and responsibilities and the degree to which the projects were supported in normal work patterns. For successful projects, the degree to which professional responsibilities could be more easily controlled to accommodate the additional demands of the collaboration was significant. As Selwyn (2000) noted, the difficulties in supporting online collaborative links is complex in terms of moving these links beyond a formal information level to higher level and more in-depth discussion. The principles for working online and the time to engage with interactive fora for professional development purposes clearly needs further structure in terms of supporting professionals to develop shared understanding in order to work together in effective partnerships.

*Technical issues.* Many generic issues related to the technology as a learning tool were raised through this visit and the subsequent attempts at collaborative projects. The vast range of equipment, software, and technical expertise in schools, along with the knowledge and understanding of teachers to support and develop learning around them, were important considerations. Difficulties seemed to arise when teachers explored the vastness of the technology in terms of matching compatible systems and software. Particular issues included out-of-date and incompatible equipment (particularly, video conferencing systems), poorly configured networking and firewalls (restricting email contact between partners), or a lack of computer networking altogether.

In the latter case, pupils often could not make use of Internet resources or email during lessons. According to journal entries, this problem had been common in the US and had made an impact on the visiting teachers. Even though these were ICT specialists, technical difficulties stood in the way of good ideas for collaborative projects, difficulties which could have been resolved by some additional support and funding.

The idea of setting up a virtual community, as Foley and Schuck (1998) discovered, can be challenging because of mediating the technology but also because the community could be easily sustained within their own settings. Projects required more low level technology, mirroring Ohlund et al.'s findings (2000). Although the aspirations of the teachers were to open up collaboration across the world, the reality required a framework to support the use of technology. Where partners were successful, there was a commitment to the project and a shared understanding of how the stages of the project could be developed, rehearsed, and planned.

*Resourcing.* The expectations of ICT and its varied uses were not always supported with the financial means or technical expertise to implement the projects effectively. The disparity between resources and settings was clearly an issue within the group and across partner countries. Although all had some autonomy within their own settings, issues of time, money, and support for professional learning appeared restricted. Collaboration beyond the classroom and sharing their knowledge and skills through the collaborative project was limited.

### Conclusions

The data reveal that, although teachers were enthusiastic and committed to the TIPD Programme, the recipe for success of a subsequent collaborative project extended well beyond personal commitment and enthusiasm. Five key strands characterized the successful projects reviewed during this research. First, insofar as it is possible to consider what preconditions can realistically be met—beyond the careful selection of partners—the following appear to be significant:

- Preplanning of topics and themes that might be discussed and shared with project partners;
- Consideration of how the topics and themes might be relevant to the whole school.

Detailed project planning must extend beyond the open choice of a project. Organizers must consider what possible themes could be related to the participants' context. As the case studies illustrate, where the focus on professional practice was well-framed within the schools' aims and priorities, the projects were more likely to be successful.

Second, the detail and scope of the collaborative project needs

- A clear aim,
- Organization of how it might work,
- Explicit plans, including resources and people,
- A realistic timescale.

Third, collaborative skills are required to ensure that joint planning of the project is carried out in relation to the predetermined expectations of both parties. Partners need to develop

- A joint project plan (what and how it might be achieved),
- Expectations for each partner,
- Realistic timeframe for communication/ feedback,
- Regular reporting on progress.

Fourth, the methodology for collaborative projects needs to be made explicit in order to support teachers' collaboration. Consideration should be given to

- The guidance that might be usefully given on the process of formulating project proposals and how these might be usefully expressed in written form;
- What expectations for collaboration are known, before, during, and after the project;
- What timescale will best encompass the scale and scope of the project.

Finally, the longitudinal nature of this research study allowed us to identify important aspects in sustaining such projects over time. Many of the themes identified here relate to the further consideration of

- How continuing professional development opportunities like TIPD might be developed within a whole school framework, thus ensuring their sustainability in terms of staff time, resourcing and impact;
- How teachers working on such projects can benefit both from a sense of professional freedom to innovate;
- How teachers manage the expectations of them as individuals and when working in collaboration with others;
- How communication and project outlines are secured across a school before, during and after the project;
- How communication with other teachers undertaking similar kinds of projects might also be secured in order to secure and develop practice.

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