



Video conferencing in the Classroom

Case Studies of Effective Practice

Case Study Two

High Ercall Community Primary School

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School background

High Ercall Community Primary is a small, school situated within a rural area of the Telford and Wrekin district of Shropshire, catering for children from Foundation Stage to Key Stage 2 (4-11 years). There are currently 115 pupils on roll and 4 teachers (FTE). The children are drawn mainly from white UK backgrounds. The school is well equipped with up-to-date ICT facilities. High Ercall is a member of a local school network which promotes collaborative teaching and learning activities.

History of video conferencing in the school

Video conferencing is relatively new to the school, having been used since September 2003. Its introduction was part of a more general, authority wide ICT development plan which has included the establishment of a 10Mb wide area network (WAN) for all schools in the region.

During the first year the development of its classroom use in the school was largely through the efforts of a committed Headteacher and the deputy head who was also ICT co-ordinator. When both of these early 'champions' left to take up new posts at the end of 2004, video conferencing activity was a regular feature of the KS2 curriculum, though at a relatively exploratory stage. The appointment of a new and equally enthusiastic Deputy Head /ICT co-ordinator, together with a supportive new Headteacher, has meant that the solid foundation laid down by their predecessors is being built upon.

Philosophy of video conferencing use

Given the size and rural location of the school, one of the most powerful aspects of video conferencing is its potential for broadening the horizons of children through developing their awareness of other cultures (both local and distant) and working on joint curriculum projects with pupils in other local schools. It is also seen as a tool for enhancing the curriculum in a variety of ways; developing knowledge and understanding in a range of subject areas (for example through interaction with experts), raising literacy skills (particularly speaking and listening) and improving social and personal confidence through dialogue with peers and with adults other than their teachers.

The new Headteacher is an ICT enthusiast and is strongly supportive of innovative approaches to teaching and learning. As a literacy specialist, she sees the potential of video conferencing to enhance communication skills a particular strength of the technology.

Developing teacher-collaboration within the local schools' network is central to the school's approach to the professional development of its staff, with video conferencing seen as a key tool for enhancing this process.

Video conferencing equipment and location

The main video conferencing equipment is a stand-alone Polycom unit which is usually located in a KS2 classroom. A document camera enables close-up transmissions where required. Conferences are viewed mainly via a large-screen TV monitor, although projection onto a fixed or interactive whiteboard is also possible. In addition to these main facilities, a number of PC workstations around the school have webcams running NetMeeting.

Current patterns of use

The majority of video conferencing activity takes place within KS2 (Years 5 & 6), where it has been used extensively over the past two year, particularly for literacy, with a clear focus on communication skill development. Plans to incorporate it into the KS1 curriculum are being developed. High Ercall has established regular and productive links with several local primaries. This approach is mainly driven by the co-existence of three factors, the local schools' network to which High Ercall belongs, high capacity broadband connectivity available to all schools in the LEA and the size and location of the school which together serve as an incentive to collaborate.

This approach contrasts with the experience of many other schools using video conferencing to contact other schools which have tended to communicate with institutions further afield (often outside the UK). This focus on neighbouring institutions means that rather than the 'cultural exchange' focus typical of many of the latter variety of conferences, pupils are able to discuss directly common curriculum topics. An awareness of regional differences (for example urban/rural) is nonetheless an important feature of even these local conferences.

Recent school-school conferences have included the joint discussion of texts as part of the literacy curriculum, ICT activities such as skill-sharing and exploring new software and science projects involving the collaborative analysis and interpretation of data collected at different sites. These locally-organised activities are supplemented by sessions with remote experts in UK museums and galleries, mainly arranged via global-leap.com, who also provide bridging between internet (IP) and fixed line (ISDN) connections where necessary. Although the use of video conferencing for professional development activities is still in its infancy, there is regular teacher-teacher contact for the joint planning of video conferencing sessions.

Examples of effective practice

Although curriculum integration of video conferencing is still at a relatively early stage, a number of examples of effective practice can be described. During visits to the school, three modes of interaction – individual to individual, group to group and subject expert to whole class - were observed.

The first was a within-school trial using the webcams for conversations between children in different locations in the school, the first time that this approach had been attempted. Children who were self-assured speakers and had some experience of video conferencing were paired with less-confident pupils. Although this was mainly a process of familiarisation with the technology rather than a curriculum activity per se, the experience provided opportunities for the more confident pupils to act as coaches to their peers, while their partners gained some experience of technology-mediated communication within a secure and known environment. In post-conference discussions, both teacher and pupils identified a number of ideas for taking this approach forward for one-to-one dialogue with children in other schools.

The second conference involved contact with a local school for a joint English lesson between two Year 6 groups. The focus of the session, involving seven and eight students respectively in the two schools, was a short text which both groups had read prior to the conference. The session began with individuals in the two groups (who had not previously met) introducing themselves. Because of an unforeseen last minute situation, there was no teacher at the 'far end', requiring the 'near end' (High

Ercall) class teacher to facilitate communication for both groups when appropriate. While this resulted in occasional confusion as individuals at both sites attempted to talk at the same time, for the most part the near end teacher was able to take a mainly facilitative role, managing to remain 'in the background' for much of the time, with students at the far end mainly organising themselves.

Both groups had prepared questions to ask of each other about the text, many of which invited reflection and open discussion ('What do you see as the main message of the story?'; 'If you could write a different conclusion, what would you say?' and so on). The relatively small size of the groups meant that a reasonable dialogue could be established which involved all participants. The conference lasted around 45 minutes, during which time all were engaged and all had plenty of opportunity to contribute.

In a 'debriefing' session immediately following the exchange, the High Ercall group were able to identify a number of learning gains. A greater understanding of the text was achieved both through preparation for the conference (reportedly more thorough than usual because of their recognition of the implications of engaging with external audience) and through alternative perspectives being offered by the far end students. The post-conference discussion also proved to be an opportunity for the teacher to explore literacy concepts (for example literal, deductive and inferential questions) and to discuss with the students the extent to which video conferencing facilitated these different modes of questioning compared with a regular classroom discussion. A consideration of video conferencing protocols ('rules of engagement') was a positive and unanticipated outcome of the conference, partly as a result of the lack of adult presence at the far end.

The third observed conference, the focus of which was Tudor exploration, involved a mixed Year 5/6 class of 35 in conference with a subject expert at the National Maritime Museum. The conference began with a brief presentation of information about the Tudor period illustrated with portraiture of the period. This opening sequence was interspersed with questions designed to test the children's existing knowledge and understanding of the subject. Historical artefacts were shown to support and promote discussions of manufacturing processes of the period or goods and produce (for example silk, spices, foodstuffs) typical of those brought back to England from abroad by Tudor explorers. Life on board a Tudor ship during these journeys was illustrated in various ways, including close ups of detailed models, the types of food eaten, and examples of some of the conditions endured by Tudor sailors. This section of the conference – with rats, weevil-biscuits and the cat-o'-nine-tails among the exhibits - gripped the students with a mixture of fascination and horror.

As in the first example, throughout the conference the class teacher kept as low a profile as possible, only intervening for clarification purposes, to identify students for questions and answers or the occasional need for classroom management. The majority of students displayed a high level of engagement throughout the almost hour-long conference.

It was a bit like being on TV only you were [the one] doing something important, or like watching a movie, only you could ask questions

Year 5 student

In post-conference interview, students were enthusiastic about the nature and content of the session and demonstrated a high degree of retention of much of the information together with an appreciation of the expert knowledge displayed by the museum tutor. The use of authentic resources, along with the novelty of interacting through a technological medium, was perceived to be a powerful combination for learning.

Planned follow-up work continued the tone of independent learning apparent in the conference, with children able to choose how best to represent what they had learned through the session and in the

classroom about the topic. Initial ideas included artistic activities (painting, modelling), story writing, dramatic presentations (a short play, hotseating) and a PowerPoint-supported talk to the class.

Management of video conferencing

Co-ordination

With the recent changes in the school, management and co-ordination of video conferencing activities has fallen almost exclusively to the new Deputy Head/ICT co-ordinator. In addition to being present at all video conferences, this involves a range of roles including the technical management of the facilities, identifying suitable conferencing partners and planning sessions with far-end personnel. Some technical support is also provided via the LEA and global-leap.com. As part of the planned developments noted above, some of these organisational roles will in future devolve to other staff.

Integration into the curriculum

While video conferencing is not currently written into schemes of work, it is seen as part of curriculum entitlement, with an expectation that its use is fully embedded into planned curriculum activities rather than as 'one-off specials'. This was clearly demonstrated in the observed conferences which were of direct relevance to the respective subject area, developed further existing knowledge and understanding which was consolidated in post-conference discussions and extended through subsequent classroom activities.

Mainstreaming

While the school does not have a policy of requiring teachers to use video conferencing, it is regarded as a key curriculum tool, with its further establishment clearly built into the school development plan (SDP). Both the Headteacher and Governing Body are fully supportive of these plans.

The general approach to this broadening of use is to establish good practice within a relatively confined area (in this case particular subjects in KS2) which will serve as a model for further development and eventual integration across all key stages and subjects.

Technical issues

The video conferencing equipment in the school is of high quality and robust. The high-speed WAN means that the audio-visual quality of conferences within the Authority, or with other locations using IP, is generally high. One feature of this form of connectivity is that occasional brief 'freezes' in transmission may be experienced, and these were evident in one observed conference. Conferences are generally preceded by a test call to ensure that the connection is sound, although there was a temporary problem in establishing a 'bridge' to the National Maritime Museum ISDN line in the earlier-described observed session.

Occasional difficulties such as those noted above can threaten the viability of a session, highlighting the need for regular technical support. Although the school does not have direct access to a technician, the teacher with main responsibility for video conferencing is familiar with the operational side of using the technology, of establishing connections with remote sites and basic troubleshooting. These skills have mainly been self-taught, although global-leap.com also offer additional support and guidance.

Future plans

Video conferencing is currently mainly used to support English/literacy, history, ICT and science. Citizenship studies are also supported, though indirectly, through interactions with other schools and (mainly national) organisations. Future plans include exploring the potential of the technology to support other curriculum areas both through further developing joint activities with pupils in other

schools and the greater use of subject experts in museums, galleries and other organisations with an educational remit. Although most activity to date has been within the local community of schools or with UK-based organisations, opportunities to communicate with international schools and institutions is being explored.

The other core area identified for the future is the use of video conferencing to support and enhance professional development activity, for example through the sharing of good practice within the local school network (where all schools have video conferencing facilities). Sustaining contact with LEA advisory services was also regarded as a potentially powerful use of the technology.