Northumbria Research Link

Implementing an ICT centre for school and community in Britain

The British Government, in parallel to the move to e-government, has introduced various strategies to embed ICT within secondary school learning. One strand of this approach has been the establishment of City Learning Centres (CLCs), state-of-the art ICT-based learning facilities based at selected secondary schools. The CLCs are designed for use by students at the host school and surrounding schools, as well as by the wider local community. This article reports on a case study of a CLC based at a secondary college in northern England.

The study examines the impact of and issues raised by the new centre. Some of these issues relate to ICT at a general level, including the impact of technology on teaching, teachers' professional learning, students' motivation, behaviour management, and students' information literacy. A more specific area of interest is the relationship between ICT and the traditional information resources in the school library, and their joint impact on teaching and learning. In this case the new ICT facility was physically incorporated into the college's library, called the Learning Resource Centre.

The research also raises practical issues of potential interest to Australian readers whose schools are planning substantial upgrades of technological resources, as well as to schools examining existing and potential links with their local communities, and those involved in clusters or other forms of inter-school collaboration who are considering ways to share costly technological resources.

The evaluation is based on data from two surveys of staff and students, the first conducted prior to the CLC's opening, and the second six months after it began operation. The research involved 49 of the school's 70 staff members and 53 students across all secondary year levels. The students and staff were surveyed via questionnaires and focus groups, and individual interviews were also conducted with selected students and with five senior staff, including the school librarian and the CLC manager. The evaluation was conducted by the author, an academic researcher at a university that has strong links to the school.

During the school term the CLC was open between 8 am and 9 pm Mondays to Thursdays; from 8am to 5pm on Fridays; and from 9am to 5pm Saturdays. It was also open during school holidays. All students from the school had lessons in the CLC. Students from other schools used the CLC by arrangement, and adults from the surrounding community by registering with the CLC reception staff.

Impact on teachers and teaching

The use of technology for lesson planning increased with the introduction of the CLC. The increased use was largely attributable to improved ICT access, but also reflected teachers' need to ensure they knew how to make the most of CLC facilities in forthcoming lessons. Additionally, as teachers could now be confident of their students' access to computers, they began to use ICTs in more of their lessons, and were able to set extended computer-based tasks. However, although the CLC offered an opportunity for creative pedagogical approaches, changes in teaching practices were only beginning to emerge at the time of the second survey. Such shifts tend to develop in line with teachers' competence and confidence in the use of ICTs.

Two thirds of the teaching staff had received ICT training some time prior to the CLC's opening. Most staff rated themselves as competent or expert in ICT use. However, the teachers indicated that they needed further training in both ICT skills and classroom application.

A number of respondents felt that most of their technology training has been to date had been to general, and they needed more training for specific software packages; the only recent PD of this kind related to the interactive whiteboard (IWB).

Some respondents felt they had been overlooked during training sessions, as their more skilled colleagues formed 'a little group with the trainer'. They called for further training targeted at those still struggling with the technology. The more competent users had usually pursued training independently or taught themselves, but even they found it difficult to find the time needed to keep up to date with ICT.

Impact on student motivation and behaviour

Almost all the students found the CLC useful, particularly in terms of the accessibility of information, the ease of use, and the inclusion of stimulating multimedia. Weaker students enjoyed having the option to present their work more attractively and in different formats. Some struggling students were more comfortable working in one-on-one tutoring situations when ICT was integrated into these sessions.

The CLC computers were more sophisticated than those in the school's standard computer labs, and could be used outside standard school hours. Students described the CLC as 'clean', 'tidy' (Year 7 students) and a 'lovely building' (Year 11 student), giving them a sense of being valued. At least one teacher believed that the CLC's relaxed environment, and the small-group discussions it made possible, had encouraged girls to make more use of ICT.

The arrangement of the CLC, in which the PCs faced in different directions, aimed to encourage independent learning, also increased opportunities for off-task behaviour, facilitating 'tootling on the net' and use of chat rooms. The students were adept at accessing inappropriate sites when not supervised. Some students on the other hand complained of a 'Big Brother' ethos: 'They watch you like hawks. They can look on your PC.' (Year 11 student). Teachers wanted the flexibility to limit internet access to appropriate sites, or block it entirely, depending on the needs of the lesson.

There was also concern that after the less structured lessons in the CLC students might be unsettled on their return to the classroom.

Information literacy and the library

The data indicated that students' information literacy ICT skills needed development. Most A-level (senior) students said they 'had not a clue' about advanced search techniques such as limiting or refining search results from Google. Additionally, while some students were aware of the varying reliability of information found on the websites, observing the strong presence of commercial sites and the uneven coverage of topics, they were generally poor at critically evaluating its quality.

The ease of cutting and pasting from the internet raised concerns about plagiarism, and the need to improve students' understanding of this issue.

The library manager helped students to select appropriate supplementary web resources, and was generally well placed to help students develop their information literacy. However, it seemed that more could be done in this area: some teachers were concerned by a tendency for students to overlook books entirely in favour of the internet. While certain teaching staff thought the library's location within the CLC also made more students aware of its existence,

and allowed library books to be used easily in conjunction with the PCs in the CLC, few students reported using the library, apart from those in Year 7 and in the senior years.

The co-location of the CLC and the library caused certain practical problems. The library tended to be used as an overspill area rather than being earmarked for specific project work, and students studying in the library were sometimes disrupted by noise from the CLC. Additionally, when the CLC was booked by another school, the host school's students lost access to the library as well as the CLC computers: during one month the host school's students were without library access for two weeks. For these reasons teachers and students wanted a more substantial partition between the library and the CLC.

Students' technical skills

Students' technical skills were uneven, with many students demonstrating a patchy grasp of standard software packages. Lower achieving children often had to be re-taught technical ICT skills. However, peer tutoring among students was common, with the more skilled or experienced students assisting their classmates. Younger children, who had grown up using ICT, had better developed technical skills than the older students.

Filtering of websites

Filtering was needed to block inappropriate internet use during class time as well as out of school hours, especially since some users were as young as six or seven. However, both staff and students expressed frustration at some of the filtering, which affected websites relevant to their study, such as a World War I website blocked for containing 'violent scenes'. Health teachers found that sites describing sexually transmitted diseases were often blocked. It was suggested that there should be different levels of filtering for different years of study.

Access, infrastructure and layout

The CLC included a reception desk that handled bookings, and technical support staff were available. Both services were generally efficient and represented an improvement on past practices, but some concerns remained. Teachers found it more difficult to get technical help in other areas of school. Teachers also suggested that technical support staff should be rostered in the CLC's learning hall, amongst the computers, rather than being based in a separate room. Limits imposed by software licences meant that software was not universally installed. The new facilities also struggled to cope with the volume of printing. Colour printing in particular was in short supply, and was felt to be expensive for students.

Teachers suggested that CLC facilities could be improved by replacing the current IWB and display boards with portable versions, and making laptops available for purchase or loan. They also noted that if teachers had been consulted at the planning stages of the CLC implementation, some problems with accessibility and misuse, such as those relating to the layout of computers, could have been forestalled.

Community access

Contrary to early expectations, there had not been substantial demand from the surrounding community to use the CLC; opportunities to promote community use were being considered. However, it was expected that access issues, particularly in relation to the use of the CLC by other schools, would become more significant. It was suggested that local schools should all

have equal access to the facilities, but that the booking system should be clear and well regulated.

Future directions

The teacher respondents suggested that students' patterns of use for the CLC should be tracked in order to determine the extent to which the CLC was being used by students, as well as to address possible issues of equity. For example, students unfamiliar with or disinclined to use the technology could be encouraged to make use of the CLC's facilities in order to develop their ICT skills and improve their learning.

Additionally, teachers' reflection on their ICT skills suggest a need for more training, such as product demonstrations, mentoring of less skilled teachers by more highly skilled colleagues, nomination of ICT champions or beacons within the college, and the use of relief teachers to allow training during school hours.

This article is based on an evaluation conducted by the author while working as Research Associate, Learning and Teaching Support, Northumbria University. For copies of the evaluation email the author: pgleary@aol.com.