

## Innovative Practice with e-Learning

An abstract background featuring a green sphere with a grid of lines, overlaid with binary code (0s and 1s) and a radial pattern of lines emanating from a central point.

# Case Studies

Vision and infrastructure

Changing to a wireless world  
Ealing, Hammersmith and West London College

## Vision and infrastructure

# Changing to a wireless world

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### Background

Ealing, Hammersmith and West London College (EHWLC) is a large further education college formed from the merger of two colleges in 2002. It operates across four main centres in Southall, Ealing, Acton and Hammersmith, as well as in a range of community and business locations.

Mobile and wireless technologies are seen as an important part of the college's long term ILT strategy, which includes a commitment to the development of a Managed Learning Environment (MLE) and its use by all learners and tutors. The college is in the final stage of a three year programme, by the end of which all sites will be fully wireless. Portable devices such as tablet PCs, supported by the wireless network, are seen as a vital part of embedding e-learning into everyday practice.

### The challenge

The college offers over 500 courses to approximately 25,000 learners over four main campus sites. With such a widely dispersed body of learners, the management of retention and achievement presents challenges. The college management recognised that immediate and regular feedback to learners would be essential to tackle poor attendance and under achievement. At the same time, there was a need to revitalise learning and teaching to encourage learners to attend.

Increasing use of the college's custom-built web-based Virtual Learning Environment (VLE) became a priority – online schemes of work had been developed, but were waiting to be populated with learning materials and resources for use in learning and teaching. Both the VLE and the Management Information System (MIS) had been developed in-house over several years; both needed to be extended to form an MLE that was widely and routinely used by all staff and learners.

### Innovative solutions

Teaching staff at EHWLC have been issued with wireless tablet PCs to record attendance in class and immediately update central records using the wireless network. Support officers can then telephone students and, where necessary, parents, within ten minutes of the registers being marked. The college's online register system is web-based and easily accessible from the four main sites and from the college's off-campus locations. To monitor overall patterns of attendance and achievement, all tutors can access the database to see how a particular learner is doing in other subjects, as well as their own, and take appropriate action.

As a result of this initiative, attendance has improved by 10% and figures for retention are up 7% on the previous year. The system also provides up to date summary reports for a variety of management requirements, including administration of the Educational Maintenance Allowance (EMA).

Tablet PCs are also proving their worth as learning and teaching tools. As the majority (75%) of classroom practitioners have been issued with a tablet, they have been able to take ownership of the new technology and explore its potential to change the dynamics in the classroom. One way of engaging learners has been to develop activities around shared use of the tablet – for example, passing it around the class to complete quizzes. Learners in science classes have also benefited from the use of a tablet or laptop running a simulation alongside a hands-on experiment to enable more rapid assimilation of skills and knowledge. By increasing the number of wireless projectors, the college's management team have encouraged increasingly interactive and innovative ways of delivering learning.

The more disadvantaged learners have also benefited from the use of tablet PCs. These can be operated by a stylus

“At any point in the building, anywhere I am, everything is instantly accessible to me. As a senior manager, it’s an invaluable tool.”

John O’Shea, Division Manager

rather than a keyboard and mouse, which is easier for learners with limited mouse skills. Those with learning difficulties, for example, have been able to interact with the tablet in simple but effective ways, and projecting their work on to the larger screen has stimulated further learning.

Mobile tablet PCs or laptops make computer use possible in any teaching environment. They are capable of wireless connectivity, and their relatively small size means that they leave more personal space on a desk. Information on the MLE is kept up to date and can be shared easily in meetings. The technology thus alleviates the requirement to anticipate information needs for staff meetings or classroom interactions.

## The technology

A fully wireless environment is a prerequisite for the development of the college’s MLE. As use of mobile wireless-enabled devices increases across the four main campuses of the college, bandwidth will need to be increased and more and stronger transmitters used to overcome ‘weak spots’. Network security is a high priority but has been successfully managed. As the elements of the MLE have been developed in-house over a period of time, there have been no interoperability issues in linking up information about learners’ attendance, progress, targets, day to day activities and timetables with learning resources.

Toshiba Portégé tablet PCs were chosen for staff use. These offer a handwriting facility with a stylus to widen the potential uses of the technology. The model used does not have a disk drive but a USB storage device can provide file management facilities. Fully charged, this type of tablet PC can be used anywhere without a cable for approximately 2–3 hours. It is lighter than a laptop – weight is a consideration when staff have to carry a device throughout the day.

Tablet PCs and data projectors can be costly. However, the expense must be considered in relation to the benefits that the use of this technology can bring. Wireless networks are

cheaper to install than physical networks. Currently it is time-consuming to provide support for mobile devices, but in the long term savings will be made.

## Making it happen

Wireless connectivity will need to be available as widely as possible throughout the institution; in some buildings and contexts, the signal may be weak – ongoing improvements are therefore needed to the network. Battery charging points will be required in staffrooms to enable practitioners who use tablets routinely for e-registration to gain confidence in using them in more innovative ways. Encouraging the sharing of resources via a VLE or intranet will make efficient use of practitioners’ time and help to create a community of practice amongst staff.



“Once staff were using it [the laptop] for registration, it was there in their hands in the classroom, and indeed out of the classroom, to support a much more energetic, a much more forceful move into e-learning than would have been the case through other technology. The key to it all is really convenience.”

John Stone, Principal, EHWLC

### Key points for successful innovation

- Boost support for practitioners developing resources for mobile and wireless technologies in order to develop a critical mass in favour of culture change.
- To give learners a similar sense of ownership over their progress, a personalised home page for each learner on the MLE or VLE can provide access to timetable, attendance record, details of completed and ongoing assignments, schemes of work and learning resources. This information can then be accessed anywhere via the learners' own mobile devices.

### Final word

Use of the tablets has helped to build staff confidence in the use of e-learning in general at EHWLC, and practitioners are now committed to their use. The key advantages are convenience and flexibility: the devices are highly portable, can be taken home, to meetings, to the canteen and into the classroom with relative ease.

An in-house level 2 ILT qualification is being developed to promote pedagogically sound use of tablet PCs and other technologies in learning and teaching.

### For further research

Condon, R. (2003) 'Tablet PCs in Education' [an overview article on tablet PCs in education from the National Institute for Technology and Liberal Education] – [www.nitle.org/resources/issues/tabletpc.htm](http://www.nitle.org/resources/issues/tabletpc.htm)

Ealing, Hammersmith and West London College – [www.hwlc.ac.uk](http://www.hwlc.ac.uk)

This case study is based on case studies of innovative e-learning practice collected for JISC by the Open University – [www.jisc.ac.uk/eli\\_oucasestudies.html](http://www.jisc.ac.uk/eli_oucasestudies.html)

