

Professor Angela McFarlane

These things we know...

Handheld Learning 2006



Preview from Handhelds Handbook, Futurelab

- Work by University of Bristol supported by Futurelab and DfEs
- Over two years visited 6 handheld projects
- Desk research on some 30+ projects
- Talked to heads, teachers, learners, LA staff
- Video analysis of lessons

Recommendations on:

- planning and implementation
- outreach
- professional development
- technology provision and support
- teaching and learning

Planning and Implementation

A shared plan that integrates the use of handhelds with existing ICT and learning strategies is a common feature of successful projects.

- Having an **authentic purpose** for use of the devices is central
- Educators should be clear about the exact **learning goals** they are hoping to achieve— these may be as much about the culture of learning as about specific content or skills
- Although some successes have resulted from models of use where not every learner has a device, or where the devices are not **'owned' by learners**, teachers find it harder to manage small numbers of devices in a whole class context

Outreach

Engaging families in learning, and extending the links between school and home learning has been a feature of many successful projects.

- Projects that have tested the use of handhelds to build links between home and school, and to increase family involvement have had most success where the level of **home access to technology is low**.
- In cases where home access is already high, a very **specific role** for the handhelds may be more effective eg to carry information between home and school

Professional Development

The training and support of teachers is critical to the success of any of the projects examined here..

- To develop a collaborative, self-supporting **community** of practice, adequate and appropriate training is a fundamental part of any successful project.
- A **whole school approach**, with support provided both for the project activity and for those implementing it, will contribute to handheld technologies being embedded in the curriculum.

Technology Provision and Support:

Teaching with handheld technologies will require planning in conjunction with school technical support staff to identify any potential network or other technical difficulties.

- The provision of **Internet connectivity**, preferably via a wireless configuration, rather than access through a wired local area network (LAN), is essential if ubiquitous computing is to be facilitated. Devices with no connectivity have not proved popular or sufficiently useful.
- Longer term **storage of work** needs careful planning as in general learners will produce more digital work, both in volume and variety
- Devices need to be robust and broken devices must be repaired or replaced quickly. Some **spare devices** will be needed to cover periods when a device is out of action

Teaching and Learning

To maximize the benefits of personal ownership, pedagogical approaches and teaching styles must accommodate a more autonomous learner role.

- The **curriculum** itself needs to accommodate this new attitude to learner responsibility for the approach to learning.
- The most successful projects combine the use of the device to access curriculum content and to produce student work in a variety of media, and lessons are planned to take advantage of both **use and production of content**.
- The **time taken to manage** the devices, in projects with personal ownership, takes up very little class time once the devices are established, leaving more time for the wider educational objectives of the lesson.
- Good **integration** with existing technologies in the school eg interactive whiteboards, data projectors, software and digital content aids the smooth adoption of the devices into routine teaching and learning.