

Technology Outdoors; Enhancing outdoor learning with mobile technology

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Project outline:

The arrival of handheld, powerful mobile technologies is blurring the lines between the concepts of 'school' and 'not school', 'classroom' and 'non-classroom', 'school-time' and 'free time'. These technologies present challenges and opportunities to teachers that are only just being recognised and understood, but little research has been done to explore how best to make the most of the opportunities while avoiding the pitfalls, and to produce clear guidance and resources for teachers and pupils. Two areas of opportunity stood out: the ability to enhance collaboration using new settings beyond the classroom and the development of supportive relationships between teachers and pupils that can stem from this greater collaboration in new situations, which is said to be particularly beneficial to those pupils undergoing transitions between age phases or between places of learning (Dalziel & Peat, 1998; Donnison et al. 2010; Kuh & Schneider, 2008).

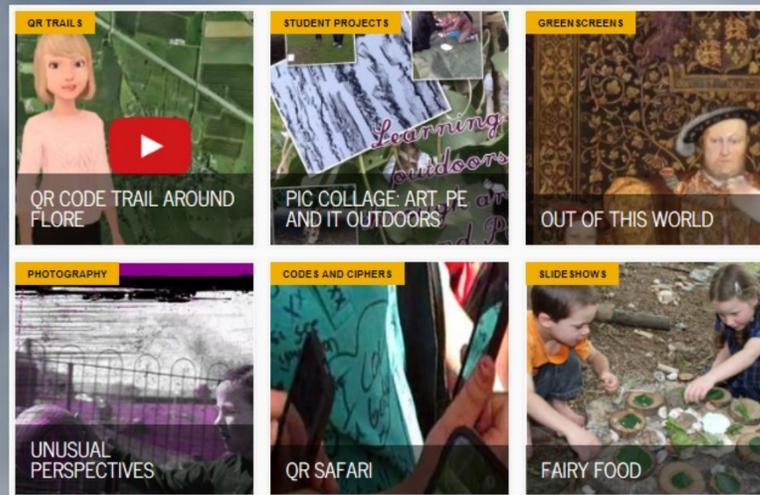
Our aim, therefore, was to create a 'Technology Outdoors' toolkit of equipment and a set of collaborative mobile learning (m-learning) activities designed to support students and school pupils during times of transition by enhancing their confidence and self-esteem and helping them to manage change in a positive way. The toolkit consisted of a portable case of equipment such as iPads, cameras and GPS devices, together with sets of activity cards aimed at specific age groups and subjects.

An inter-disciplinary group of university students were trained to act as 'Digital Leaders' (www.digitalleadernetwork.co.uk) delivering team-building workshops using the toolkit to support school pupils with an emphasis on periods of transition as they enter a new phase of learning. Within schools the activities were targeted at pupils entering a new key stage. The activities were also extended to pupils and students who faced particular challenges due to SEN or EAL. The digital leaders also provided support for university tutors running Technology Outdoors CPD workshops for teachers.

What is mobile learning?

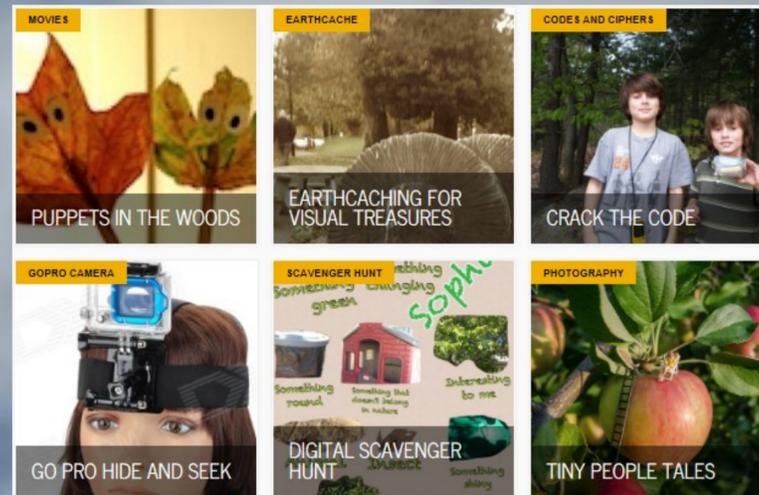
M-learning is a developing concept and as such the definition of mobile learning is increasingly complex. For the purpose of this study it is viewed as 'technocentric' 'learning using a mobile device such as a PDA, mobile phone, iPod, PlayStation Portable etc' (Winters in Sharples 2006, p.5).

It has however meant that research has focussed on the device in use rather than the interactions between the learner and device, resulting in definitions such as 'any sort of learning that happens when a learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technology' (Winters in Sharples, 2006 p.6).



Project Aims;

- To promote the socialisation, well-being and retention of students and pupils experiencing phase or institutional transition through collaborative m-learning within the outdoor environment.
- To support the orientation of students and pupils in unfamiliar environments.
- To create learning resources for UoN staff in Health, ITT and Arts to deliver with their students.
- To establish a team of digital leaders to support m-learning initiatives with students, staff and pupils. These Digital Leaders are part of the University STEM Champion programme that supports employability through extra curricular activities.
- To support the Ashoka Changemaker initiative at the University of Northampton in making innovative positive impacts on society through learning, teaching and public engagement.
- To promote the Raising The Bar goals of promoting social innovation and enhancing the student experience.



Activity Examples:

Example themes include media trails using augmented reality, treasure hunts based on geocaching techniques, the use of specialist cameras to explore unusual perspectives, and scavenger hunts for natural objects to create art inspired by the environment.

These activities are designed to inspire curiosity and facilitate collaboration between students and teachers. There is an emphasis on accessibility, on cross-curricular learning, and on working towards shared goals such as solving a problem or producing a digital artefact.

These ideas draw upon previous studies exploring the use of mobile devices for collaborative outdoor learning experiences (Rogers et al., 2005; Kurti, Spikol, & Milrad, 2008), and how collaborative learning has been shown to benefit transition (Donnison, Edwards, Iiter, Martin, & Yager, 2010; Laird & Kuh, 2005).

Project Outcomes;

- Enhanced pupil and student experience and retention through activities supporting emotional well-being at times of change.
- A student group of trained digital leaders who can deliver workshops in schools and at the university on the use of m-learning outdoors to support targeted groups of learners.
- A set of 'Transforming Outdoor Spaces through Technology' CPD workshops for teachers run by university staff supported by a trained team of digital leaders contributing to the University's financial sustainability.
- A learning framework and sets of age-specific task cards to help educators use technology in innovative ways to meet outdoor learning goals across curriculum subjects and key stages.
- Conference presentations and publishable work documenting the project and sharing outcomes. Themes might include 'Transforming Outdoor Spaces through Technology', 'Running a Digital Leaders programme in Higher Education' and 'M-learning outdoors to promote student well-being'.
- An online blog and forum, and a series of face-to-face meetings for educators to share and reflect upon the impact of their outdoor learning practice.
- Enhanced partnerships between university schools, between the university and local schools, and between the university and local SMEs in the field of technology.
- Enhanced student employability for the digital leaders delivering the programme.
- Enhancement of university teaching programmes across subjects in ITT and across schools via internal sharing of ideas.
- Promotion and extension of the Forest School initiative at UoN.

Outcomes to date:

- Students are actively working as digital leaders in school supporting and developing new practice in outdoor and mobile technology.
- Teachers and students are engaging with our web materials, planning their own activities and continuing to recruit and train digital leaders.

Where Next?

- The team aspire to disseminate their work more widely and have attracted a great deal of interest from schools, writers, and conferences. We hope to be able to share our ideas and up skill professionals in using mobile technology.
- We are continuing to develop new and innovative ways of enhancing outside learning experiences.
- Further work within the university could target vulnerable groups such as international students, intercalating students, beginning students, or mature students returning to full time education
- The project also lends itself to joint eTwinning, fostering cultural awareness and allowing schools to increase their international dimension as they bring mobile technology projects to life across countries.



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