Researching Ubiquitous Learning with New Technologies

The use of ICTs in educational research, implications for theory, methodology and ethics.

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Handhelds in Initial Teacher Training

Jocelyn Wishart
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- Teachers prefer the personal
- Technology at their side and not in their face
- Key applications:
  - Diary scheduling, class admin and personal note-taking
  - Anytime, anywhere internet access

https://www.bris.ac.uk/education/research/sites/pda
Mobiles in secondary schools

Elizabeth Hartnell-Young
Learning Sciences Research Institute
University of Nottingham

• Funded by Becta & supported by Nokia and Vodafone
• Working with teacher-researchers in three sites
• Introducing the legitimate use of mobile phones in classes
• Conducting observations, surveys, interviews, and collecting school-and student-generated products and documents
Moblog: Learn culture through mobile group blogging

Yinjuan Shao (PhD student)
Learning Sciences Research Institute
University of Nottingham

- Online community for enculturation formed by international students as culture learners
- Learning in daily life: evidences collection and experiences sharing, ‘capture the moment’ ‘on the spot’, anytime, anywhere
- Personal learner contributes to the reflective learning resources: Self-reflection and group reflection
SEMA

SEMA (‘speak out’ in Kiswahili) has trained: 16,500 teachers from 3500 schools in 13 districts across Kenya.

John Traxler, University of Wolverhampton

• The image shows Tutors and Quality Assurance Officers undergoing SMS initial training. They are responsible for conducting cascade training to Head Teachers and others in their zones.
Information Presentation for Racing Sailors

Russell Beale
Advanced Interaction Group
University of Birmingham, UK

- investigation into how racing sailors improve performance
- supporting them with mobile and embedded technologies
- mobile systems less good; embedded systems preferred
- basic data presentation preferred over processed representations, as raw information necessary for learning
- http://www.cs.bham.ac.uk/research/hci/
Learning through mobile blogging supported portfolios

Russell Beale, Nick Shrine
University of Birmingham, UK

Antti Syvänan,
University of Tampere, Finland

- Student teachers given Nokia communicators with customised mobile blogging software for easy, anytime creation of multimedia portfolios
- Supports their in-place learning and encourages reflection
- Finnish study, to be replicated in UK as well
- http://www.cs.bham.ac.uk/research/hci/
Flex-Learn project

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- Exploring the potentials of Mobile video-based learning for truckdrivers
- Convergence of tools and learning resources on a dual pc/mobile platform
- Multimodal learning resources addressing learners with special needs
- Contextualized on-demand learning in a life-long perspective
ENLACE Project

M. F. Verdejo
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LTCS Group
UNED, Spain

• Explore the design of an innovative educational environment
  • Inquiry and collaborative long-term activities
  • Integration across the curriculum
• Physical exploration of special interest sites, analytical reflection at school
  • Sustain data and tool interoperability
• Continuum between formal and informal settings (classroom, computer lab, field trip, home, exploratorium)

http://enlace.uned.es
Mobile My Sports Pulse Challenge

David Metcalf
Institute for Simulation and Training
University of Central Florida, USA
In partnership with Växjö University

• Mobile Simulations for Science, Technology, Engineering and Math (STEM) Education
• Voice, SMS, and e-mail message from Sport Celebrities
  • Example: Andre Agassi: “My serve is 132 mph, what is that is feet/second” For help go to mysportspulse.com
• Answer is sent back and scored by the automated system-
  Game elements to build virtual athlete and win prizes
  http://www.mysportspulse.com
Skattjakt (Treasure Hunt)

CeLeKT Team, Växjö University, Sweden

Skattjakt is a mobile game that has been conceived and implemented to promote physical activity and collaborative problem solving by the unique combination of orienteering, gaming and mobile technology.

• 79 young people equipped with Smartphones and GPS devices participated and played the game. 22 of them involved in game design workshops and classes.

• Novel way to connect informal and formal learning activities.

• More information can be found at: http://www.celekt.info/max
GI DDER: Groups in Digital Dialogue

High school students learn about contemporary art across sites

• Pre-visit: work collectively on task in classroom wiki and select works to explore more deeply
• Visit: use mobile phones in museum to blog their experience of authentic works to the wiki
• Post-visit: use labels and other shared resources to interpret artworks, present to class

Palmyre Pierroux
InterMedia, University of Oslo
http://www.intermedia.uio.no
Mobile DNA
(Digital Narrative Approach)

The ‘Script’

Filming & Editing

Final Editing & Screening
ALPS Visualise – example content

- Formative assessment in the practice
- Student recording experiences / techniques
Documenting evidence – trainees’ progress against standards
Fieldwork – bridging the classroom and the real world
Using the camera – events such as a pupil role play
Personal use - important to success at using tool to support learning
Conclusions: Theory

- Learning theories underpinning use of mobile handheld technologies in education focus on cognitive aspects of learning. They are interdependent and combined in a complex web creating motivation and understanding.

- complexity
- challenge
- collaboration
- curiosity
- constructivism
- control
- conversational
- confidence
- context
Blurring of boundaries

- Are they at work or at play?
- At home or at school?
Blurring of roles
• Are they experienced professionals or new learners?
Blurring of ownership – whose work is it anyway?

- Undergraduate students in Bristol found that having a PDA allowed the students to hold question and answer sessions via an online discussion board during lectures. (Ramsden, 2005)

- The EDUINNOVA project (after Nussbaum) comprises a series of learning activities that involves assigning children in a class randomly to groups of three who then work together to solve a series of challenges on their individual PDA.
Issues in identifying research methods

• Learning will be mobile
  – Tracking activity across locations
• Learning may be distributed
  – Multiple participants in different locations
• Learning may be informal
  – How can we distinguish learning from other activities?
• Learning may be extended
  – How can we evaluate long-term learning?
• Learning may involve a variety of personal and institutional technologies
  – Mobile and fixed phones, desktop machines, laptops, pdas
• There may be specific ethical problems
  – How can and should we monitor everyday activity?

(Sharples, 2007)
Conclusion: Ethical issues need addressing

Questions that have been already asked of the presenter include:

- What if I see inappropriate images on a students’ mobile phone?
- How do I set up a study on handhelds in a college where the use of mobile devices is banned?
- Can I take photos of a patient’s cuts and bruises on my PDA for my wound care project?
- A trainee has sent in video of his pupils as evidence of teaching through role play – can I show it to others?
- Am I sure that the use of mobile phones with young people is actually safe?
Focus on Recording and Privacy Issues

- Is permission relevant? Who owns the images?
- Where can they be stored / displayed?
- What about pupils capturing images of teachers?

... And Not Just Images

Use of audio in class management ➔ ‘recording transgressions’

A teacher recorded a student’s use of strong language in the classroom and played it back to him. The student uncharacteristically immediately acknowledged that he’d been out of order and apologised.

The teacher clearly felt a need to destroy the recording. Why?

Do the teacher or researcher’s roles include understanding and applying media and privacy laws?
More?

IAS funded workshop Series:

1. What's going on where:
2. Road Map for Research in Mobile Learning
3. What do mobile technologies do best?
4. Mobility, Creative Learning and Future Scenarios
5. Mobile Devices: Assessment, Reporting and Recording Learning
6. Ethical considerations in mobile learning and research -11th June

http://www.bris.ac.uk/education/research/networks/mobile/