

Student interaction with mobile technologies

Niall Dew

Senior Lecturer, University of Huddersfield

Viktoria Joynes

Research Officer, ALPS Core Team

Questions (Not answers!)

- What do we understand about how students/learners construct knowledge?
- What do we understand about how students/learners orientate themselves in the wider community of their peers?
- What have we learnt from projects involving mobile technologies (SO FAR) that might change this understanding?

Constructing Knowledge

It is our belief that in order to understand how students construct their knowledge (personal or vocational) we need to understand:

- the social processes that occur, and within that
- the range of “methods” they use.

We believe that as these social processes and methods continually co-construct each other we are looking at a social construction of knowledge.

Texting

Discussion from Markett *et al* (2006) suggests that SMS in class can provide:

- a more active learning environment
- provision of greater and ongoing feedback for lecturers;
- increased student interest and motivation.

However they also acknowledge that although all students had a mobile phone...

- some were on an expensive (pre-pay) plan
- some had difficulty in typing, and the time needed to do so distracted some others
- discipline specific language difficult to enter with predictive texting
- students would use it for “non-educational texting”

Texting

A study by Motiwalla (2007) asked students to rate the following statements about using a mobile learning system. Average scores from 44 students (5 = strongly agree, 1 = strongly disagree) are shown next to the statements.

A mobile learning system...

- Adds value to e-learning (3.75)
- Allows instant access regardless of your location (4.27)
- Useful to supplement to an existing course (3.64)
- Is an effective learning aid or assistant for students (4.20)
- Is an effective method of providing personalized information (3.70)
- Allows to convert any wait (dead) time into productive (3.89)
- Allows convenient access to discussions – anywhere and anytime (4.05)
- That sends the information via messages may be better (3.50)
- That also allows access to information from the website (3.80)
- Can be used as a supplemental tool for any existing course (3.33)

Texting

Finally Rau *et al* (2008) suggested that:

“instant messaging helps bonding the two roles – student and instructor – in the instruction process, effectively”.

“...when combined with Internet communication media (online forum), it can significantly increase student extrinsic motivation without causing higher pressure.”

It seems that of of all the communication mediums students like texting because of the relative anonymity and speed of expressing ideas.

Social Networking

A poll in the economist (economist.com, 2008) suggested that 63% of respondents think:

“social networking technologies will bring large [positive] changes to educational methods, in and out of the classroom”

ALPS Pilot (2006) – students said they had no desire to use Myspace/Facebook networks as part of their course.

The interesting feedback from a number of blogs is the apparent mis-match of the educational “institution” and the apparent anarchy of networking sites. Indeed a literature search of social networking and education yielded few results.

Social Networking

A couple of our own questions...

If it is 'informal' use we are interested in, then how can we measure it overtly?

If it is more 'formal' use of these sites then how do we get students to engage with it so that they do not feel we are 'spying' on them?

SHOULD we attempt to use these sites/"measure" their usefulness, or should we actually let students have something that they 'own'?

Does experience tell us they will probably find something else once we 'invade' anyway?

Would the add-ons to facebook for blackboard access work – would the students let us "invade" their space?

Second Life

Second Life seems to offer the control universities like over the social communities that mobile learning offer.

A number of Universities (Huddersfield and Leeds included) have second life presences.

There are also a number of education and particularly health education related areas within Second Life e.g.

<http://secondhealth.wordpress.com/>

Once again we have to ask how far the students are willing to engage with something educational in an arena which they might consider is 'theirs'

AND question how appropriate it is for every course

Twittering/Microblogging

In an online search, ‘twittering’ in education returns more results than social networking sites, and about the same as texting. However the similarities to texting are obvious and can account for this result.

“Just in case you're not sure what Twitter is, it's an online application that is a sort of cross between a chat facility and a blog. Its key feature is that you are only allowed to type 140 characters at a time.”

Freedman (2007)

However the scenario again is that this could be used in classrooms, to collect views, ideas, questions, misunderstandings as the session goes along and react “on the hoof”. Obviously not suitable to all students or indeed educationalists styles – and many of the arguments against the use of texting would apply to Twitter as well.

Again it appears that we may need boundaries to cope with the mass of information generated?

Podcasting & Texting

Neil Morris, Institute of Life Science Education,
University of Leeds, HEA Centre for Bioscience funded project:
“Embedding formative mobile assessments in podcasts for final year
students: evaluation of the tools available”

- Formative assessments, year group split in to 2 (trial and control)
- Trial group received access to podcasts / mobile formative assessments for first 14 lectures of a final year module
- All students completed formative MCQ assessment

- Each podcast contained 5 narrated formative MCQs, which were directly related to material in podcast
- Students submitted an SMS (text) message of their answers and got immediate feedback on their phone

Podcasting & Texting

Effect of trial on assessment results

- Formative MCQ exam (30 questions) conducted under exam conditions on 22/11/07
- 85 students completed the exam (n=42 Control; n=43 Trial)
- Students in the Trial group performed significantly better than those in the Control group ($P < 0.05$, Student's T-Test).
- Those in the Trial group who completed SMS assessments (n=31) and took the exam performed significantly better ($P < 0.05$, Student's T-Test) than other students (n=54)

CONTROL (n=42)	TRIAL (n=43)
52.1 ± 2	56.4 ± 2* ($P < 0.05$)

No SMS assessments (n=54)	At least one SMS assessment (n=31)
52.2 ± 2	58.1 ± 1* ($P < 0.05$)

* % score; unscaled; mean ± S.E.M.

Podcasting/Videocasting

Lane (2006) University of Washington 41 students on 4 courses

Use by students

81 % to catch up on missed classes

70 % used them to prepare for exams

67 % liked the opportunity to download a podcast anytime after a lecture

50 % to clarify concepts

81 % listened to podcasts on computers at home

77 % no effect on attendance

Neil Morris, University of Leeds – found that most of the students listened to podcasts they had accessed of their course on their computers, and only 21% listened to ‘the majority of the podcasts’ on their mp3 players.

Podcasting/Videocasting

Lee and Chan (2007) suggest this is due to students inability to multi-task i.e listen to the mp3 player and, for example, read.

What does this (and the previous slide) tell us about the way in students use technology, and the assumptions we make in making certain technologies available to them?

Is this surprising? What will the students be using the podcasts for? Learning...or revision? What sort of 'multi-tasking' happens when technology is not present in learning? What are we expecting to change?

“Other”

Other things we have discovered students have used the ALPS devices for...

- Google Maps – ‘very useful for finding placement settings’ (focus group comment)
- Calendars, again particularly for placements
- Photos – including personal pictures
- Blogging
- Placement protocol documents
- Timetables/travel information

Stored internet favourites included:
Facebook, Google, BBC and YouTube

Things to reflect on...

- **Students are not necessarily digital natives**
- **We know from usage stats that some students who were issued ALPS devices haven't used their devices at all**
- **SOME students will situate themselves as 'reisisters'**
- **And others just want to 'opt out' altogether**

We could therefore argue that, for a variety of different reasons, they are removing themselves from 'belonging' to their peer group, if their peer group is defined by the technology they are using.

Within ALPS we felt that giving students devices was enough of an incentive

to get them involved and wanting to use them

- Was this technology 'new' for the students?

If it was 'new' – have they engaged any differently with it?

Like many of the technology discussed – the devices are still associated with work, not 'pleasure'. Is it once again 'invading' their territory?

Reflection (2)

ALPS Pilots (Dearnley *et al*, IJEL paper forthcoming):

Students did not use devices because they did not have them for long enough

-desire to “bond” with devices

-borne out in ‘Med Pilots’ where students had devices for one month placements

Only 24% rated 3, 4 or 5 out of 5 and only 11% gave 4 or 5 out of 5 for usefulness

Importance of staff engagement – how do we get students to engage with Technology if staff (tutors, assessors, practice staff) are resistant or even negative to it?

Will we see a difference in engagement with different technologies from different professions?

Remember WHY technology is important - Walton *et al* (2005) show that students “in the community” place great importance on the use of technology to help them in their work

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