

Learning on The Move

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Keywords: *Mobile learning, students' mobile phones*

Introduction

It is now accepted that mobile devices have a number of important characteristics which make them attractive from an educational perspective, including increasing portability, functionality, multimedia convergence, ubiquity, personal ownership, social interactivity, context sensitivity, location awareness, connectivity and personalisation (Pachler et al, 2010). Mobile phones are now essentially mobile computers, and are rapidly taking over many of the tasks and functionalities previously carried out by PCs. In particular, the rise of accessing the Internet from mobiles is increasing rapidly. Accessing information and learning can now take place when and where it is most appropriate.

Much research has taken place documenting mlearning pilots and projects, and in developing theoretical frameworks to scaffold mobile learning (e.g. Kukulska-Hulme et al, 2009; Laurillard, 2007). However, there is a lack of research into how students are actually using their own phones for learning outside of the formal classroom.

This paper presents some of the results from a small empirical research project at London Met that explored in depth how students are using their mobile phones to help with their learning. The project 'Making the most of my space': Students' use of mobile phones for studying and note making, was funded by the Write Now and Learn Higher CETLs, in conjunction with the Centre for Academic Professional Development. The aim was to find out about student mobile phone ownership, their attitude to using their mobiles for learning, and if they are using them for learning, what they are using them for.

We agree with Schuck et al, that given the ubiquity of mobile devices, an imperative has arisen for educators in Higher Education to familiarise themselves with the affordances of mobile technologies for learning so that they are able to capitalise on

their students' usage of these devices for effective learning (Schuck et al, 2010). We should be able to utilise the powerful mobile phones that students now have with them all the time – devices which they know how to use, and already use for a multitude of tasks in their everyday lives. However, we first need an understanding of the student situation and their attitudes towards using their mobiles for learning before we can design effective mobile learning activities that will bring mobile phones into the blended learning arena, including them within learning scenarios, rather than excluding them.

For our research, initial data was gathered from a student survey of mobile phone use. This was followed-up with in-depth studies with a small number of students to obtain a greater understanding about student practice. Three students were loaned Flip Video camcorders to record their daily use of their phone for learning activities. Two of them also recorded video interviews with fellow students about what they were doing. Afterwards, the three students were interviewed, to explore in more depth their mobile learning practice and attitude towards it. From the interviews, a case study was compiled for each student. The case studies are not reported in this paper due to space constraints, but they are available on the project website, along with all the student videos, the full survey data and all the other outputs from the project [www.londonmet.ac.uk/learningonthemove/index.html].

Results

The first stage of the research was to conduct a survey with students to find out what mobile phones they have, what their attitudes are towards using them for learning, and what they actually use them for. A short paper-based questionnaire was given to first-year students taking a core business module, 'Studying Marketing and Operations'. The main results are presented in this section.

The students and their mobile phones

Seventy-four students completed the questionnaire. All of them own a mobile phone. Seventy-three percent of the students were female, 28% male. The majority, 61%, were age 18-20, 33% 21-25 and 6% 26 and over. The gender and age characteristics reflect the average make-up of the module cohort, being predominantly female and in their late teens/early twenties (a significant number of fashion marketing students study this module).

Sixty-three percent of students have their phone on a monthly contract, and the other 37% use 'pay as you go'. Contracts usually provide inclusive call-time, SMS messages and data download. If students have these included within their monthly tariff, they will be less concerned about the costs incurred of using their phone for learning purposes.

The range of handsets owned by the students is diverse: 72 students cited 37 phone models from 9 manufacturers. About 80% of these handsets can be classified as Smart Phones (where this can be determined from the model information supplied). Whilst there is not an industry standard definition of a Smart Phone, we have taken this to mean a high-end phone that includes web browsing and email. Figure 1 below shows the phones that students own by make, with the proportion of Smart phones indicated.

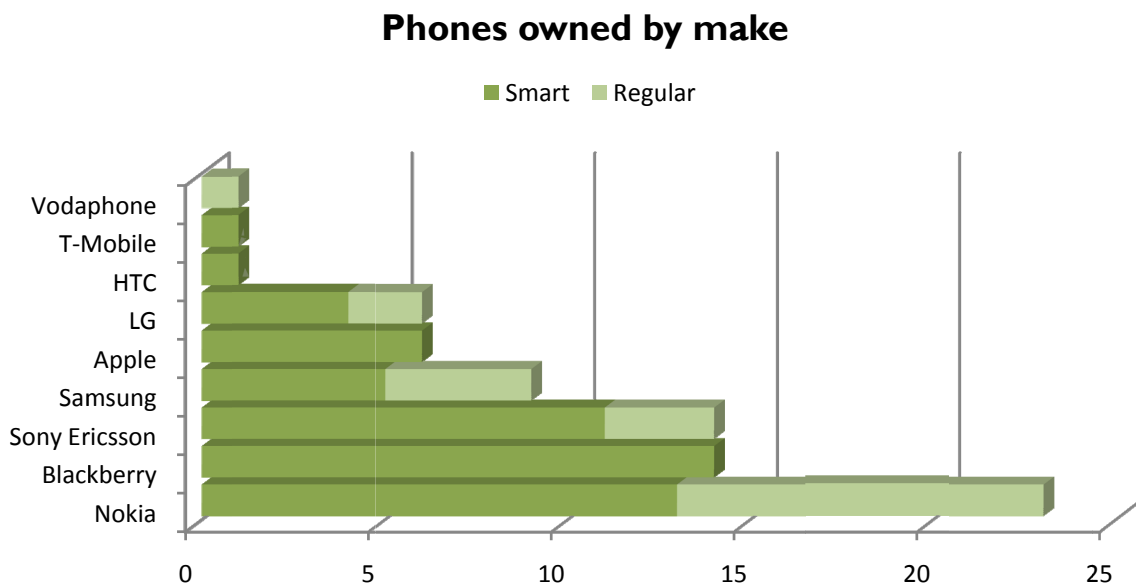


Figure 1: Phones owned by make

This data is important, as it shows the diverse range of phones that would have to be supported in any mobile learning initiatives (such as developing learning materials for mobile phones). An interesting insight that came out of the student interviews was that Blackberry phones are popular amongst students because they can send messages (via Blackberry Messenger) and share files for free amongst other Blackberry users.

The real indicator of what students can do with their phones is shown in Figure 2, features of students' mobile phones. It shows that colour screens, cameras, the ability to be able to record video and voice, and more importantly Internet access, are features possessed by the majority of students.

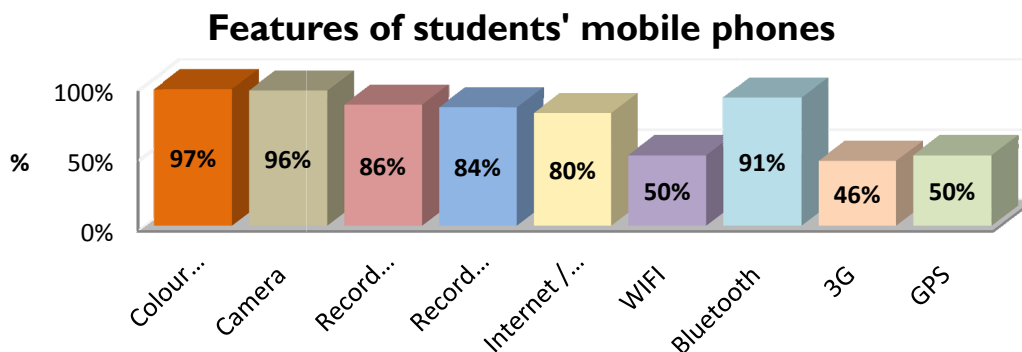


Figure 2: Features of students' mobile phones

Students' attitudes to using their phones for learning

The questionnaire also sought to capture students' attitudes towards using their mobiles for learning and being contacted by the University. Table 1 shows the responses to the question 'How much is the ability to learn at any time and in any place important to you?'. Adding the results at the positive and negative ends of the scale together (1 + 2 and 4 + 5) makes it easier to interpret the results. Fifty-six percent think it is important to be able to learn at any time and in any place, 29% are unsure (choosing '3' in the middle), and only 9% think it isn't important. This demonstrates a high importance on being able to learn when and where it is appropriate, which mobile learning can facilitate.

Extremely important	1	2	3	4	5	Not at all important
% respondents	30	26	29	4	5	

Table 1: How much is the ability to learn at any time and in any place important to you?

Table 2 explores the question 'How useful would it be to access learning materials via your mobile?', as earlier research explored developing learning objects for mobiles. Fifty-nine percent think it would be useful to access learning materials from their mobile, 25% think it wouldn't be useful, and 16% are unsure. Some explanations for the less positive responses could be because students don't think that their phone is capable of accessing learning materials, or they may be concerned about the cost of accessing them (both concerns were raised by one student in our interviews).

Extremely useful	1	2	3	4	5	Not at all useful
% respondents	29	30	16	12	13	

Table 2: How useful would it be to access learning materials via your mobile?

Table 3 shows the responses to the question 'How would you view the university contacting you via your mobile for learning purposes?'. Fifty percent gave a positive view, 29% are unsure and 21% have a negative view, so student opinion is divided on this issue. Feedback picked up by the tutor in class suggests that whilst they would be happy for useful contact such as learning tips or deadline reminders, they would not want to be contacted about what they considered to be unhelpful information, e.g. news about University events.

It would be a positive aspect	1	2	3	4	5	It would be a negative aspect
% respondents	26	24	29	10.5	10.5	

*Table 3: How would you view the University contacting you via your mobile for learning purposes?
How students are using their mobile phones for learning*

The survey also asked 'Do you currently use your mobile phone to help with your learning, and if so, what do you use it for?' 22 students (29%) reported using their mobiles for learning, citing 34 tasks. These uses have been grouped into 7 categories of use. The most popular use was for 'conducting research/getting information', practised by 12 students, and included using the Internet (4 students), using Google (3 students) and generally doing research and finding information. Six students used their mobiles for 'communicating', with email being most practised (4 students), and also for contacting group assignment members and communicating with a fashion FaceBook group. Four students used their mobiles for 'generating content/artefacts', which included 'take pictures/photos' (3 students) and 'voice recording'. Some students used 'tools/applications', such as the calculator (3 students) and Microsoft Office. Three were 'organising' their studying, for example using the organiser, checking for exams and setting reminder alarms for meetings. One student used a phone for 'notetaking'. Other uses cited were 'accessing learning materials', 'presentations', 'record presentations', and 'transport files (PDF, Word, PowerPoint)'. The full list of uses reported by students can be found on the project website: <http://www.londonmet.ac.uk/learningonthemove/students.html>

Our research has discovered that many students are actually using whatever mobile phone they have for a wide range of learning activities. What transpired from the interviews is that they demonstrate resourcefulness and creative solutions to help them meet their learning and coursework requirements, making the best use of the devices they have and the services that are available or that are cost-effective for them. For example, one international student with a basic Sony Ericsson phone writes notes and jots down things to remember in the form of text messages that she saves on her phone. At the other end of the scale, another student with a Blackberry and cheap unlimited Internet access, has taken to using her phone for a wide range of tasks, including accessing university systems such as Webmail, WebLearn and Evision because (a) it's more accessible (always connected to the Internet and other people) and you can use it anywhere and everywhere, and (b) because she has problems connecting to University systems with her Apple laptop. Her Blackberry also has most (or versions of) the commonly used Windows software she needs to use for writing reports and creating presentations. As a result, her mobile has pretty much taken over the role of her laptop.

Conclusion and implication

The student survey has provided useful background information about the current situation of student mobile phone ownership and appropriation for learning. Whilst it focuses on students from one module, it does provide a snapshot of the reality within this group of students. The results show that all the students have a mobile phone, and that the majority possess a high-end Smart Phone (about 80%). Eighty percent can access the Internet, 96% have a camera, 86% can record video and 80%

can record audio, clearly illustrating that students have the capabilities in their phones to engage in a wide range of learning activities.

These students are also receptive to using their mobiles for learning. Fifty-six percent of students thought it was important to have the ability to learn at any time and in any place. On being able to access learning materials on their phone, 59% thought this would be useful. Half of the students (50%) view the University contacting them via their mobiles for learning purposes positively.

Whilst the outcomes from the project will be interesting to anyone (both students and tutors) considering utilising mobile learning within their own learning or their modules, it is also helping to uncover more about hitherto unavailable aspects of our students' lives, both inside and outside of the classroom, and the types of everyday learning practices they adopt. On the whole, these practices are largely as a result of their own initiative rather than being tutor driven. But such practices could be adopted by other students or encouraged by tutors where they may help to facilitate or engage students in learning scenarios. The ubiquity of powerful and Internet-connected mobile phones amongst our student population offers a range of just-in-time, convenient and more flexible learning opportunities for students.

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Biographical note

Claire Bradley (MA) is a Research Fellow at the Learning Technology Research Institute. For the past 14 years she has worked on a number of UK and European research projects involved in mLearning, eLearning, online communities, multimedia and the general application and evaluation of digital technologies in teaching and learning. She has co-authored a number of journal articles and papers in these areas.

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