"Happiness" (or Student Success and Pervasive Computing)

Adriana Wilde, Ed Zaluska and Hugh Davis

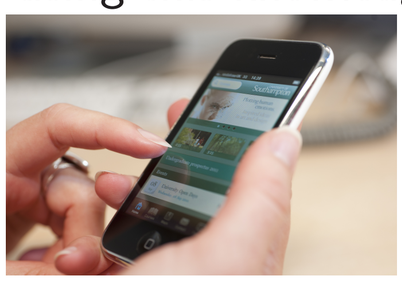
1. Why Pervasive Computing?

Smartphones, as sensor-rich, ubiquitous devices, can help students be successful in Higher Education. However, much of the current interest in pervasive computing for education has focused on the delivery of resources rather than on discovering **what successful students do**.

2. Happiness and Success

We want to model successful student behaviour by measuring happiness, which is both a contributing factor and also a proxy for success. Our hypothesis is that an intervention in student behaviour to increase their happiness will impact positively on their success.

- First identifying what successful students do, and then
- using this knowledge to encourage positive behaviours.



Accessing study materials anytime, anywhere.

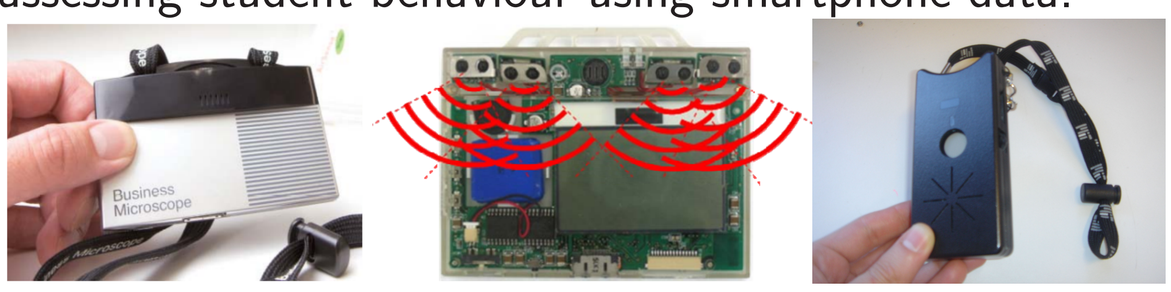
Happy students $\Longleftrightarrow$ successful students...?

Today, thanks to smartphones and mobile computing, students not only can access learning materials anytime and anywhere but, more than ever before, we can *discover more about student habits and context*.

3. Sensing behaviour: badges and phones

Social behaviour has been studied via sensors embedded in smart badges: e.g. the Hitachi's Business Microscope (HBM) and the MIT wearable sociometric badge.

However, since our study population is higher education students, smartphones are probably more appropriate than smart badges and our research focuses on assessing student behaviour using smartphone data.



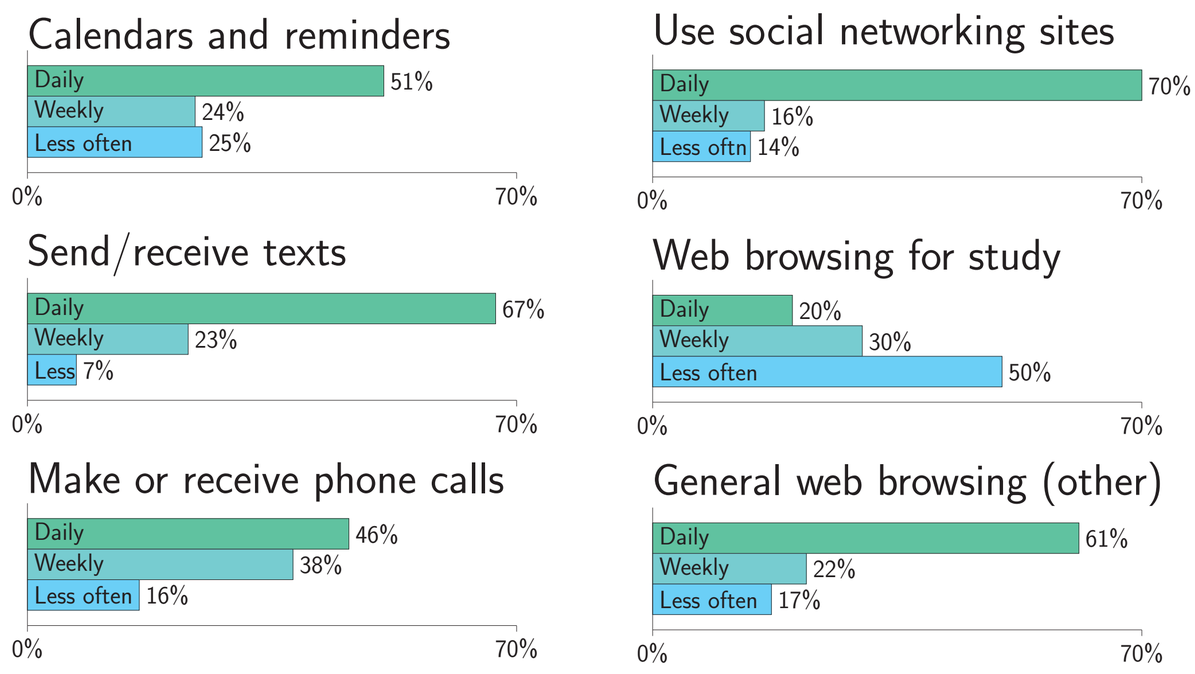
Smart badges: The HBM (external and internal appearance) and the MIT wearable sociometric badge

Current research (e.g. the UBhave project[1]) explores the smartphone potential for large-scale behaviour change, on the assumption that sensing is unobstrusive (users continuously have their smartphone "at arm's reach") and that an intervention would be welcomed by users. We are currently testing these assumptions.

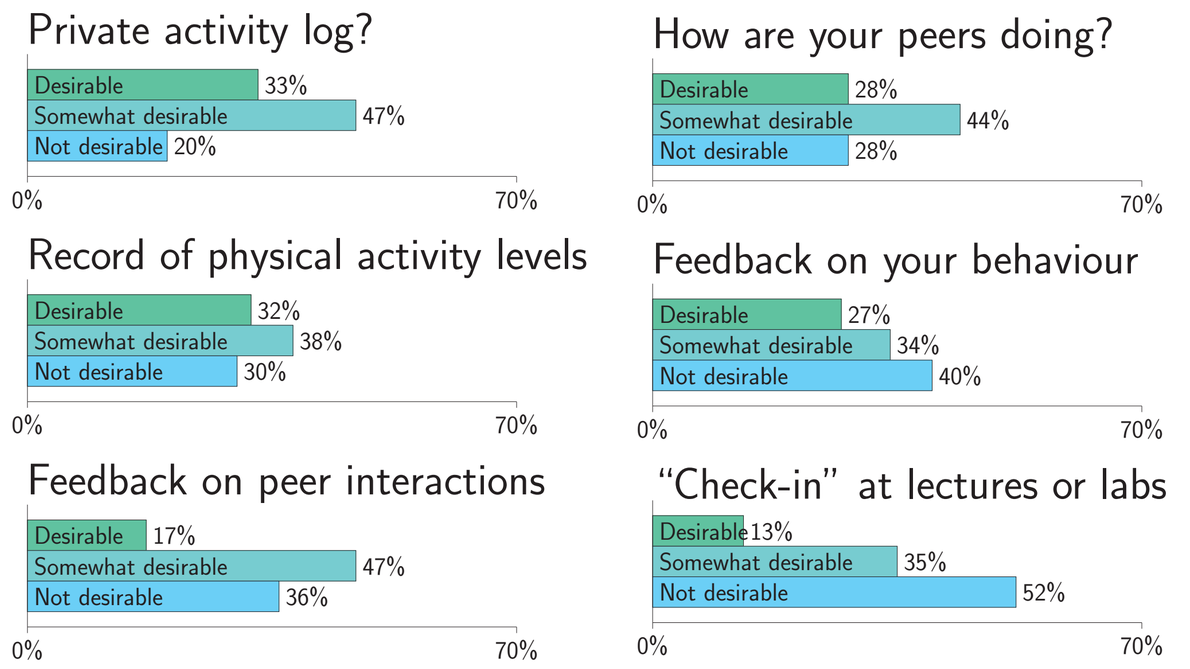
[1] "UBhave: ubiquitous and social computing for positive behavior change" by Cambridge, Birmingham and Southampton (EPSRC(UK))

4. Survey

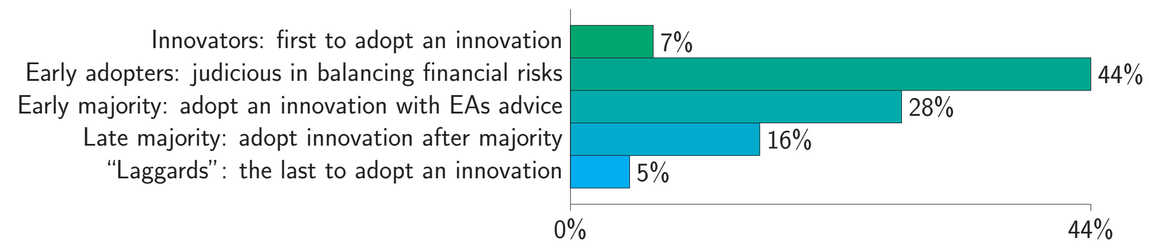
We are conducting a survey exploring the current use of smartphones by Higher Education students as well as establishing acceptability of a future application. Preliminary results[2] indicate that participants, despite actively using smartphones in their daily lives, are hesitant on allowing these devices to track their behaviour and whether such feedback is desirable. On one hand, participants report their *use of a smartphone* for the following activities:



On the other hand, this is how desirable they find the following *features* of a future smartphone application:



However, not all respondents have the same attitude towards *adopting innovation*, as they claim identification with the following groups[3]:



[2] Data from 143 participants as of the 6th September 2013. Survey closes on the 18 October.
[3] Categorisation based on Rogers (1962) *Diffusion of Innovations*.

5. Want more?

Take part! Go to goo.gl/ZfC1ct
You must be over 18 and a student in Higher Education.
Ethics reference: ERGO/FoPSE/7447.

Full paper including references. Also available in the Adjunct Proceedings of UbiComp 2013.

agw106@ecs.soton.ac.uk
Electronics and Computer Science
University of Southampton