Through a black mirror, palely

The perceptions, realities and possibilities of the digital learner

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Mirror, mirror...

The "black mirror" ... is the one you'll find on every wall, on every desk, in the palm of every hand: the cold, shiny screen of a TV, a monitor, a smartphone. (Brooker, 2011)
1. What technologies, if any, do you think your students are currently using to support their academic studies?

2. Do you know what technologies your students are actually using to support their academic studies?

3. How do you determine what is an “appropriate use of technology” with your students?
Fit the Zeroth: Statistics...

...the practice or science of collecting and analysing numerical data in large quantities, especially for the purpose of inferring proportions in a whole from those in a representative sample. (OED, 2012)
UK Policy: A “techno-romance”?

National Strategy for Information Technology (1980)
Microelectronics in Education Programme (MEP) (1981-1985) - £23m
Micros for Schools Scheme (1981-1984) - £16m
Training & Vocational Education Initiative (TVEI) (1983-1997) - £1bn
New Technology for Better Schools (1987)
IT in Schools Strategy (1987-1993) - £90m
Teaching & Learning Technology Programme (TLTP) (1992-1996) - £75m
Superhighways for Education (1995)
Connecting the Learning Society (1997)
New Opportunities Funding (NOF) (1999-2002) - £300m
National Grid for Learning (NGfL) (1998-2006) - £1.6bn
Higher Ambitions (2010)
Higher Education: Students at the Heart of the System (2011)

Estimated £6bn since 1997

E-Learning is important because it can contribute to all the government's objectives for education - to raising standards, improving quality, removing barriers to learning, and, ultimately, ensuring that every learner achieves their full potential. (DfES, 2003)
At the end of 2011, there were 6 billion mobile cellular subscriptions globally.\(^1\)

**6 BILLION**

That means 87% of the world’s population have mobile phones!\(^2\)

22% of these mobile subscribers access the web at least monthly.\(^2\)

By 2014, mobile internet usage is predicted to take over desktop internet usage.\(^3\)

34% USA

28% EUROPE

34% of Americans and 28% of Europeans use their mobile devices to access applications.\(^4\)

GROWING 7-9%

Across regions, mobile browsing and application usage is growing at a rate of 7-9% per year.\(^4\)

30 BILLION DOWNLOADS

At the end of 2011, nearly 30 billion apps had been downloaded worldwide.\(^5\)

The average smartphone user in the US has 22 mobile apps downloaded.\(^6\)

22 APPS
The mobile web receives 217 new users.

YouTube users upload 48 hours of new video.

Email users send 204,166,667 messages.

Google receives over 2,000,000 search queries.

Facebook users share 684,478 pieces of content.

Consumers spend $272,070 on web shopping.

Foursquare users perform 2,083 check-ins.

Flickr users add 3,125 new photos.

Instagram users share 3,600 new photos.

Tumblr blog owners publish 27,778 new posts.

Brands & organizations on Facebook receive 34,722 “likes.”

Apple receives about 47,000 app downloads.

Every minute of the day.

Fit the First: Perception...

…the way in which something is regarded, understood, or interpreted. (OED, 2012)
Rise of the...

- born after 1982
- have grown up with digital technology
- prefer visual information
- are social and prefer to work collaboratively
- are able to multi-task
- have zero-tolerance for slow access to information
- suggests that their brains have physically changed
  - are able to think and process information differently
  - have hypertext-like minds
  - cannot tolerate step-by-step instruction

The Digital Learner

Constantly *connected* to information and each other, students don’t just consume information. They create - and re-create - it. With a *do-it-yourself, open source approach* to materials, students often take existing material, add their own touches, and republish it. Bypassing traditional authority channels, *self-publishing - in print, image, video, or audio - is common.* (Lorenzo, Oblinger & Dziuban, 2006)
<table>
<thead>
<tr>
<th>Social Software Category</th>
<th>Examples</th>
<th>Pedagogical Applications</th>
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<tr>
<td><strong>Multi-User Online Environments</strong></td>
<td><em>Second Life</em>; <em>World of Warcraft</em>; <em>Everquest</em></td>
<td>Simulation; Role Play; Visualisation; Collaboration</td>
</tr>
<tr>
<td><strong>Discourse Facilitation Systems</strong></td>
<td>Instant Messaging (<em>Windows Live Chat</em>; <em>Yahoo Chat</em>; <em>Google Chat</em>; <em>ICQ</em>; <em>Skype</em>); e-Mail; Discussion Board</td>
<td>Communication (Verbal &amp; Written); Socialisation; Peer-to-Peer Exchange and Feedback</td>
</tr>
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<td><strong>Content Management Systems</strong></td>
<td>Blogs; Wikis</td>
<td>Creation and dissemination of ideas; Collaborating writing; Publishing; Peer Review</td>
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<td><strong>Peer-to-Peer File Sharing Systems</strong></td>
<td><em>Dropbox</em>; <em>SkyDrive</em>; <em>Kazaa</em>; <em>BitTorrent</em>; <em>Napster</em></td>
<td>Sharing; Review; Collaboration</td>
</tr>
<tr>
<td><strong>Virtual Learning Environments</strong></td>
<td><em>Blackboard</em>; <em>Moodle</em>; <em>Sakai</em></td>
<td>Communication; Groupwork; Distribution and Sharing of resources</td>
</tr>
<tr>
<td><strong>Relationship Management Systems</strong></td>
<td><em>Facebook</em>; <em>MySpace</em>; <em>Bebo</em>; <em>Twitter</em></td>
<td>Establishing and maintaining social contacts; Connectivity; Spaces for Communication; Creation of Identity</td>
</tr>
<tr>
<td><strong>Syndication Systems</strong></td>
<td>List-Servs; RSS Aggregators</td>
<td>Multi-modal access to information; Maintaining links with new content; Filtering and customised display of content</td>
</tr>
<tr>
<td><strong>Distributed Classification Systems</strong> (&quot;Folksonomies&quot;)</td>
<td>Social Bookmarking (<em>Delicious</em>; <em>Diigo</em>; <em>Furl</em>); Media Sharing (<em>Flickr</em>; <em>YouTube</em>)</td>
<td>Tagging/Categorising resources; Maintaining sharable collections of resources; Reuse of resources; Development and joint exploration of common interests</td>
</tr>
</tbody>
</table>

The exploitation of ubiquitous handheld technologies, together with wireless and mobile phone networks, to facilitate, support, enhance and extend the reach of teaching and learning. (MoLeNET Programme, 2008)
An underworld of communication

Digital learners frequently maintain an underworld of communication and networking that runs parallel to their official studies and sidesteps channels of communication set up by tutors ...

This private world of personally selected technologies is largely used to gain support from peers. (JISC, 2007)
Fit the Second: **Reality**...

...the state of things as they actually exist, as opposed to an idealistic or notional idea of them. (OED, 2012)
Generation is **NOT** the issue!

Proponents arguing that education must change dramatically to cater for the needs of these digital natives have sparked an academic form of a ‘moral panic’ using extreme arguments that have lacked empirical evidence. (Bennett, Maton & Kervin, 2008)

...there is a very real danger that if these rhetorical stories continue to be taken at face value and conflated with the realities of young people’s technology use, then they can only provide an ill-informed and unrealistic basis for the formation of effective policymaking and practice. (Selwyn, 2009)

The students ... make use of a limited set of technologies based on three key issues: **familiarity, cost, and immediacy** ... Our study found that the use of some ICTs was ubiquitous (e.g., mobile phones, email, and instant messaging) we did not find any evidence to support claims that digital literacy, connectedness, a need for immediacy, and a preference for experiential learning were characteristics of a particular generation of learners. (Bullen, Morgan & Qayyum, 2011)
Student Expectations

- Students see face-to-face interaction with a lecturer is a “back bone” to learning;
- Students value authority figures over the Internet for information;
- Students want their tutors to be fully engaged with technology-enhanced learning;
- Students are unable to make the connection on how technology can help them learn;
- Students are not interested in technology for “own sake”, only as a means to an end;
- Students want clear explanations about technologies that they are expected to use;
- Technology is part of students’ lives: the term “e-learning” does not mean much to them;
- The use of technology should be based on needs and be education driven not technology or product driven.

(Ipsos MORI, 2007 & 2008)
Source: Ipsos MORI (2008)
Similarly, in considering the educational affordances of Web 2.0, social software, and other ICT tools for learning, it is necessary to acknowledge that these affordances are ultimately dependent on the views and perceptions of users (learners). In other words, how learners perceive the possibilities of the tools and their “ideal” use(s) in the context of their learning may be markedly different to the ideas and intentions of the educators and educational technologists who design them. (McLoughlin & Lee, 2008)
The “Canterbury Scene”

- N=138
- Gender: Female (75%) | Male (25%)
- Age: Under 24 (88%) | Over 25 (12%)
- Level of Study: Level 5 (28%) | Level 6 (72%)
- Course: Psychology (82%) | O.T. (18%)
- English as 1st Language: Yes (92%) | No (8%)

Materials that students want to access on their hand-held mobile device

- Other
- Access to VLE
- Other Readings
- Textbooks
- Course Calendar
- Course-based Apps
- Video Lecture
- Audio Lecture
- Podcasts

- 96% own a mobile device
- 88% own a smartphone
- 49% supports learning
The “Canterbury Scene”: Apps
Digital Literacy

... digital literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesise digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action, and to reflect upon this process.
(Martin & Grudziecki, 2006)

The rise of ‘digital literacy’ as a concept, loose as it is, has also exerted considerable pressure on schools and teachers to change fundamental aspects of their practice and schooling.
(Nut, 2010)

JISC £1.5m
Developing Digital Literacies Programme (2011-2013)

Image: http://www.flickr.com/photos/skene/3874882162/
Fit the Third: Possibilities...

...unspecified qualities of a promising nature; potential.
(OED, 2012)
On the horizon...

#1 Mobile Apps

Mobile apps are the **fastest growing dimension** of the mobile space in higher education right now, with impacts on virtually every aspect of informal life, and increasingly, every discipline in the university ...

Higher Education Institutions are now designing apps tailored to educational and research needs across the curriculum (The NMC Horizon Report - HE Edition, 2012)
On the horizon...

#2 Tablet Computing

Tablet computing presents new opportunities to enhance learning experiences in ways simply not possible with other devices ...

Higher Education Institutions are seeing them not just as an affordable solution for one-to-one learning, but also as a feature-rich tool for field and lab work, often times replacing far more expensive and cumbersome devices and equipment. (The NMC Horizon Report - HE Edition, 2012)

Image: http://www.flickr.com/photos/jaredearle/4675262184/
Augmented reality refers to the layering of information over a view or representation of the normal world, offering users the ability to access place-based information in ways that are compellingly intuitive.

Augmented reality brings a significant potential to supplement information delivered via computers, mobile devices, video, and even the printed book. (The NMC Horizon Report - HE Edition, 2011)
On the horizon...

#4 Personal Learning Environments

Personal learning environments (PLEs) refer to the personal collections of tools and resources a person assembles to support their own learning — both formal and informal. The conceptual basis for PLEs has shifted significantly in the last year, as smartphones, tablets, and apps have begun to emerge as a compelling alternative to browser based PLEs and e-portfolios. (The NMC Horizon Report – K-12 Edition, 2012)
MOOCs are an attempt to create open access online courses that provide no constraints on class size. In contrast to open courseware, MOOCs are self-managed by groups of learners and teachers and run over a defined period of time, typically 6-12 weeks. MOOCs are open to all, have no formal entry requirements, and can provide a framework for ‘badge’ based recognition...

MOOCs can be purely informal offerings, or opportunities for independent learning aligned to a formal course, or semi-formal courses offered by an institution for informal certification.

(Innovating Pedagogy: OU Report 1, 2012)
Over the horizon...?
Questions?

Thank You
For further information...

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