The Open University

Distance Education and Innovations in Teaching and Learning

Leonor Barroca, The Open University

What I will talk about

- Introduction to Distance Education (DE)
- The Open University (OU), UK
- Research and teaching at the OU
- Changes to DE – Technologies
- Changes to DE – Pedagogies
- The “open” movement

What is Distance Education?

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- “Educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner” (Perraton, 1982).
- It has existed for a long time, such as correspondence education.
- It is now a major player at all levels of education.

What is the motivation for distance education?

- Economic motivation (scale)
- Flexibility
- Increase in social demand for education

The Open University, UK

The Open University in the UK

The Open University

- The Open University (OU) was the world's first successful entirely at a distance teaching university.
- Founded on the belief that communications technology could bring high quality degree-level learning to people who had not had the opportunity to attend traditional campus universities.
- In 1969 the first vice-chancellor of the OU is appointed; the first students (25000) start in 1971.
- Lord Briggs (now 91) , OU chancellor from 1978 to 1994 calls the OU «the most innovative and radical of all new university institutions»

The OU's facts

- The OU is the biggest university in the UK with:
  - more than 260,000 students
  - close to 7,000 tutors
  - more than 1,200 full-time academic staff
  - more than 3,500 support and administrative staff
- more than 1.8 million people have taken an OU course

The OU's mission

- «The Open University is open to people, places, methods and ideas»
- Widening participation – a strong agenda to extend educational opportunities and achieve social justice by providing high-quality university education to all who wish to realise their ambitions and fulfil their potential.

Queen's Anniversary Prize for its teacher education project, TESSA, which now extends across nine African countries

OU's experience

- Open to all
  - no formal entry requirements
  - support to students with disabilities
  - reaching out to under-represented groups
- Consistently voted by our students into the top five universities for student satisfaction, topping the chart several times.
- In 2013 the OU achieved a satisfaction rating of 92 per cent.
- Partnership with the BBC for over 40 years, co-produces up to 25 TV and radio series a year with the BBC

The OU's Teaching and Learning

- Supported Open Learning
  - support from a tutor or online forum to help with module material, activities and assignments;
  - student advisers and study facilities in their own region; and,
  - contact with other students at tutorials, day schools or through online conferencing, online social networks, informal study groups, and events.

Course Production at the OU

- Course team:
  - Academics
  - External academic adviser
  - Industrial adviser
  - Educational technologist
  - Manager
  - Technical support
  - Library

Supporting Learning and Teaching

The Support for Learning and Teaching site was developed specifically to support staff working on the production and presentation of OU modules, to make it easy for you to explore how Library Services can support you during the production and presentation of your module or programme.

Through this site you can explore how Library Services can support you in key areas such as:

- **Finding the right content**
  - Sub-sections focus on particular content types: Library licensed resources, OU teaching materials, Open Educational Resources
- **Managing content**
  - Sub-sections focus on managing links and references, accessibility and copyright
- **Developing students' digital and information literacy skills**
  - Sub-sections focus on integrating information literacy into modules, employability and benchmarking/competency statements
- **Learning Design**
  - This section shows how digital information literacy skills and Library Services found content can be incorporated into the different learning design views
- **Stage-gate (SG)**
  - This section identifies Library Services involvement in the new stage gate process including the Investment Case, Qualification Specification, Full Specification and Production and Qualification Life
- **Library Services case studies**
  - Case studies are used throughout the site to give examples of current or potential uses of resources or services. Individual case studies can be accessed directly from the relevant pages or can be seen as an entire collection from this page.

Each Faculty has a team of dedicated Learning and Teaching Librarians which can advise Module Teams on the use of online resources and about many different aspects of integrating digital and information literacies.

More detailed information about the support available to OU staff can be found on the Support to Learning and Teaching intranet site.

Monday, 20 May 2013 — Sam Dick

Course Production (Design)

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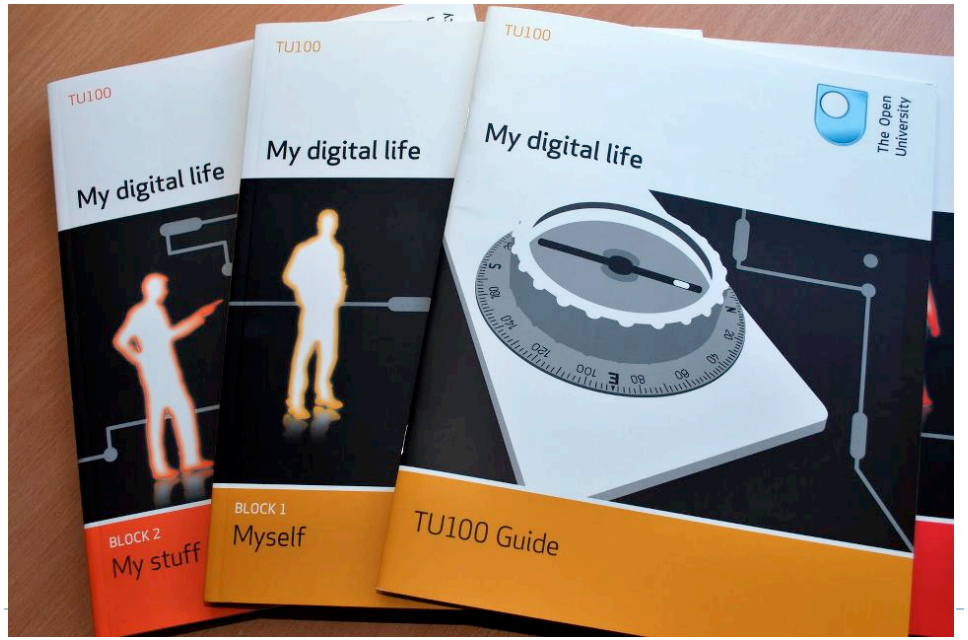
- Skill development
- Learning outcomes
- Assessment
- Supporting technologies
- Different perspectives (curriculum, pedagogical, design, professional, rights, students' needs…)

Course Production (Collaborative writing)

- Team work
- Critical readers
- Academic editors
- Several drafts are commented on



Course Production (Testing)

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- Developmental testing – testing before launch (QA)
  - Students – to uncover difficulties
  - Specialists – to provide feedback
- Assess workload
- Assess student engagement
- Assess structure

Presentation at the OU

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- Module life
- Presentation patterns
- Global presentation
- Examination and Assessment Board

Research at the OU

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- Interdisciplinary Research Centres
  - Citizenship, Identities and Governance
  - Computing
  - Education and Educational Technology
  - Physical and Environmental Sciences
  - Geographical and Environmemtal concerns
  - Social and Economic Research on Innovation in Genomics
  - Socio-cultural change
- Institute of Educational Technology
- Knowledge Media Institute

Research at the OU (cont)

- *Open Research Online* – repository of research publications and other research outputs.
- In top third UK higher education institutions in the Research Assessment Exercise 2008
- Innovation in teaching and learning driven by the IET and KMI

Research and scholarship informs course development

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- Student analytics – data, surveys, modelling and strategic analysis (effectiveness of module design)
- Quality enhancement and design –learning design tools developed for OU courses
- Accessibility and usability
- Learning in an open world
- Innovating pedagogy
- Learning Analytics
- Future internet, knowledge mngt, semantic web, social software, …

How is Distance Education changing?

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- Two great triggers for change:
  - Technology (Virtual microscopes, online tutorials, …)
  - Innovative pedagogies

Technologies

Web 2.0 tools	Examples of application
VLEs, e.g. Moodle and Elluminate	Act as the main gateway of interaction between institutions and students.
Wikis and collaborative editing tools, e.g. wikis in Moodle.	Support reflection, and collaboration; they can help students with teamwork, and in developing academic writing skills.
Blogs, e.g. Thoughts on software and systems engineering and Serendipity	Support teachers and groups to organize and disseminate knowledge in a more interactive and lively way than of what was previously done with personal web pages.
Social bookmarking, e.g. BibSonomy and delicious	Support literature review, research groups, and the writing of final year projects and theses.
Instant messaging, e.g. Skype chat, Google talk, Messenger, and Twitter	Support supervision and communication with students and amongst students.
Social networks, Facebook, Google+, Cloudworks	Support student integration.
Broadcast and Media sharing, e.g. Youtube, Flickr and Slideshare	Search for additional data, and informal knowledge.
Virtual world, e.g. Second life	Provide a purpose-built virtual campus for students.
Games	Commonly used for professional training.
eBooks	Interacting with, and adapting dynamic shared books

Technologies to watch

- Short term to adoption (1yr or less)
  - MOOCs
  - Tablets
- Medium term (2 to 3 yrs)
  - Games and gamification
  - Learning analytics
- Long term (4 to 5 yrs)
  - 3D printing
  - Wearable technologies

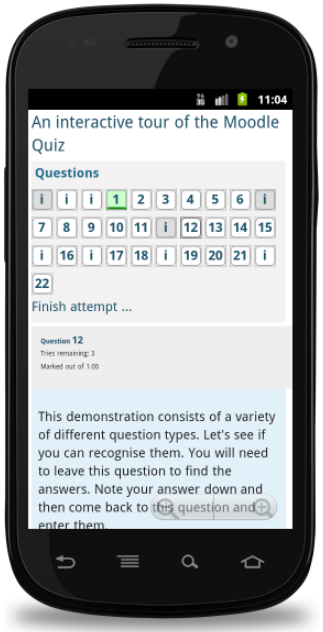
NMC Horizon Report > 2013 Higher Education Edition

Technologies at the OU

- OU VLE – own version of Moodle
  - Core – content, calendar, messages, course-related resources
  - Interactive Moodle tools – wikis, blogs, forums, quizzes
  - Non-Moodle tools – Elluminate, etc
- Google Apps

Technologies at the OU (cont.)

- Mobile VLE
- e-Assessment
- Second Life – to support research communities



Technologies at the OU (cont.)

- ebooks – publication in digital form that can be read offline or downloaded as a discrete entity.
- itunes U
- The OU is one of the first universities worldwide to make ebooks available on iTunes U

Technologies in a first level module (TU100)

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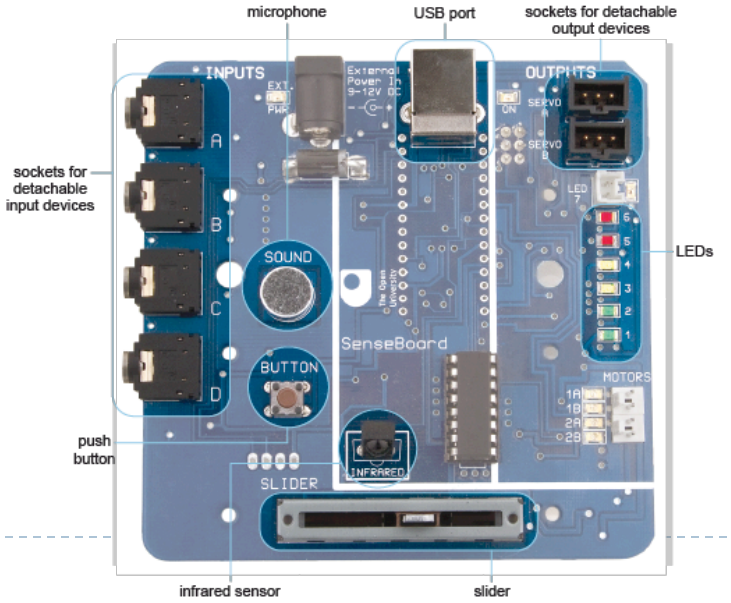
- "My Digital Life", level 1 module, ½ FT-year study, over 5000 students
- Introduction to computing, programming, social implications
- SenseBoard – programmable device with built-in input/output and sensors (based on the Arduino microcontroller)



Technologies in a first level module (TU100) (cont)

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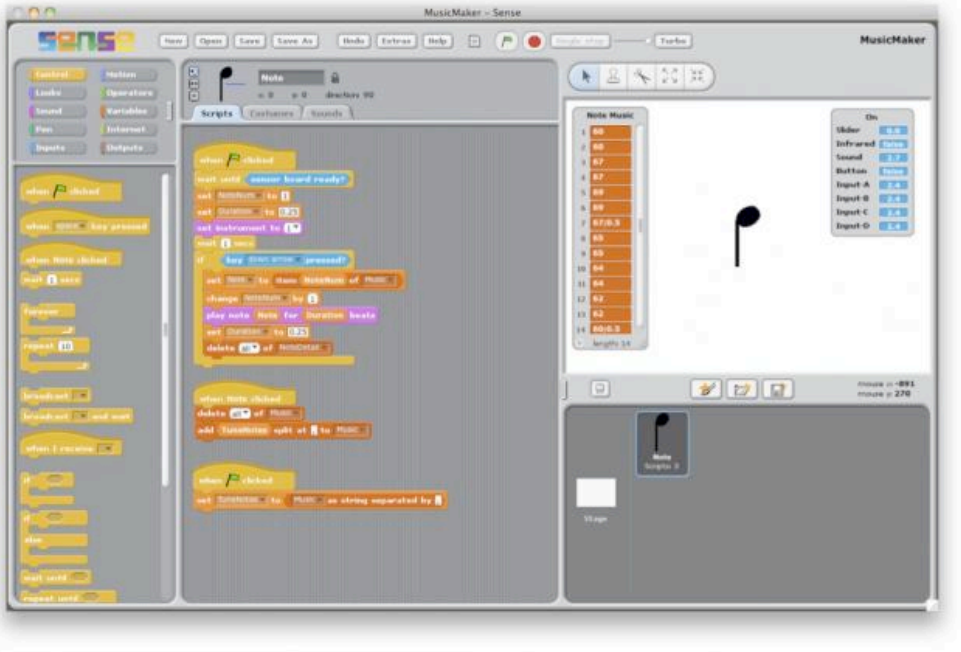
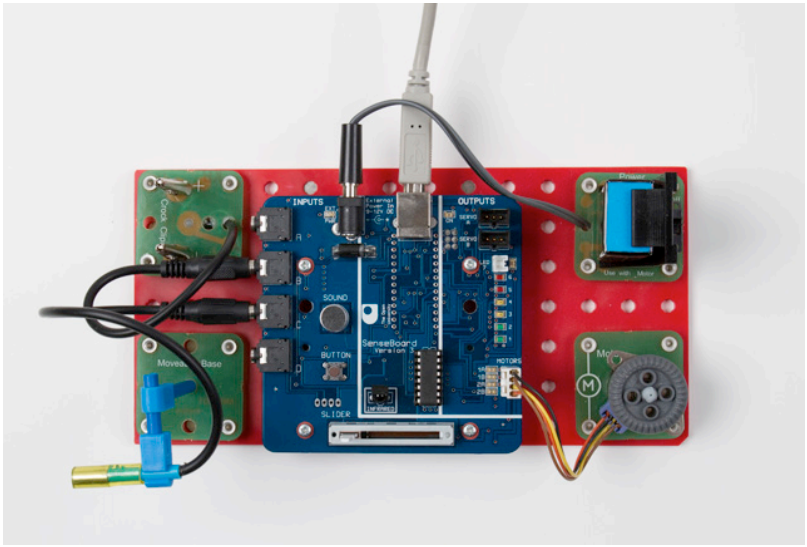
- Sense (programming env. extending Scratch)
- Students projects (e.g building a weather clock that reads feeds from a RSS feed; a wherabouts clock)





Pedagogies

- New characteristics of learning and supporting technologies (convergence)

New Learning	New Technology
Personalised	Personal
Learner centred	User centred
Situated	Mobile
Collaborative	Networked
Ubiquitous	Ubiquitous
Lifelong	Durable

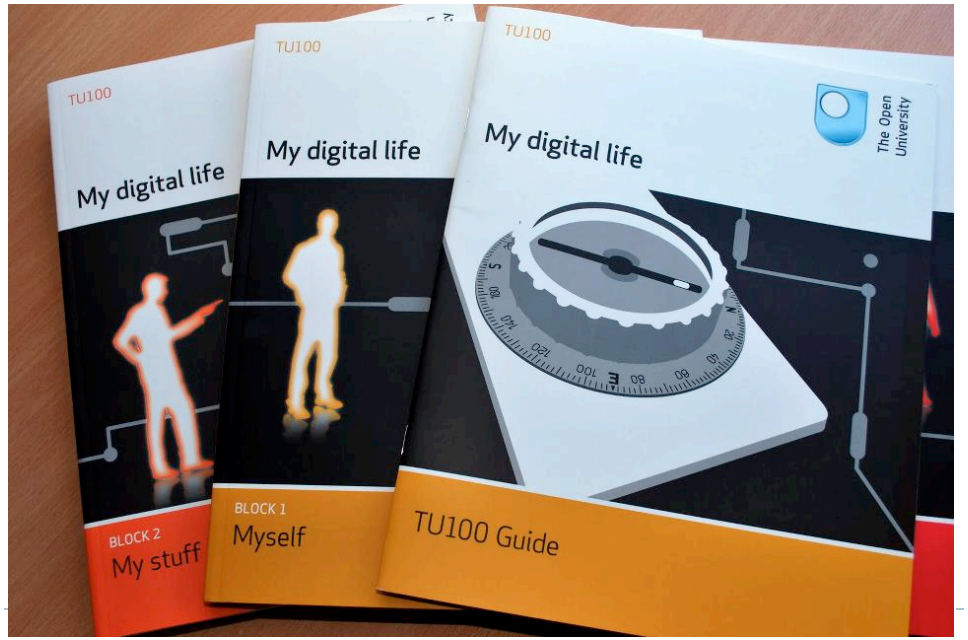
Sharples, Taylor, Vavoula 2007

Pedagogies at the OU

- Collaborative work – using wikis and forums
- Reflective work – using wikis and blogs
- Creativity – using the Web to engage in social interaction (e.g. Facebook, Twitter)
- Online communities – connecting beginners with experts (e.g. iSpot, sharing images and identifying species correclty)

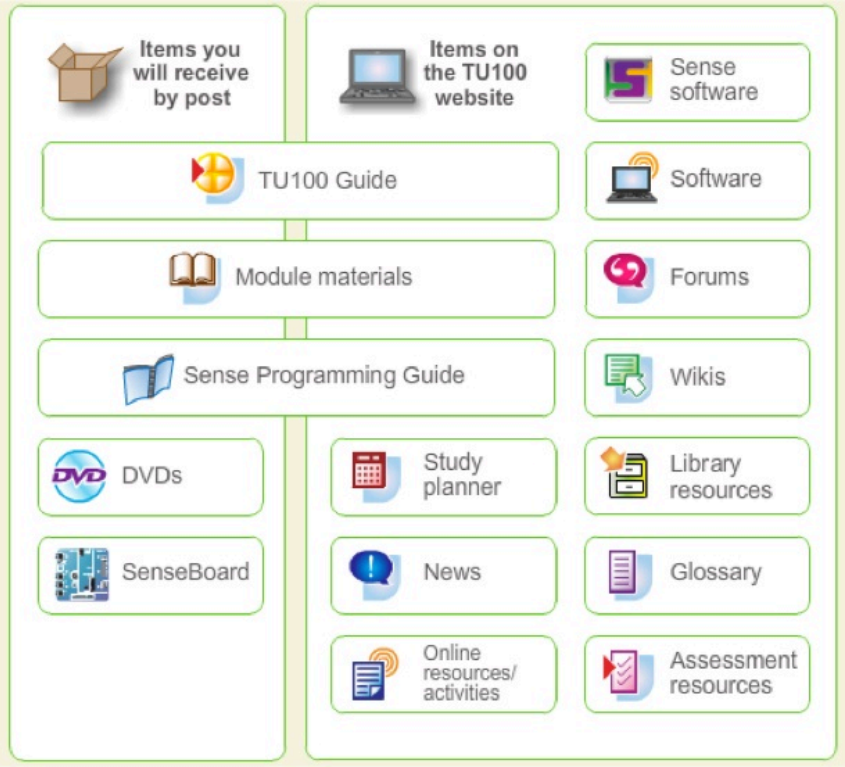
Pedagogies in a first level module (TU100)

- Designed to excite, encourage, reassure learners to explore programming through playing
- Study materials: printed documents, online materials, online conferencing, quality videos, other resources (library, technical support, employability advice)



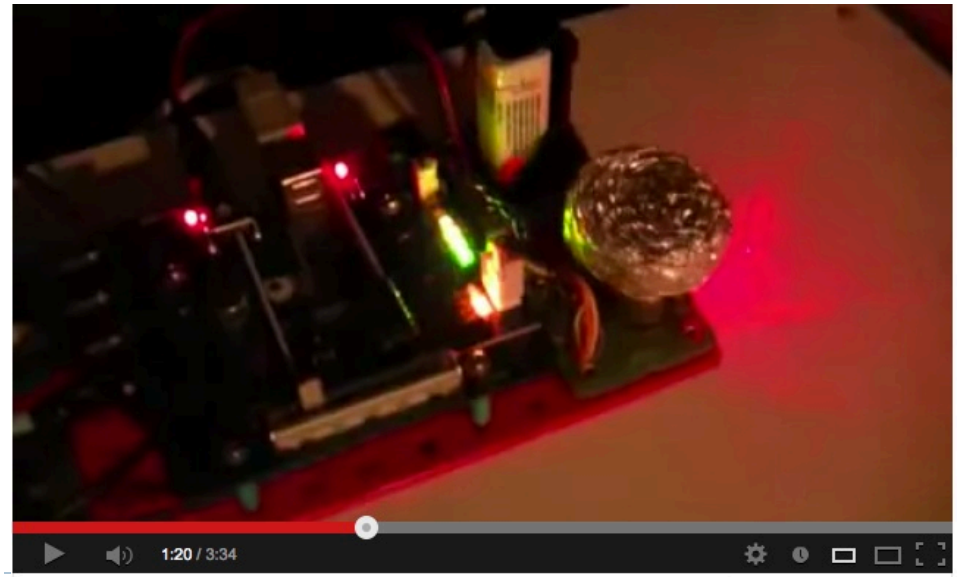
Pedagogies in a first level module (TU100) (cont)

- Google Apps as part of the teaching process
  - Google *Sites*
  - Google *Docs*
  - *iGoogle*
  - Google *Talk*



Pedagogies in a first level module (TU100)

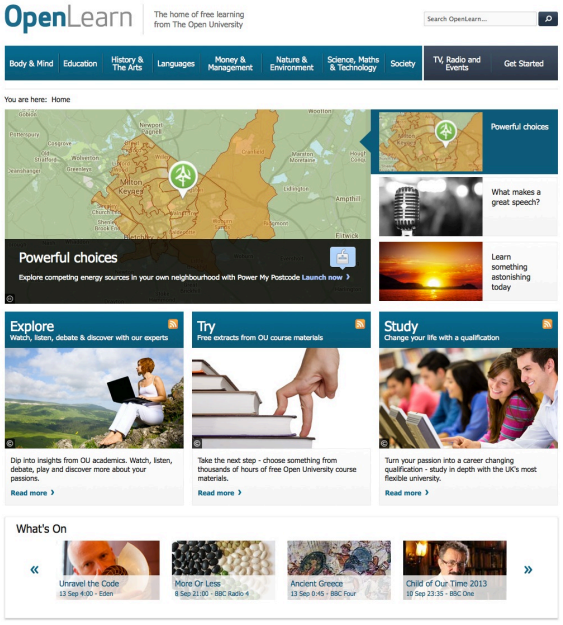
- Activities to reinforce learning and allow students with different abilities to follow different paths (with or without scaffolding)
- Enthusiasm of students for the use of technologies (students developing own projects with Sense and making them available)



TTU100 Sense Board, VU Meter Laser display TU100 Sense Board

Open source learning in a first level module (TU100)

- Sense is freely available, as an open-source project
- SenseBoard spec also freely availalble
- Videos available on iTunesU (http://open.edu/itunes/) and YouTube (http://www.youtube.com/user/TheOpenUniversity)
- Some learning materials also available in OpenLearn (http://openlearn.open.ac.uk/)



Innovating in teaching and learning

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- MOOCs – courses with a very large distributed audience, with materials also distributed as web resources, and that is participatory (large impact, short timescale)
- Badges – Accreditation of non-formal learning (high impact, medium timescale)

- Learning analytics – collection and analysis of large data sets on learners and their contexts (medium/high, medium)
- Seamless learning – connecting learning experiences across the contexts of location, time, device and social setting (medium/high, medium)
- Crowd learning – learning from the expertise and opinions of others through online shared spaces (high, medium)

(Mike Sharples et al, Innovating Pedgagy 2013)

Innovating in teaching and learning

- Digital scholarship – open access publishing, open science, digital humanities, use of social media by academics, digital and citizen science (medium/high, short)
- Geo-learning – context-aware educational resources (medium, medium)
- Learning from gaming (high, medium)
- Maker culture – learning by making (high, medium)
- Citizen inquiry/science (medium, long)

(Mike Sharples, Innovating Pedgagy 2013)

BBC Sign in News Sport Weather iPlayer TV

NEWS TECHNOLOGY

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31 January 2013 Last updated at 11:48

Share

Mosaic QR codes boost tourism in Rio de Janeiro

Officials in Rio de Janeiro have begun embedding quick response (QR) codes into pavements to guide tourists around the city.

The black and white codes are being built with the same stones used to decorate the pavements with more traditional mosaic designs.

The city plans to install 30 of the codes at beaches and historic sites.

The codes offer tourists more information about the most visited spots such as Ipanema beach.

QR codes were first designed for the automotive industry in Japan in 1994 but in recent years have become popular as marketing tools.

The codes are already attracting users

Open learning/education

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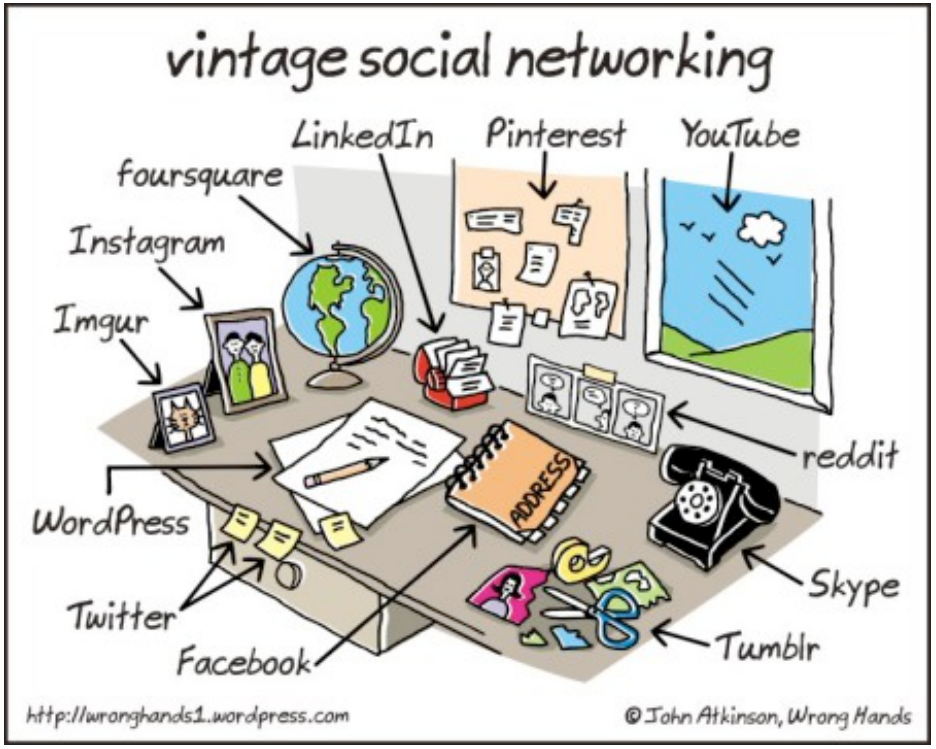
- Open Learning then “an organised educational activity, based on the use of teaching materials, in which constraints on study are minimised either in terms of access, or of time and place, methods of study, or any combination of these” Perraton 1997
- Open Education now…taking advantage of technological advances to support:
  - social learning that is collaborative and participative within a community
  - free access to learning

Towards open education

- Globalisation and internationalisation of higher education
- Great demands for higher education
- Increased numbers of lifelong learners
- Changes needed to cost, affordability, and economic models for higher education
- Technology has advanced to make it easy

The ‘open’ movement in education

- Open Educational Resources (OERs)
- MOOCs



Open Educational Resources (OERs)

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- OERs are “teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. Open licensing is built within the existing framework of intellectual property rights as defined by relevant international conventions and respects the authorship of the work” Unesco 2002

What motivates people to generate OERs?

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- Contribute to the way forward for higher education
- Acknowledge that technology-enhanced learning is the way forward to the formation of independent learners
- Believe in the open movement
- In f2f it allows teachers to concentrate on more specific tasks, individual support, etc
- Students have a clear idea upfront about what they are going to study

Positive assumptions about OERs

- Can improve students performance/satisfaction
- Widen participation in education
- Can help educators reflect on their practice
- Can help at-risk learners
- Can support informal learners in moving to formal study
- May encourage institutions to change their policies

(http://oerresearchhub.org/)

How can the use of OERs be evaluated?

- Through performance in assessemt
- Student satisfaction
- Efficiency in training
- Improved individual support

How can OERs be adopted by others? REUSE

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- Full adoption
- Adoption with customization by educators
- Adoption for self-study by individual learners

OER take-up

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- OERs are still not being widely used
- Reasons
  - Lack of time, reseach vs teaching, no rewards, no support
- Could take-up be helped by learning design? (Gráinne Conole 2012)
  - Design could help with repurposing and sharing
  - BUT, may be complex, time consuming, formulaic
- We have learnt in software engineering that reuse can be helped by good design…can the same be true of educational resources?

OER take-up (cont)

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- Can it be improved with collaborative production?
- HEIs are not traditionally open in sharing teaching practices
  - OERs may help in collaborative development
  - Sharing of cost and effort
  - Enrich OERs
  - Requires clear leadership, careful timetabling, shared understanding of culture and language (A. Lane 2012)

Open Educational Resources (OERs)

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Recommendations

- Foster awareness and use
- Facilitate enabling environments to bridge digital divide
- Reinforce strategies and policies for production and use
- Promote open licensing fwks
- Support capacity building for the sustainable development
- Foster alliances
- Encourage development and adoption
- Encourage research
- Facilitate finding, retrieving and sharing
- Encourage open licensing of materials produced with public funds

Paris 2012 Declaration

United Nations
Educational, Scientific and
Cultural Organization

MOOCs

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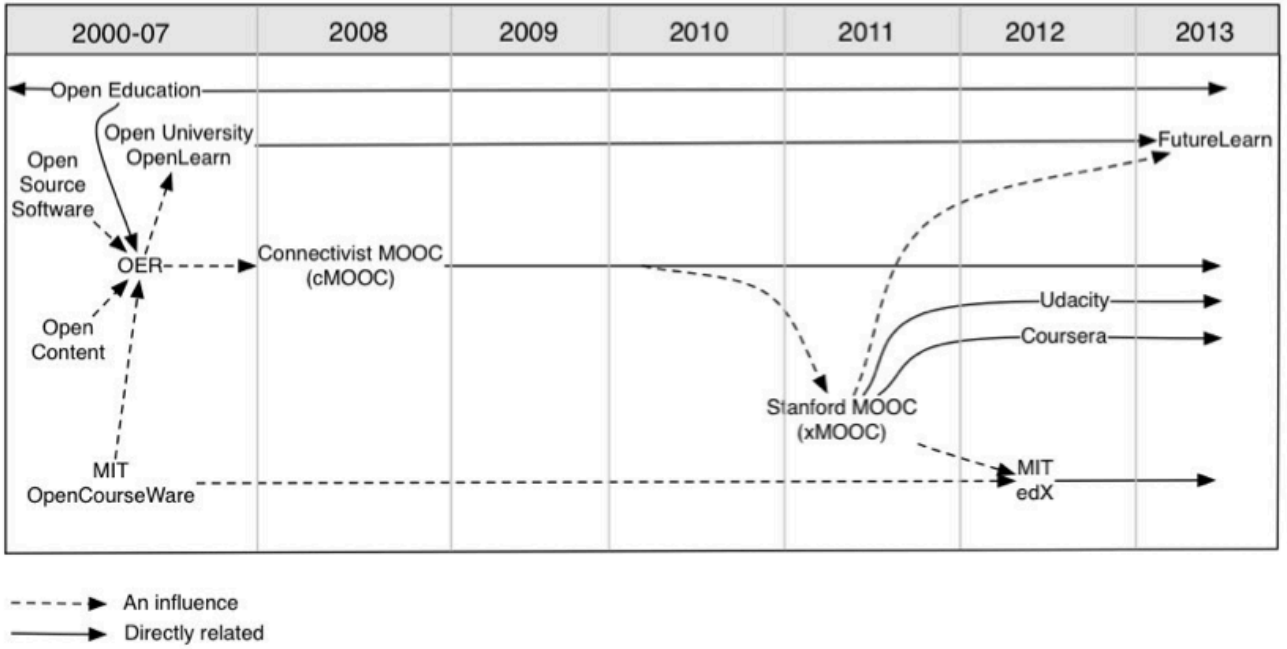
- are everywhere…
- In August, 4 months after opening, Coursera registered 1 million students from nearly 200 countries
- Coursera, edX, Udacity, FutureLearn
- …but, completion rates, increased digital divide, student support!!!

MOOCs

- Original aims:
  - Open access
  - Scalability



(MOOCs and Open Education, JISC 2013)

MOOCs motivations

- For institutions:
  - experimentation with online learning ('digital footprint' of learners)
  - brand, reputation
  - move students from informal to formal learning (bums on seats that stay…retention)
  - not missing the boat
- For learners (survey from Duke University 2013):
  - support lifelong learning, gaining understanding on subject
  - fun, entertainment, social experience, intellectual stimulation
  - convenience and barriers to traditional education
  - experience and explore online education

The interesting side of MOOCs

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- What is my stance on openness?
- How can curriculum be more flexible?
- Are there smaller achievements we can use for motivation?
- How can we bridge informal to formal learning?
- What technologies can I use?
- Can we build more automatic support to help students?
- People are interested in elearning

(Martin Weller, slidehare.net, Jul 2013)

The challenges of MOOCs

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- Economically sustainable?
- Pedagogy
  - Many followed a broadcast educational model
  - Are there new pedagogies needed?
- Quality assurance, retention and completion rates
- Assessment and credit

FutureLearn

- 1st UK-led provider of MOOCs
- Owned by the OU, with top UK and international universities and other cultural institutions
- Social interaction built-in as a key learning tool
- Promoting learning through conversations around learning materials
- Designed to work on smart phones, tablets, desktops

Issues and debate

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- Are universities going to change (e.g. awarding credit to education outside its walls)?
- Are students going to find alternative routes to learning?
- Can education be personalised (PLEs vs. VLEs)?
- Are educators going to be recognised for their alternative educational contributions?
- Open and free education – what are the pedagogical implications?

Issues and debate (cont)

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- "McDonaldization of Higher Education", a one way transfer of education from north to south?
- Are cross-cultural issues in learning being taken into account?
- Engagement with, and learning from, different cultures vs universities as multinational broadcasting entities

Challenges

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- Will learners be willing to, and have the autonomy and expertise for, making choices and actively participating (as prosumers)?
- Frustrations of online collaboration (different levels of commitment, effort, responsibility, etc).
- Institutions need to adapt and policies to change.
- Are MOOCs really going to:
  - solve access to education?
  - be pedagogically innovative?

Future perspectives

- Lowering the cost of education and making it more widely available but with improved quality
- Diversifying offerings with specialised vocational training for non-university students
- Focusing on learning, not teaching; learning by doing, problem solving, team work, real world relevance, etc