Adopting more open practices for learning, teaching and research

Gráinne Conole

Innovate in university teaching thanks to Open Educational Resources

Geneva, 11th May 2017
Outline

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• Learning theories
• Peering into the future
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  – Open practices
• Learning Design
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<th>E-books and smart devices</th>
<th>Massive Open Online Courses</th>
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<td>80s</td>
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Disruptive innovation

• Challenging the established
  – Practices
  – Business models
  – Pedagogies

• Resulting in new practices

<table>
<thead>
<tr>
<th>Disruptive innovation</th>
<th>Replacing</th>
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<tbody>
<tr>
<td>Wikipedia</td>
<td>Encyclopedias</td>
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<td>Google Drive</td>
<td>Office software</td>
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<td>Word processing</td>
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<tr>
<td>Mobile phones</td>
<td>Land lines</td>
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<tr>
<td>OER/MOOCs</td>
<td>Course resources and courses</td>
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</tbody>
</table>
5 transformative technologies

• The web/WiFi
• Learning Management Systems (LMSs)
• Mobile devices
• OER/MOOCs
• Social media
Transformative characteristics

- Access to rich interactive resources
- Many ways to communicate and collaborate
- Instant access to knowledge
- Enable open practices
- Portable across devices and locations
Challenges

• **Web/Wifi**
  – Lack of connectivity
  – Online 24/7

• **LMS**
  – Institutionally focused
  – Not transferable post course

• **Mobile devices**
  – Battery life
  – Fragile
  – Web pages not rendered properly
Challenges

• OER/MOOCs
  – Finding relevant resources
  – Evaluating quality and relevance
  – Lack of support
  – High drop out rates
  – No formal recognition

• Social media
  – Confusing
  – Balance between white noise/relevance
Peering into the future....

- Artificial intelligence
- Cloud computing
- Augmented and virtual reality
- Learning Analytics and adaptive learning
- Affective computing
- Learning through social media
- Productive failure
- Learning from the crowd
- Learning through video games
- Formative analytics
- Learning for the future
A Glimpse into the Future of Learning

In the future...

These changes point the way toward a diverse learning ecosystem in which learning adapts to each child instead of each child trying to adapt to school.

For KnowledgeWorks' full forecast on the future of learning, see Recombinant Education: Regenerating the Learning Ecosystem knowledgeworks.org/strategic-foresight

https://storify.com/ProfKarim/new-culture-of-learning
An overview of learning theories

Learning theories can be grouped into:

- **Associative** (learning as activity via structured tasks)
- **Cognitive** (learning through understanding)
- **Situative** (learning as social practice)
- **Connectivist** (learning in a networked context)

Mayes and de Freitas, 2004
Siemens, 2004
Conole, 2010
So what is learning?

Thought by itself, however, moves nothing; what moves us is thought aiming at some goal and concerned with action (Aristotle)

Human learning... whole persons construct experiences of situation and transform them into knowledge, skills attitudes, values, emotions and the senses, and integrate the outcomes into their own biographies (Jarvis, 2004)

Knowledge is information already transformed: selected, analyzed, interpreted, integrated, articulated, tested evaluated’ (Laurillard, 1993)
Pedagogies of e-learning

**Associative**
Focus on individual learning through association and reinforcement

**Constructivist**
Building on prior knowledge, task-orientated

**Situative**
Learning through social interaction, learning in context

**Connectivist**
Learning in a networked environment

Experiential, problem-based, role play

Inquiry learning, resource-based

Reflective & dialogic learning, personalised learning
Learning Theory

http://hotel-project.eu/sites/default/files/Learning_Theory_v6_web/Learning%20Theory.html
Illustrative examples

- Two examples of how digital technologies can impact on practice:
  - The flipped classroom
  - Open practice
The flipped classroom

- Students engage with content before the class
  - Video, podcasts etc.
- Teacher poses questions about the content
- Classroom is student-centred and active

https://www.youtube.com/watch?v=26pxh_qMppE&feature=youtu.be
Why flip?

• Information transfer is not enough
  – Lack of student engagement
  – Not meeting future needs
  – Need to go beyond knowledge recall
  – Fosters active learning
The traditional classroom

• Teacher as gatekeeper, giving information, deciding what is important
• Content delivered during class
• Students assimilate the learning outside of the class
• Students as content consumers
The flipped classroom

- Students view content before class
- Focus in class on active learning
- More student centred
- Teacher as facilitator
- Fosters student engagement
- Independent study plus face-to-face interaction
Benefits for the teacher

• Can see students at work interacting with others
• Frees time to help students during class
• Identify struggling students
• Provide more personalised attention
Benefits for the students

- Shift from passive consumer of information to active learning
- Can work at their own pace
- Have more control of learning whilst watch videos, can stop and re-watch or skim through
- More peer interaction
- More engaging and motivating
Pros and cons

**Pros**
- Students have more control
- Promotes student-centered learning and collaboration
- Content more accessible
- Easier for parents to see what’s going on
- More efficient

**Cons**
- Can create or exacerbate a digital divide
- Relies on preparation and trust
- Significant work on the front end
- Not teaching to improve standardised test scores
- Time in front of screens instead of people and places is increased
Open practices

• Digital technologies enable more open practices
• Increase of free resources and expertise - via Webinars, blogs, open repositories and journals, and social media
• Increasing importance of OER and MOOCs
OER

Teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others (UNESCO)

- Hundreds of high quality OER repositories
- Education as a fundamental human right
- Challenging formal education
- New business models emerging
- New ways to accredit informal and non-formal learning
- Useful links
  - IPTS report on open education
  - EFQUEL MOOC blogs
  - MOOC-IT
Integrating OER

- Assess the validity and reliability
- Determine placement in curriculum
- Check licensing
- Eliminate extraneous content
- Adapt to your context
- Remix with other educational materials
- Clear instructions on how the OER will be used
- Make pedagogy explicit
- Consider getting students to find and collate relevant OER
OER Case Study

- OER at the Open University UK
  - Research
    - OER hub conducts research on the impact of OER
  - Community
    - GO-GN develops a global community of OER PhD students
  - Content
    - OpenLearn releases thousands of hours of open licensed materials
  - International
    - TESSA and TESS-India use locally developed OER to aid teacher education
Open practices

• Enabled through digital technologies
• Educational practices that are concerned with and promote equity and openness
• Range of practices around create, use and management of OER
• Results in a change in practice
• Connectedness, trust and innovation
Pros and cons

Pros
• Reusing existing resources
• More efficient
• Recycling good practice
• Get students to find and collate resources
• Sharing of good practice
• Education for all

Cons
• Hard to find
• Pedagogy not explicit
• Lack of understanding of licensing
• Reluctant to use OER
• Teachers aren’t using and repurposing OER much
• Accreditation issues
MOOCs

• Massive Open Online Courses
• First CCK2008
• Rise of Udacity, EdX, Coursera etc.
• High drop out rates
• Issues around accreditation
• Challenging traditional educational offerings
Beyond cMOOCs or xMOOCs

**cMOOCs**
- Weekly centred
- Participant reflective spaces
- Social and networked participation
- Hashtag: #etmooc
- Use of a range of social media

**xMOOCs**
- Linear learning pathway
- Mainly text and video
- Formative feedback through MCQs
- Individually focused
## A taxonomy of MOOCs

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context</strong></td>
<td></td>
</tr>
<tr>
<td>Open</td>
<td>Degree to which the MOOC is open</td>
</tr>
<tr>
<td>Massive</td>
<td>How large the MOOC is</td>
</tr>
<tr>
<td>Diversity</td>
<td>The diversity of the learners</td>
</tr>
<tr>
<td><strong>Learning</strong></td>
<td></td>
</tr>
<tr>
<td>Use of multimedia</td>
<td>Extent of use of rich multimedia</td>
</tr>
<tr>
<td>Degree of communication</td>
<td>Amount of communication incorporated</td>
</tr>
<tr>
<td>Degree of collaboration</td>
<td>Amount of collaboration incorporated</td>
</tr>
<tr>
<td>Amount of reflection</td>
<td>Ways in which reflection is encouraged</td>
</tr>
<tr>
<td>Learning pathway</td>
<td>Degree to which the learning pathway is supported</td>
</tr>
<tr>
<td>Quality assurance</td>
<td>Degree of quality assurance</td>
</tr>
<tr>
<td>Certification</td>
<td>Mechanisms for accreditation</td>
</tr>
<tr>
<td>Formal learning</td>
<td>Feed into formal learning offerings</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Degree of learner autonomy</td>
</tr>
</tbody>
</table>

http://e4innovation.com/?p=727
Recognising non-formal learning

• Analysed practices for assessment and recognition of non-formal learning

• Barriers:
  – Online seen as lower value
  – Lack of guidance on recognition options
  – Cost of recognition
  – Need to unbundle learning provision

Promise and reality

Social media offer new ways to communicate and collaborate. Wealth of free resources and tools

Not fully exploited
Replicating bad pedagogy
Lack the time and skills

https://www.alt.ac.uk/sites/alt.ac.uk/files/public/ALTsurvey%20for%20ETAG%202014.pdf
Learning Design

• A pedagogically informed approach to design that makes appropriate use of technologies
What is learning design? (1)
What is learning design? (2)
What is learning design? (3)

Sharing

https://www.flickr.com/photos/10075621@N06/3810402230
The 7Cs of Learning Design

Vision

- Conceptualise

Activities

- Create
- Communicate
- Collaborate
- Consider

Synthesis

- Combine

Implementation

- Consolidate

http://www2.le.ac.uk/projects/oer/oers/beyond-distance-research-alliance/7Cs-toolkit
Course features

http://cloudworks.ac.uk/cloud/view/5950

• Pedagogical approaches
• Principles
• Guidance and support
• Content and activities
• Reflection and demonstration
• Communication and collaboration
Activity profile

- Assimilative
- Information handling
- Communication
- Productive
- Experiential
- Adaptive
- Assessment
Learning Outcomes
LO1
LO2
LO3
LO4

Assessment
LO1
LO2
LO3
LO4

Week 1
Topic 1

Week 2
Topic 2

Week 3
Topic 3

Week 4
Topic 4

Start

End
Welcome to e4innovation

Gráinne Conole is an e-learning expert and consultant with a range of research interests in the use of digital technologies for learning, teaching and research. She can undertake commissioned reviews and reports, run workshops, and provide tailored e-learning support and advice.

Click here to find out more...

g.conole@gmail.com
Website: e4innovation.co.uk
Twitter: @gconole
http://www.slideshare.net/GrainneConole