A Roadmap to the Digital University of 2025

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The structure of my presentation

1. A warning!!
2. A very brief history of digital education
3. What is digital higher education now?
4. Disruption & perturbations
5. The next steps in innovation in digital higher education
6. Another warning!
7. The end 😊
“Learning Technology and Groundhog Day”

Terry Mayes, 1995
- Technology has matured / is easy(ish) to use / internet is widespread / ‘computers’ are in everyone’s hands
- There is social acceptance of technology for ‘everything/anything’
- MOOCs + online degrees = it’s possible to do HE online, even by high ranked universities
- The open universities of the world have trained countless academic and support staff
My opening position statements

“As lifelong learning in the future will increasingly be taken online, no student should graduate without experience of fully online education”

“As online education will be normal in universities in the future, all academics will teach in this mode routinely, alongside face to face teaching”
Where have we come from?
Digital Education: ~2004/5

LAMS main model for course design
VLEs mainstreamed
Digital libraries stabilising
E-portfolios taken seriously
Re-usable learning objects ‘fashionable’
Digital natives / immigrants ‘influential’

EC eLearning Programme / Lisbon Strategy
National & regional strategies & initiatives
Digital Education: since 2004/5

Explosion in online applications / identities
Skype
Smartphones & 3G & wifi
Pads
OER / open everything
E-books come of age
Online degrees / providers / for-profits
MOOCs
EC LLL Programme / Europe 2020
Numerous national reports & investigations
Where are we now?
More online applications than you can keep count of!!

Some are specifically education oriented
Some are generic / general public oriented

You can find, create, store, re-use, share content
You can support individual, group or global processes, including assessment

They support blended & fully online education & MOOCs
YEREVAN COMMUNIQUÉ

We, the Ministers, meeting in Yerevan on 14-15 May 2015,


The Opening up Education initiative

The European Commission’s Opening up Education initiative in a nutshell

The main goal of this initiative is to stimulate ways of learning and teaching through ICT and digital content, mainly through the development and availability of OER. Amongst its actions, the most important one is to change the role of digital technologies at school. All the actions within the initiative are put in place with the hope that they help attainment of ultimate objective, namely to boost competitiveness and growth at the European level.

The Changing Pedagogical Landscape

New ways of teaching and learning and their implications for higher education policy

Fig 1, Cascade of policy actions to reach the "chalk-face" level

Level 7: Europe/EC

Level 6: national/regional governments

Level 5: national/regional agencies

Level 4: HEIs

Level 3: faculties/schools/departments

Level 2a: subject associations

Level 2: teachers/support staff

Level 1: learners
The Norwegian MOOC Commission published its first report on 13 December 2014, making the Norwegian government the first to present a governmental report on MOOCs.

The report includes a number of recommendations, including financial commitments towards research based on learning analytics as well as improving digital competences among educators.

The Commission’s report is in Norwegian, but the recommendations have been translated to English. The recommendations indicate a strong level of commitment to openness in Norway, and could set a precedent for other governments to follow.

An educational portfolio with technology: 2015

On-campus
33,000 students all courses since ~1990

Off-campus
2700 students 60 Masters since ~2005

20 MOOCs 1.5M learners since 2012 ~19 MOOCs under construction

Open studies Extension ~17,000 learners enrolled

Open

T E C H N O L O G Y

LITTLE/NO TECHNOLOGY

2015
20 MOOCs
1.5M learners
since 2012
~19 MOOCs
under construction
A short history of digital education @ Edinburgh

1992  email for all / IT literacy

1998  first central eLearning unit set up / WebCT VLE – expanded from there

2003  Principal’s eLearning Fund / 3+ years & £3.6M / 50 projects / evaluation & lessons learned

2006  Distance Education Initiative Phase 1 / 5+ years & £5M / target 10,000 students & Masters level online education in every School / current 2500 students, 90% of Schools / now entering Phases 2 & 3

2012  MOOCs – currently 1.5M enrolments / 100k certificates / 3 platforms / expenditure gross ~£1.5M / ROI positive and varied
Governance for online learning & for MOOCs

Agile when necessary (MOOCs), standard processes when not (ODL)

Educate the governance participants rather than create additional mechanisms

Quality management throughout

Explicit risk assessment & risk mitigation

Understanding & exposing return on investment

Trust, trust, trust
University of Edinburgh Risk Policy and Risk Appetite

1. Pushing the boundaries of knowledge, innovating, and implementing strategic developments will always have risks. Effective risk management increases the probability of successful outcomes, whilst protecting the reputation and sustainability of the University.

The University’s appetite for risk across its activities is provided in the following statements, and is illustrated diagrammatically.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Unacceptable to take risks</th>
<th>Higher Willingness to take risks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Reputation</td>
<td>&lt;</td>
<td>&gt;</td>
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<td>Compliance</td>
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<td>Financial</td>
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<td>Research</td>
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<td>Education &amp; Student Experience</td>
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<td>Knowledge Exchange</td>
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<td>International Development</td>
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<tr>
<td>Major change activities</td>
<td>&lt;</td>
<td>&gt;</td>
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<tr>
<td>Environment and Social Responsibility</td>
<td></td>
<td></td>
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<tr>
<td>People and culture</td>
<td></td>
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</tbody>
</table>
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### Appendix 1

#### Assessment of whether a project is a “major” project

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Mark</th>
<th>Project Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost of Project</strong></td>
<td></td>
<td></td>
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<tr>
<td>(should include dedicated project team as well as time/resource elsewhere spent on the project)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$25m or over</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>$10m or over</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>$5m or over</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Under $0.5m</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Impact on Staff and Students</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct impact on staff/students across the University and across a College / Support Group</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Direct impact on staff/students across a School or a Support function, or a significant finite group of staff or students</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Impacts only on staff/students within a local organisation</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Complexity of Project</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Medium</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Low</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Reputational Impact</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>if project gets into difficulties or is not delivered</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Potential for International or UK profile</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Potential for Scotland profile</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Reputational impact local</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*If Score 20 or over, then project is a “Strategic” project*  
*If Score is 10-19, then project is a “Major” project*

![Project Status Radar Chart – Multiple Assessments](image)
Signals of perturbation.....
Historically, higher education has avoided competitive disruption. One reason for this past immunity is the power of prestige in the higher education marketplace, where the quality of the product is hard to measure. In the absence of comparable measures of what universities produce for their students, the well-respected institutions have a natural advantage. A re-

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**Figure 2: Disruptive Innovation**

![Disruptive Innovation Diagram](image)

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ECAR 2014 Survey of Students & IT

2/3 of students said most/all of their instructors... have adequate technical skills... use technology effectively

OPEN EDUCATIONAL RESOURCES

71% of students use open educational resources

54% feel they are very or extremely important

ECAR 2014 Survey of Faculty & IT

2014 STUDY OF FACULTY & IT

17,451 faculty respondents from 151 institutions in 39 U.S. states and 13 countries

GRADE CHANGE, 2013

ANNUAL SURVEY OF ONLINE EDUCATION IN THE UNITED STATES

Survey by I. Elaine Allen and Jeff Seaman, Babson Survey Research Group, based on responses from over 2,800 Chief Academic Officers (CAOs) and academic leaders

The number of students taking at least one online course has now surpassed 7.1 million and represents 33% of all higher education students (21.3 million).

Students Taking at Least One Online Course as Part of Total - Fall 2012

7.1 MILLION STUDENTS ONLINE

76% of faculty are familiar with MOOCs

1/3 of faculty have taught an online class in the past year

62% say online learning will lead to pedagogical breakthroughs

Innovation Seminar, University of Iasi, October 2015
Information technology has been extremely consequential in higher education over the last 25 years, but principally in “output enhancing” ways that do not show up in the usual measures of either productivity or cost per student.

William G Bowen, Tanner Lecture, Stanford University, October 2012
Opening the black box

Comparative assessment of learning outcomes of graduates is the most promising approach to measure teaching and learning excellence.
- OECD's AHELO project
- National research projects in Germany, UK, Italy
- CLA and various other initiatives in US
- OECD-CEA partnership to implement CLA+ in countries
- European Commission supported CALOHEE project in Tuning framework

Learning at the heart of the system

Learning and teaching excellence: Learning gain

We wish to build better ways of capturing excellent education, including new approaches that measure students' learning experience, refining existing indicators of students' learning expectation to employment or further study.
Competence-based education
U-Multirank helps you compare universities around the world – matching like with like and seeing what each is best at.

Australian Graduate Survey – an overview

The Australian Graduate Survey (AGS) is an annual national survey of recent graduates. It has been conducted annually since 1972. The AGS is a consensual survey of all Australian universities and a number of higher education colleges and a range of employer organisations. It is conducted one year after the graduates complete the requirements for their awards. The annual graduate population is generally between 60 and 65 per cent.

The AGS comprises the following sections:

- the Graduate Destination Survey (GDS)
- the Course Experience Questionnaire (CEQ)
- the Postgraduate Research Experience Questionnaire (PREQ)

DISCOVER ONLINE COURSES

Navigate the world of online education through 100,000 student reviews

Search for courses

Find what you’re looking for.
Where do we want to go?

Education that is “student centred”…. 

- on-demand
- self-paced
- location-flexible
- relevant to life/career now & in future
- global and local
- personalised to learning place/style/speed
- affordable
- high value-added

and in a wide range of subjects!
How might we get there?

renewed vision at policy levels
a roadmap of modest but purposeful steps
investment
agility
determination
analysis and evidence-base
autonomy = agility

Academic autonomy refers to a university’s ability to decide on various academic issues, such as student admissions, academic content, quality assurance, the introduction of degree programmes and the language of instruction.

Introduction of programmes at Master’s level

- Universities can open degree programmes without prior accreditation
  - 7 countries
- A minority of new degree programmes/courses must be submitted to prior accreditation to be introduced/funded
  - 0 countries
- All new degree programmes/courses must be submitted to prior accreditation to be funded
  - 3 countries
- All new degree programmes/courses must be submitted to prior accreditation to be introduced
  - 12 countries
- Other restrictions
  - 7 countries
On-campus AND off-campus
40,000 students, all with at least one fully online course

Off-campus
10,000 students
100 Masters
10s of PGRs

Open
Open studies
Extension
~17,000 learners enrolled

100s MOOCs
1000s OERs
10,000,000 learners since 2012

An educational portfolio with technology: c2020
“By 20XX, fully online education will be normal for all universities”

2015⇒ 20?? ⇒ 20?? ⇒ 20?? ⇒ 20XX

How fast?
How much?
How??
The Un-changing Higher Education Landscape

- Durability of existing pedagogies
- Faculty skillset / student skillset
- Less student enthusiasm for radical change than the hype implies
- Risk of action by individual universities is high
- Lack of incentives / actual barriers (financial | legal | regulatory |...)
- Inter-locked curricula
- Physical estate
- Lack of burning platform

Zemsky, “Checklist for Change”, 2013
Thank you for listening

Let’s talk!

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