How the Web changes the World & Universities (or not)

Leslie Carr

Web Science Institute,
Web & Internet Science Research Group
EPrints Services
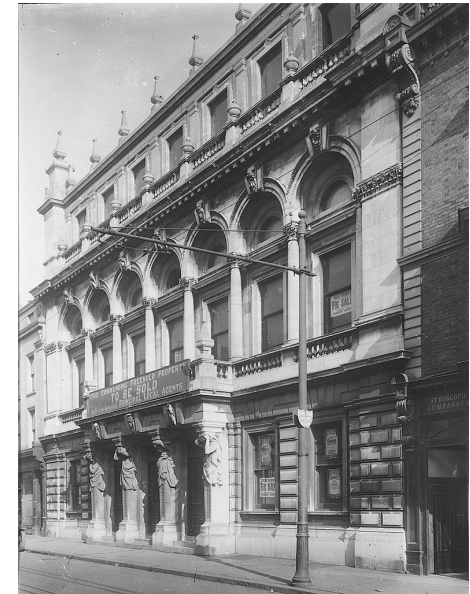*Web Science DTC*

With thanks to Professor Hugh Davis,

Director of Institute for Learning
Innovation and Development

Universities & The World

England Bologna Oxford Cambridge Glasgow Great Britain *Journals* United Kingdom Southampton European Union EPSRC

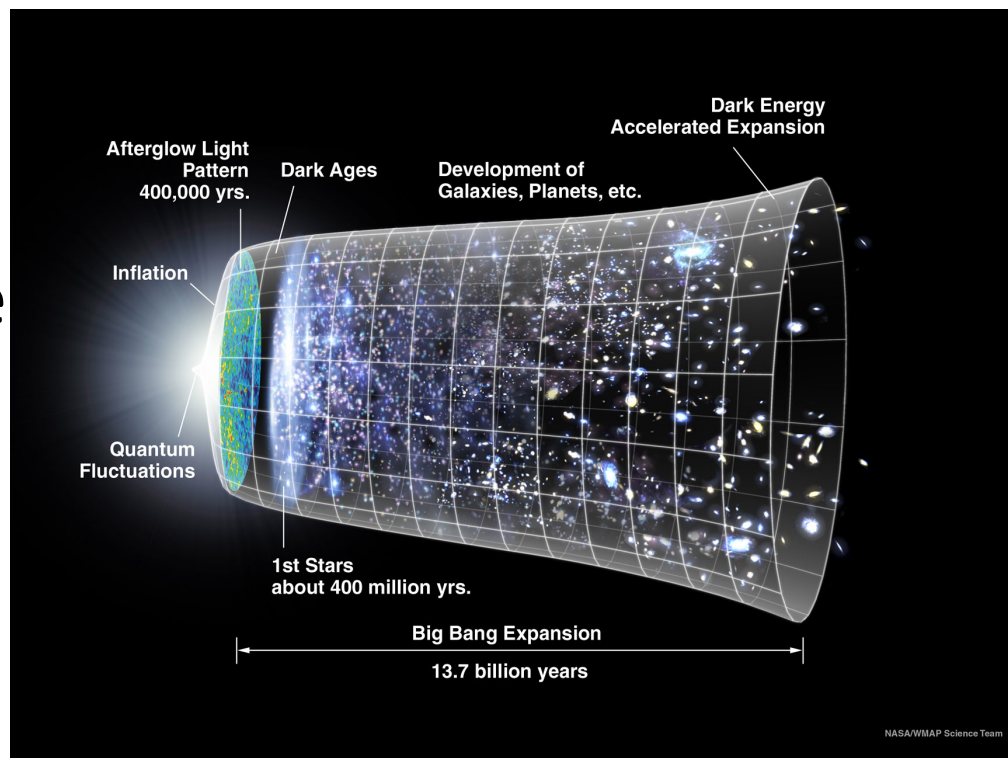| 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 |

PC, Internet, Email, DTP, Web, mobile, MOOCs

Web Disruption at University?

- How much difference does the Web make to your education?
  - *See my spreadsheet from 5 years ago*
- What would happen if the following blew up
  - the University's web servers?
  - the University's connection to the Internet?
  - Southampton's connections to the Internet?
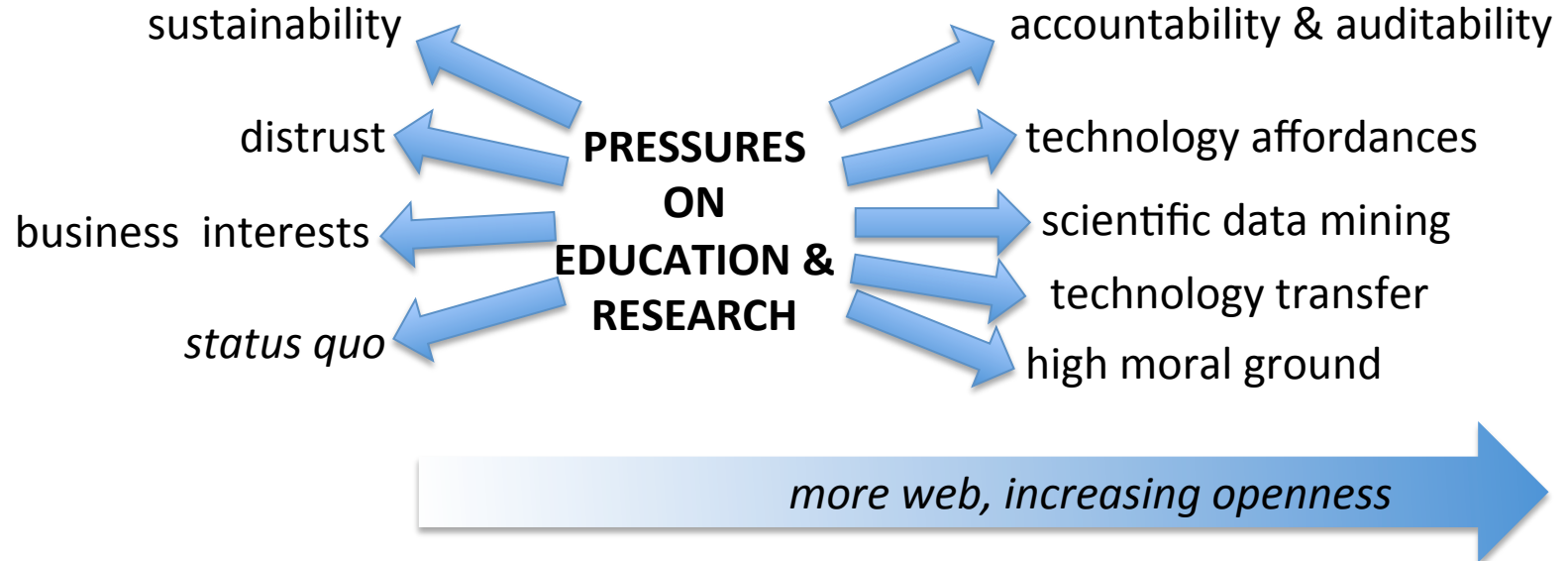 - the UK's connection to the rest of the Internet?

Expansion of the Web

- The Web spread the conditions of its initial creation throughout the whole of society as it underwent an initial inflationary phase.

- The academy
  - government patronage
  - large-scale co-operation
  - sharing of intellectual property

Afterglow Light
Pattern
400,000 yrs.

Inflation

Quantum
Fluctuations

Dark Ages

Development of
Galaxies, Planets, etc.

Dark Energy
Accelerated Expansion

1st Stars
about 400 million yrs.

Big Bang Expansion
13.7 billion years

NASA/WMAP Science Team

Remember I actually said this "We got the web of the researchers"

Directions for Academics

sustainability

distrust

business interests

status quo

PRESSURES ON EDUCATION & RESEARCH

accountability & auditability

technology affordances

scientific data mining

technology transfer

high moral ground

more web, increasing openness

- MOOCS, Open Science, Open Data, Open Educational Resources
  - Web Technology joins the High Moral Ground
- *vs* the established economic model for ensuring continuity of information production
  - trading of privately held information through payment and subscription products such as journals or magazines

Directions for Businesses

The key commercial differentiating advantage of the web: It's porous.
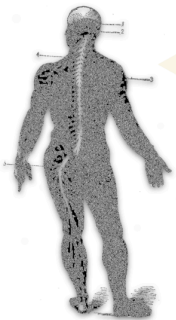
1 NETWORKED

The web is us, dummy.

2 SEAMLESS
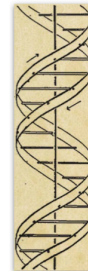
No structural barriers.

3 OPEN

Social engagement and consensus. Led by users.

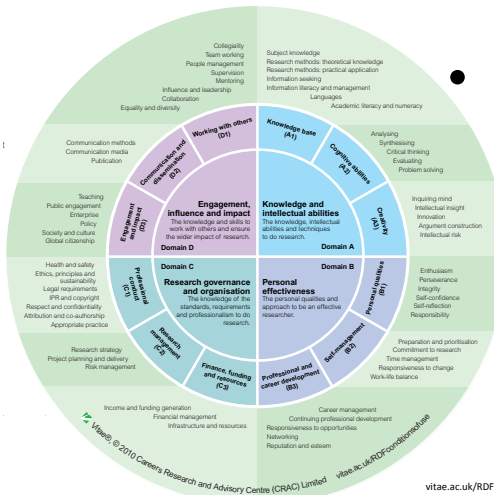**4 COMPELLING**

Don't be dull or merely important.

5 PURPOSE BEYOND PROFIT

Multidimensional value

The Web helps us to break down external and internal barriers

DTCs & Graduate Education

- Higher education is more than
  - Acquiring advanced knowledge
  - Acquiring advanced skills

- It is also
  - Acquiring a leadership position within the digital economy
  - By a mentored program of networked industry engagements/relationships

- Don't just write a thesis, form an impressive network and take advantage of it

MOOC

Future Learn

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UNITED KINGDOM

THE SECRET POWER OF BRANDS (PILOT 1)   UNIVERSITY OF EAST ANGLIA

29 July   11 August

1   2

Course info · Leave this course   Go to course

THE MIND IS FLAT: THE SHOCKING...   THE UNIVERSITY OF WARWICK

04 November   15 December

1   2   3   4   5   6

Course info · Leave this course   Go to course

MOONS: A SHORT INTRODUCTION   THE OPEN UNIVERSITY

29 July   11 August

1   2

Course info · Leave this course   Go to course

BEGIN PROGRAMMING   UNIVERSITY OF READING

28 October   15 December

1   2   3   4   5   6   7

Course info · Leave this course   Go to course

What is a MOOC?

Massive - some have 10,000s registered.

Open = free

anyone can register

> Short (often 4-8 weeks, 3 hrs /week)
> No formal assessment and feedback
> Rely on Social Learning

Online although many have a parallel blended incarnation

Course - that runs at a given time with a given cohort

(but not necessarily accredited for anything)

-

What are MOOCs made of?

Most MOOCs consist of:

- Many short videos
    - Some talking heads
    - Some "worked examples"
    - Some experiments etc.
- On-line papers etc.
- On-line activities
- Links to external resources
- Discussions on platform
- Off platform activity

Assessment and Feedback?

Assessment (and feedback) will need to be

- Objective (multiple choice etc.)

- Peer review

- Self evaluation

The emphasis must be on the student as a self-motivated learner.

No "Conversational Framework" here!

CENTRE FOR INNOVATION
IN TECHNOLOGIES & EDUCATION

MOOC Providers

Udacity the first "democratizing education"
but still for profit. Started at Stanford.

Coursera for profit
but business model only just emerging
2,000,000 people have taken a course,
from the catalogue of around 200. Only 7-9% complete.
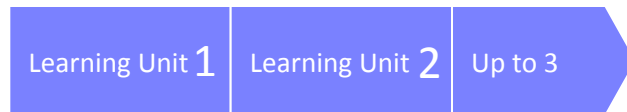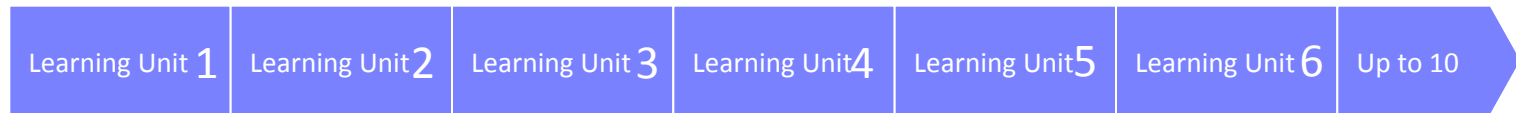
EdX not for profit
MIT, Harvard, Berkeley

Futurelearn for profit
Based in UK at OU
aspires to include top 30-40 universities
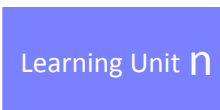Director is Simon Nelson - responsible previously for BBC digital
strategy
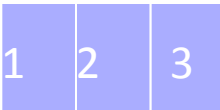
FutureLearn platform (Sept 2013)

FutureLearn MOOC Structure

| Learning Unit 1 | Learning Unit 2 | Learning Unit 3 | Learning Unit 4 | Learning Unit 5 | Learning Unit 6 | Up to 10 |

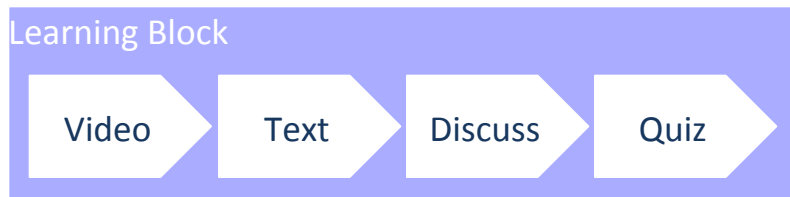| Learning Unit 1 | Learning Unit 2 | Up to 3 |

miniMOOCs have 2 or 3 Learning Units

Learning Unit n

Weekly **Learning Units:** , 2- 6 hours study time
Meaningful title, clear learning goals, end-of-unit assessment

| 1 | 2 | 3 |

Each with 2 or 3 self-contained **Learning Blocks**

Learning Block

| Video | Text | Discuss | Quiz |

Learning Blocks
Sequence of elements
(This is just one example)

UNIVERSITY OF
Southampton

8,226
Unique visitors

296,052
page views

14 pages
per visit

21,236
Visits

2.6
Visits per learner

22 mins
per visit

13,183
Joined course
426 have since left

4,361
Marking steps as complete

14
Completed steps
per learner

5,677
Comments

1,720
Social learners
39% of active learners

3.3
Comments
per learner

Top 10

1. United Kingdom (77%)
2. United States (2%)
3. India (2%)
4. Ireland (2%)
5. Spain (2%)
6. China (1%)
7. Australia (1%)
8. Italy (1%)
9. France (1%)
10. Greece (1%)
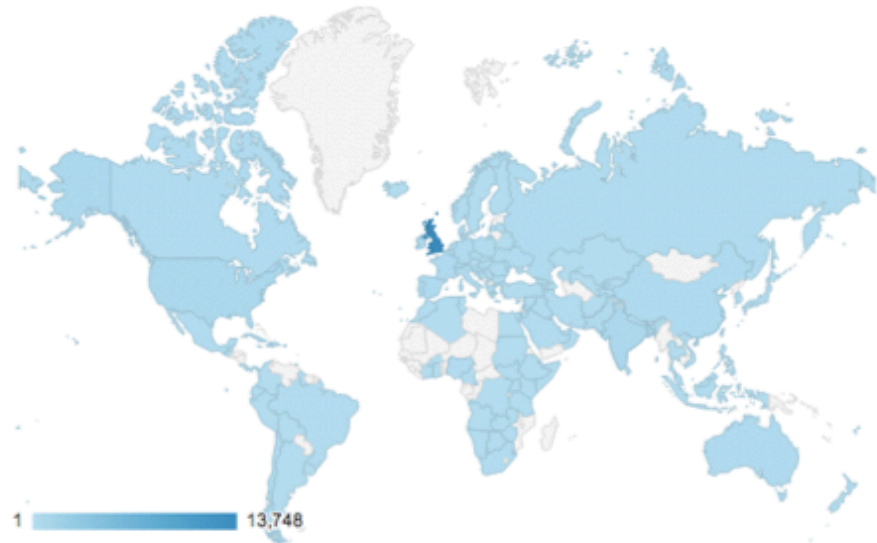
Age group
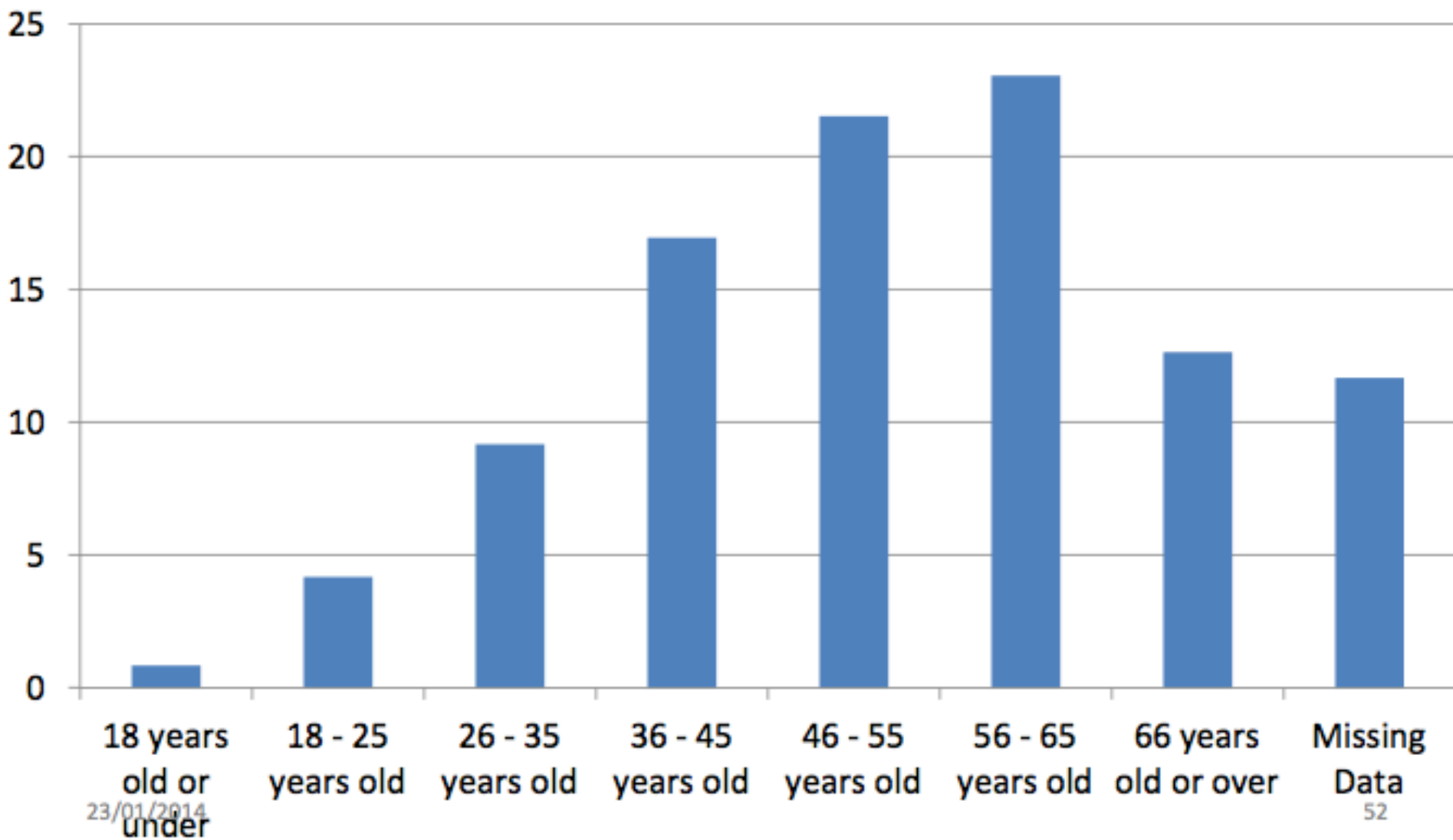
Level of education
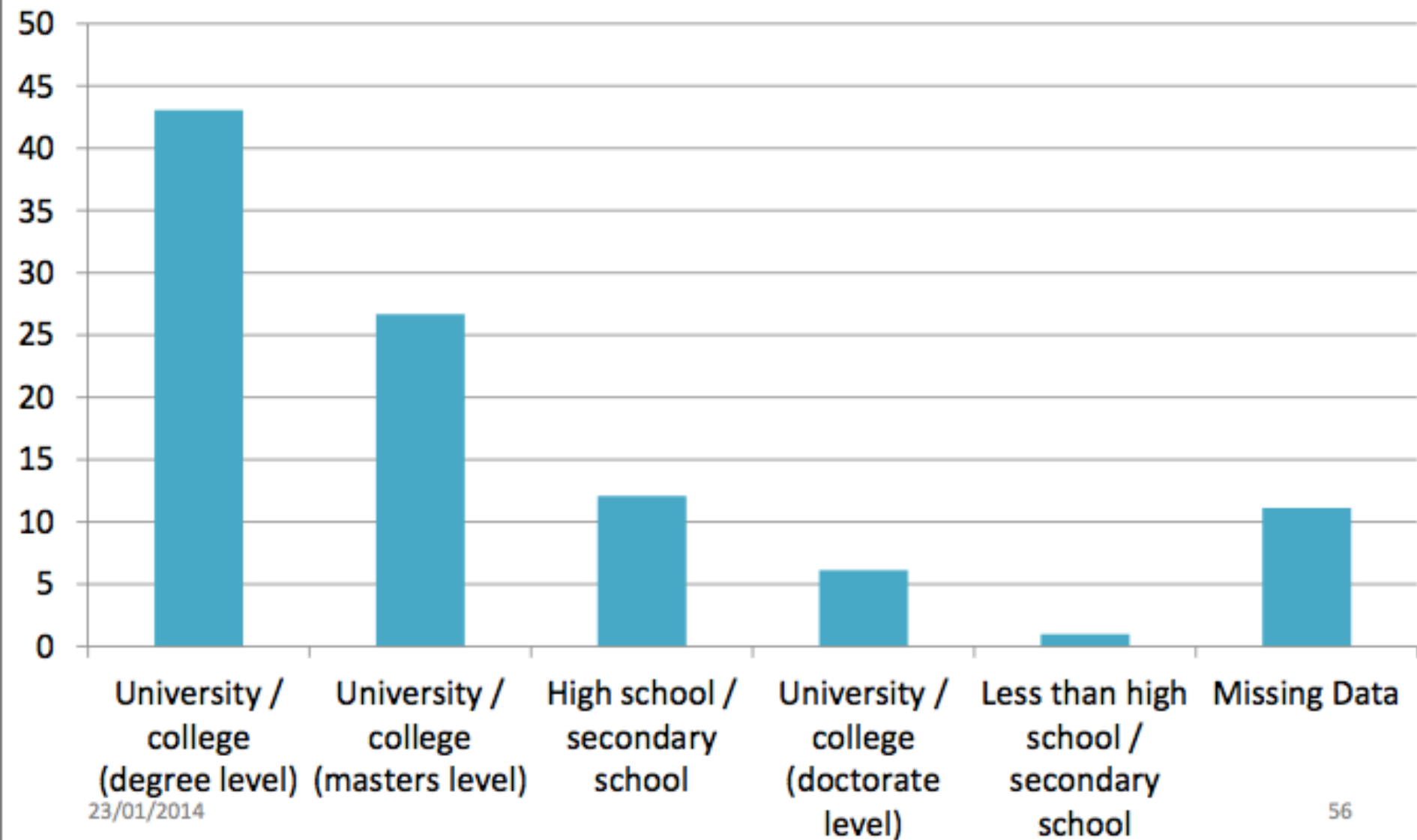
Area of employment?

Patterns of engagement
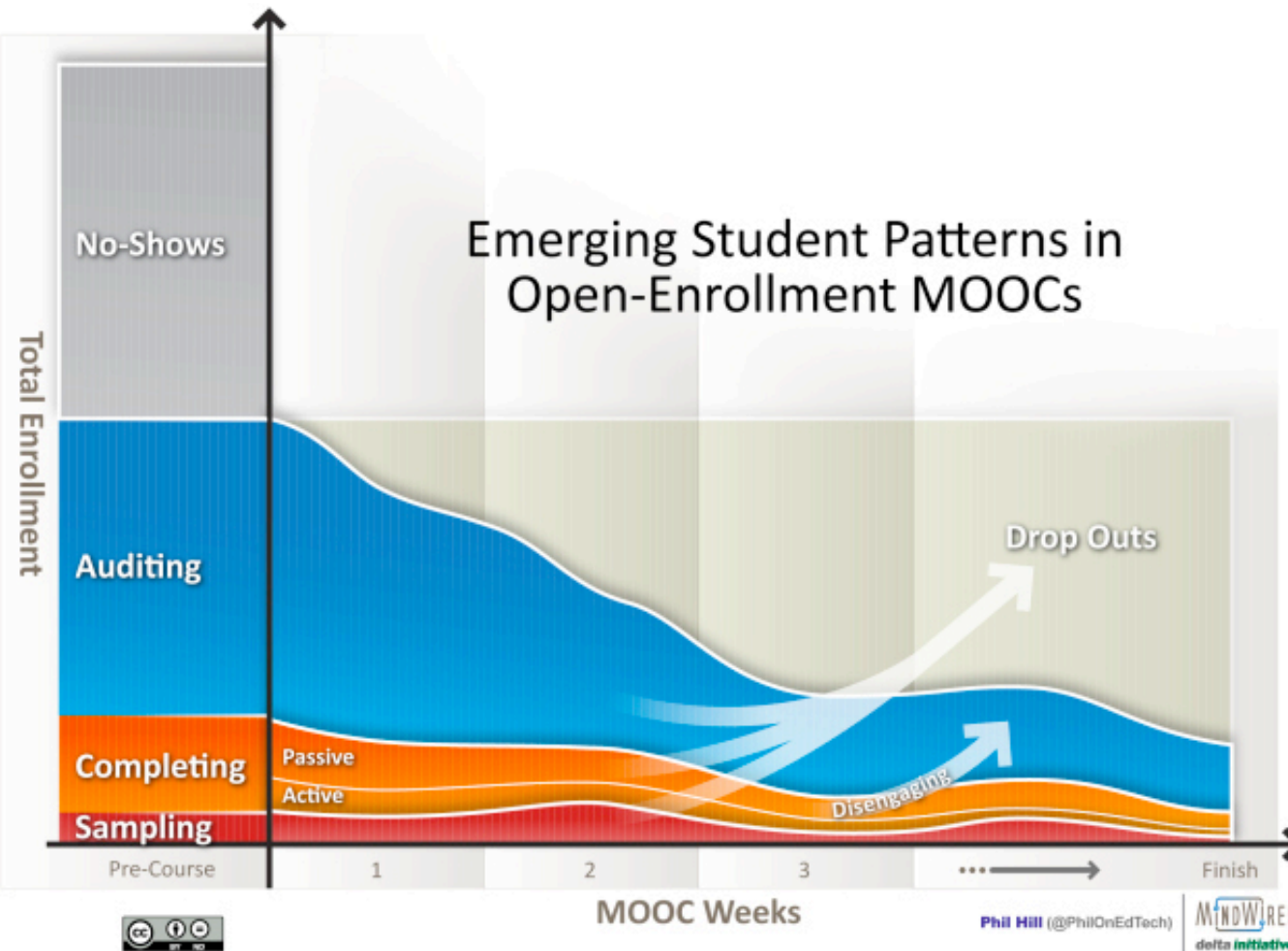
Auditing: Just interested. Not looking for credit.

Completing: Looking for credit – either passive or actively engaged with discussions etc.

Sampling: Looking for interesting material

How do MOOCs make money?

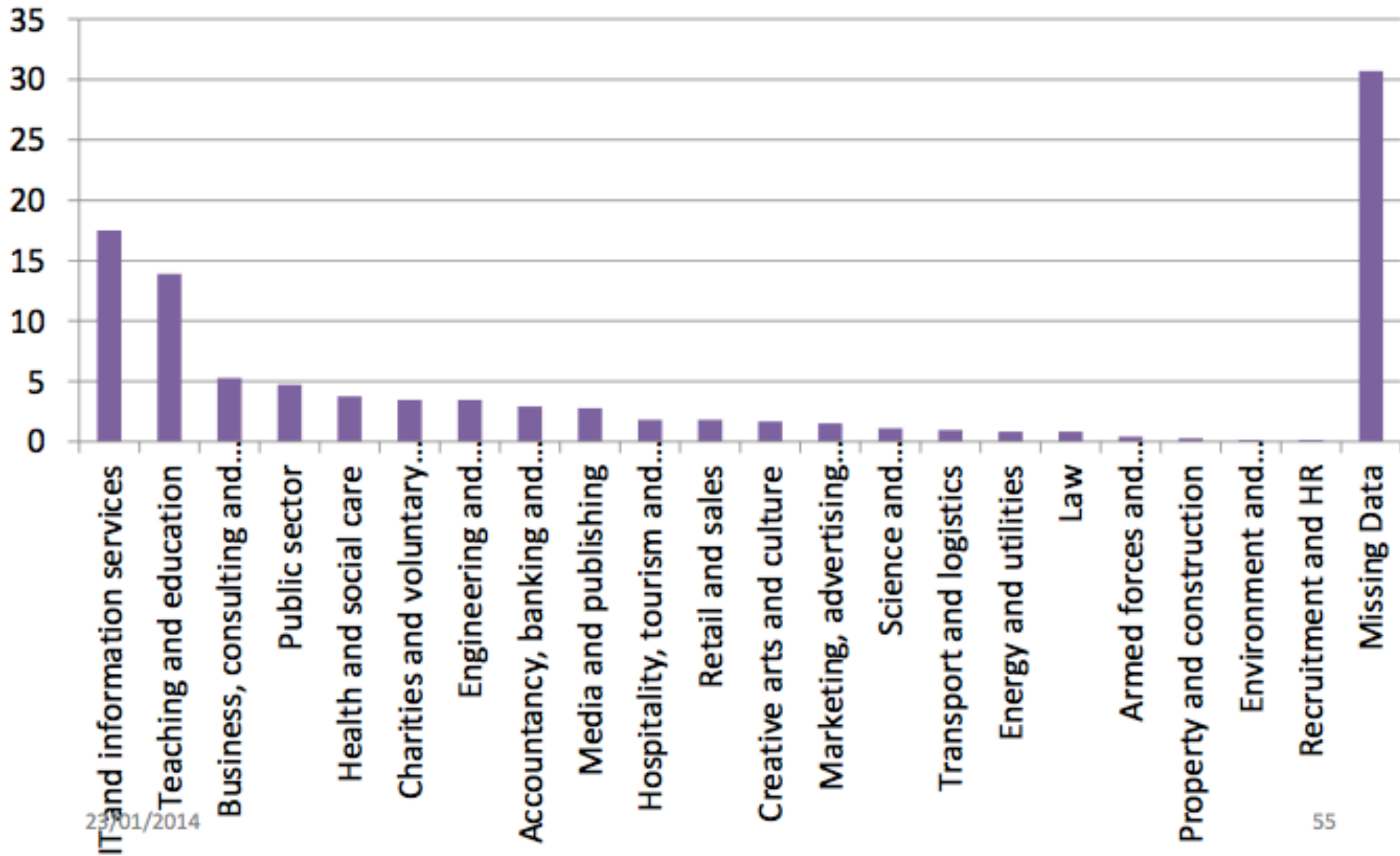**The Fremium Model**

You get added value if you pay e.g.

- Statements of participation, or attainment – or actual credits?
- Tutoring – the eBay model

Sponsored MOOCs

- Someone pays me to make the MOOC I want (for their marketing purposes)
- Someone pays me to make the MOOC **they** want – but I can use too.

Access to student data

But this is all money for the Platform Provider. Why do **Universities** and Academics do this?

Our Business Model = marketing + educational;

1.   Enhancing Reputation (particularly for the flagship subjects)
     - being good world citizens in *democratising education*

2. Reaching new markets
     - (International Markets)
     - (The CPD market)

3. Increasing Our Capacity on-line
     - (building a unit to create on-line)
     - (educating our staff in the possibilities)

4.   Trying to move our F2F experience further from Content Delivery and more to using it for achieving deeper understanding
     - flipped classroom
     - flipped MOOC

Georgia Tech Model
$6600 per year per person
(cf $45000 for campus based)
400 students in first paying cohort (actually not open)

The Cost of Making a MOOC?

According to Edinburgh - £30,000 each.

There seems to be some consensus around this, although few people are sharing any figures

The ScHARR MOOCS Diaries: Part X –
The cost of developing a MOOC
(Chris Blackmore,
University of Sheffield)

At
recorded figures much
higher, including costs for
Legal, copyright clearance, marketing
management time, teaching assistant

TOTALS		
	Hours	% of total
All	489.5	
Learning Technologists	62	13
Academic advisors	125	26
MOOC leaders	296	60
Content developers	0	0
CiCS input	4.5	1
Admin support	2	0

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Want to be a MOOC Star?

We had a team of around 15 academics, 15 research PGs, 6 CITE staff, 2 legal staff and a librarian on WS MOOC
Cost? "£30k" and the rest

Opening conversation: the future of Web Science

In this discussion it is suggested that computer science is a branch of science fiction, allowing a new world to be built with powerful

Structures

Steering Group (every 2 months)

- Chief Financial Officer
- PVC Ed
- Director of Centre of Innovation in Technologies and Education (CITE)
- Director of Marketing and Communications
- Legal Services
- Director of iSolutions
- The Librarian
- Head of QA

CITE (weekly)

- Learning design
- Project management
- Video and Multimedia Production

Consultants

- External production company

Academic Team (with CITE every week)

- No established model yet
- Our Web Science MOOC is involved a team of around 12 academic staff and 6 PGRs over last summer

The Library and Legal (weekly)

- Resource Discovery
- Rights clearance
- Licences

Futurelearn Liaison (monthly ++)

Reporting/ QA

Run Time Team

- Runtime Manager Academics/Postdocs/PhDs social media & comment handling

HE Context

Fees going up faster than value of degree

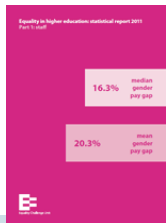Increased demand for flexibility of study (particularly CPD)

Need for universities to globalize or specialize

Challenge from alternative educational providers (particularly for MSc's/CPD) becoming real

All these things imply a greater engagement with on-line

Changing Business model for higher education

MOOCs are the vanguard for on-line programmes

HEAR.

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Achievement Report

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