FutureLearn Academic Network

An ecology for eLearning: Minnows, MOOCs and Monsters

15 June 2015

Professor Sir Timothy O'Shea

Principal & Vice-Chancellor

THE UNIVERSITY *of* EDINBURGH

History

- 1940s Vannevar Bush - *As We May Think*
- 50s Crowder - Branching
- 50s Pask - Conversation Theory
- 60s Smallwood - Self-Improving
- 60s Papert - Self-Expression
- 60s Kay - Dynabook
- 70s Kimball, O'Shea - Intelligent Tutors

History Continued

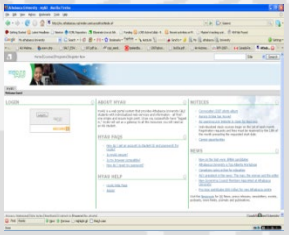
- 70s Open University CAL Group
- 80s Open University Home Computing
- 90s Collaborative/Social Learning
- 90s Mobile and Speckled Computing
- 2000 Open Educational Resources
- 2000 Plan Ceibal Uruguay
- 2012 MOOCs!

How big is a MOOC & ecology

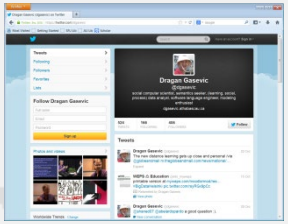
- Everything surviving
- 60 ECTS = 1500/1800 study hours
- 100 MOOCs = Honours (240 ECTS)
- 25 MOOCs = Masters (60 ECTS)
- Median MOOC = 75 study hours
- 1 MOOC = 1000 Minnows
- 1 Minnow = 4 minute highlight
- 100,000 Minnows = 1 baby killer whale

Learners

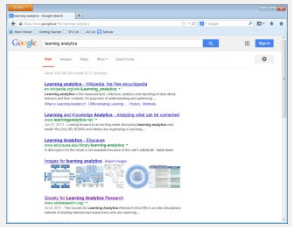
Student Information Systems



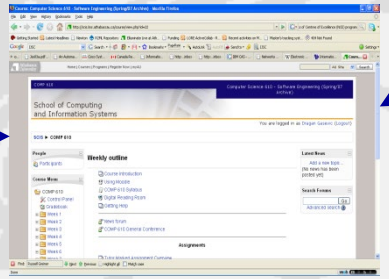
Mobile



Networks

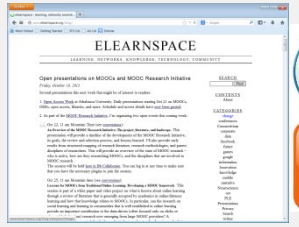


Search

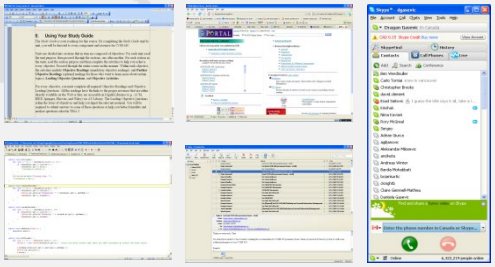


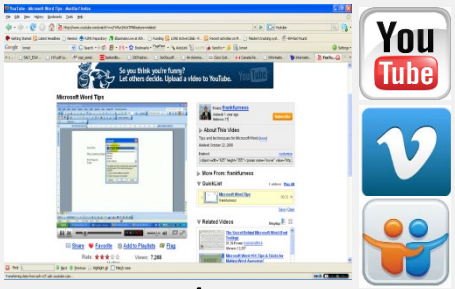
Learning environment

Educators



Blogs





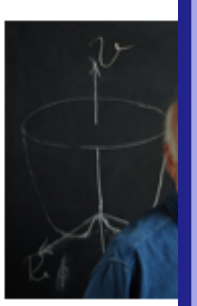
Videos/slides

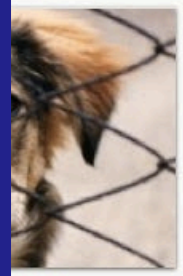
The University of Edinburgh

and top 3
mes with

16 MOOCs built
7 MOOCs under construction
12 MOOCs under consideration

2 platforms (Coursera, Futurelearn)
>1,000,000 enrolments
>100,000 completions



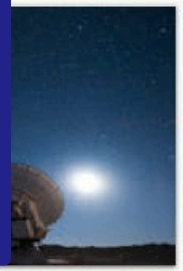


lfare

EDIVET: Do you have what it takes to be a veterinarian?

ic Theory

Introduction to the Clinical Psychology of Children and Young People
Date to be announced.



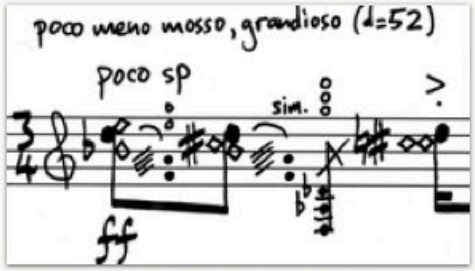
AstroTech: The Science and Technology behind Astronomical Discovery
Date to be announced.

Why do MOOCs?

Warhol
Date to be announced.

Philosophy and the Sciences
Date to be announced.

Animal Behaviour and Welfare
Date to be announced.



Fundamentals of Music Theory
Date to be announced.

Introduction to the Clinical Psychology of Children and Young People
Date to be announced.

AstroTech: The Science and Technology behind Astronomical Discovery
Date to be announced.

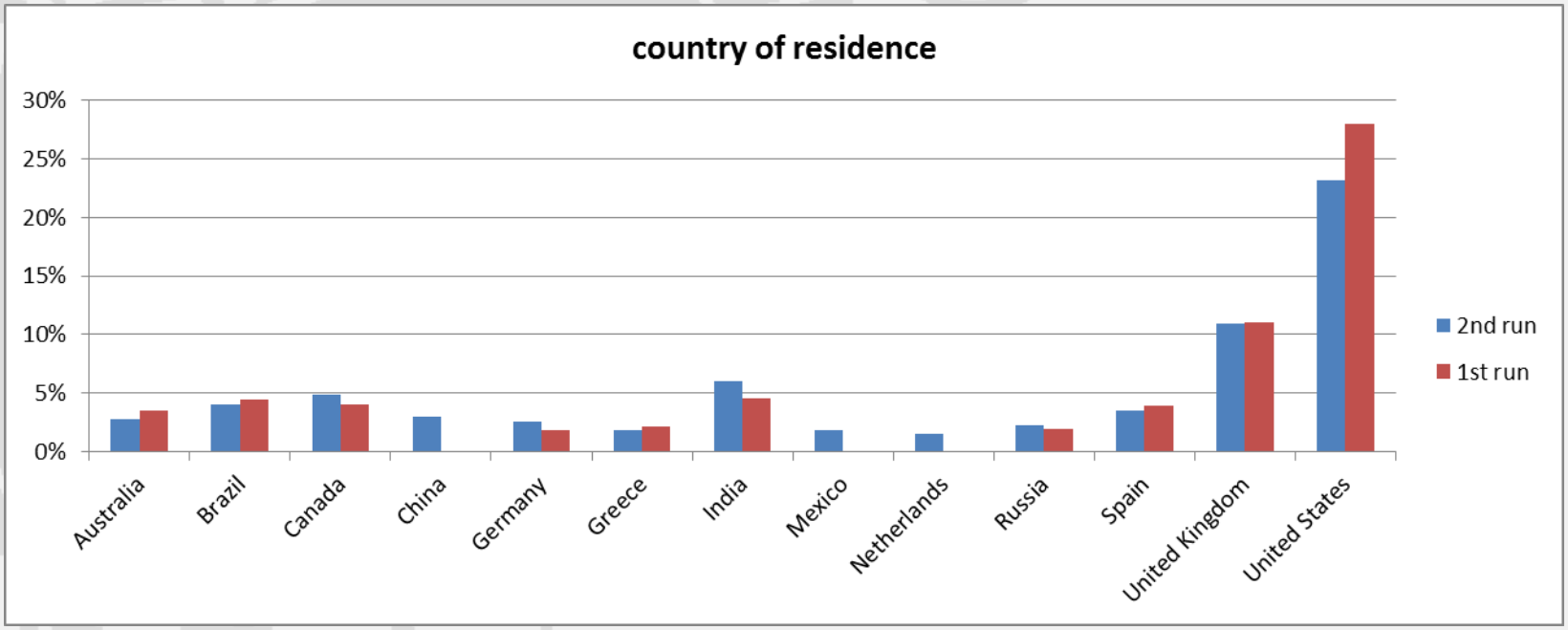
Why do MOOCs?

- Reputation – early adopter of educational technology
- Exploration of a new pedagogical ‘space’ to inform practice
- Wish to reach as widely as we can with our courses
- Sharing experiences with peer universities
- Fun!

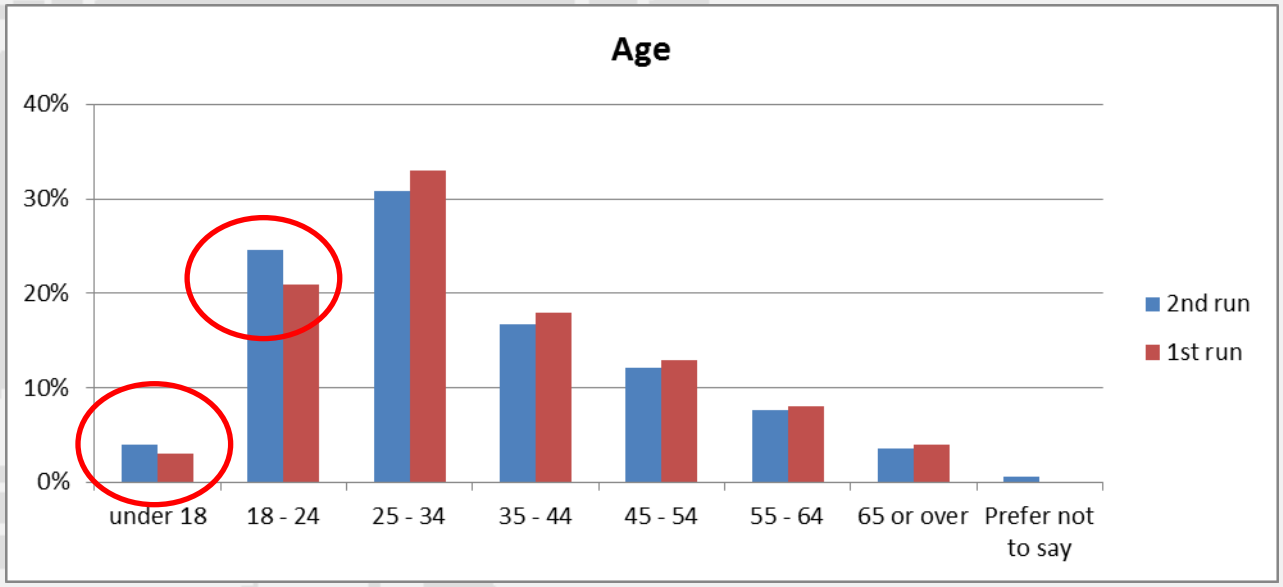
➢ Not money

➢ Not direct recruitment

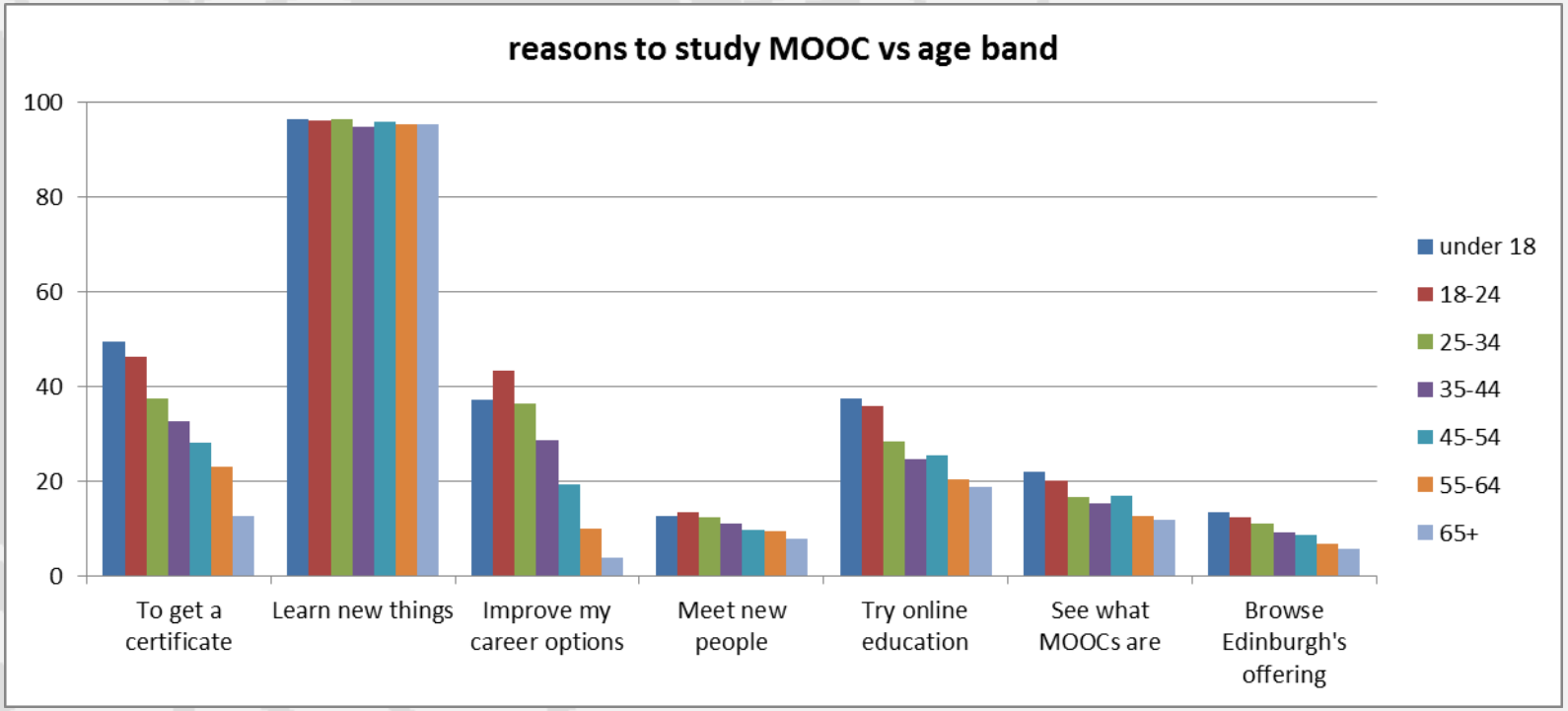
Top countries supplying learners on 6 Edinburgh MOOCs



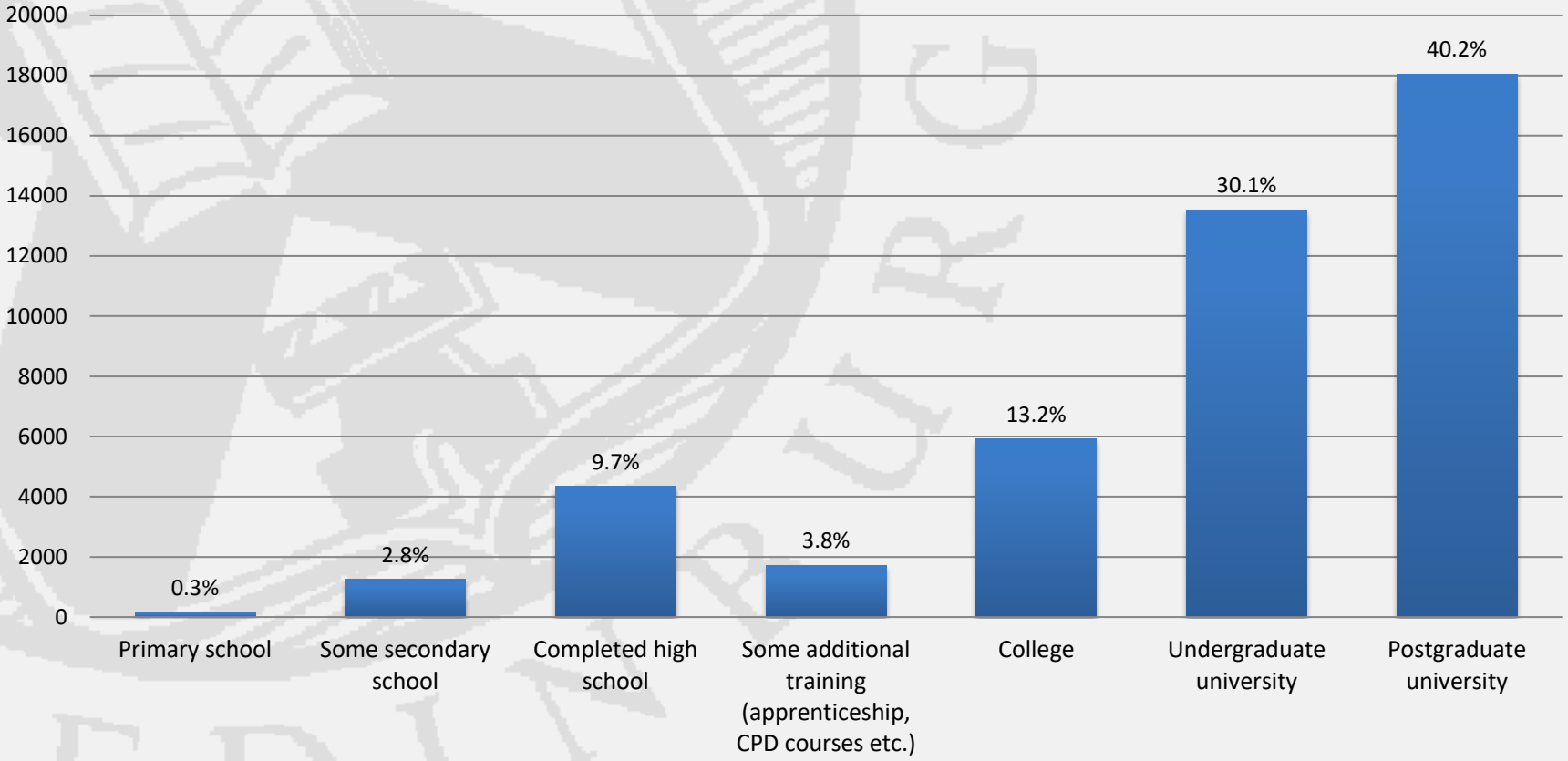
Age


Age
40%
30%
20%
10%
0%
under 18
18 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65 or over
Prefer not to say
2nd run
1st run

Reasons for Studying on a MOOC vs Age Profiles



Highest level of academic study completed



Two types of MOOC research are most common

“Who studies on MOOCs?”

e.g. University of Edinburgh

Items: Demographics, MOOC intentions, satisfaction, prior experiences, future intentions

Survey sources: incomplete (often <20% response rates)

Ethics: explicit

“What do MOOC learners actually do on course?”

e.g. MIT, EPFL

Items: Groups of learner types, stop-out points, use of online tools, mastery, discussion forum behaviours

System data: 100% but only records on-system study

Ethics: ambiguous

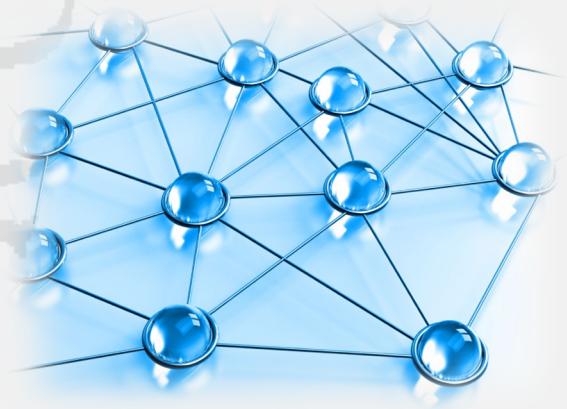
Competing Designs

xMOOC

Instructivist

Guru Professors

Content then Quiz



cMOOC

Constructivist

Connectivist

Networking

Beyond x and c

On how #edcmooc did a cmooc on Coursera

Posted on
February 27, 2013

Tagged
#edcmooc

By demonstrating that you could build a very "open" course on Coursera, the University of Edinburgh team in charge of E-learning and Digital Cultures succeeded in breaking down some walls between the large-scale free course (called xMOOC by some critics) and the cMOOC connectivist learn-fest.

#edcmooc

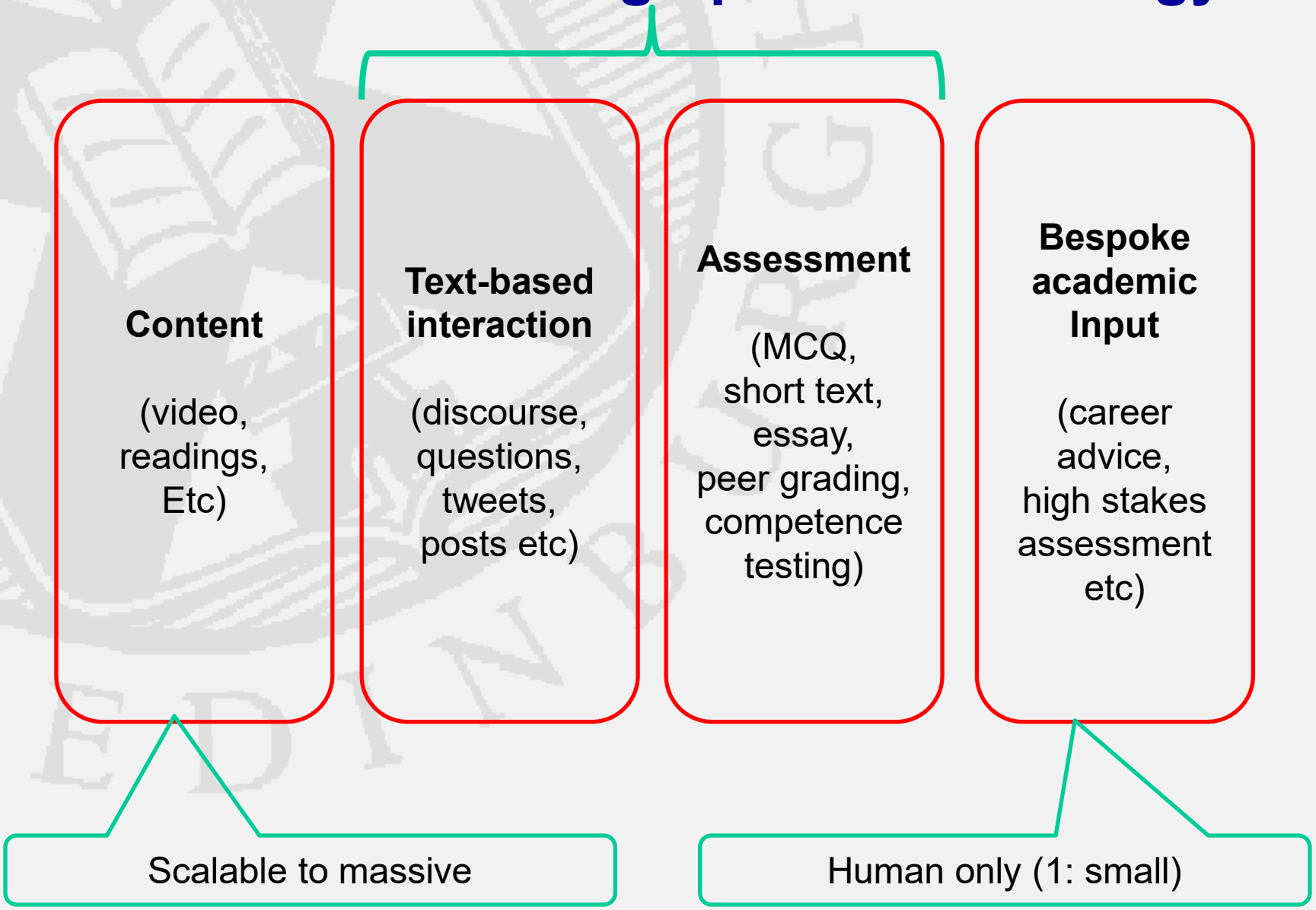
1. MOOCs are multiple - cMOOC/xMOOC binary no longer holds
2. MOOC pedagogy is not embedded in MOOC platform
3. The teacher persists in the MOOC

Adapted from Bayne & Ross 2014
Bayne, S., & Ross, J. (2014) *The pedagogy of the Massive Open Online Course: the UK view*: Higher Education Academy.

In Summary

- Mostly adults of working age, well-educated, global with concentrations in developed countries, learning for interest
- Demographics changing slowly, can be influenced
- Large numbers of learners in the minority groups
- Interest in study for career etc rising
- As with all online education, continuous study hard to sustain against external pressures

Potential for scaling up thru technology

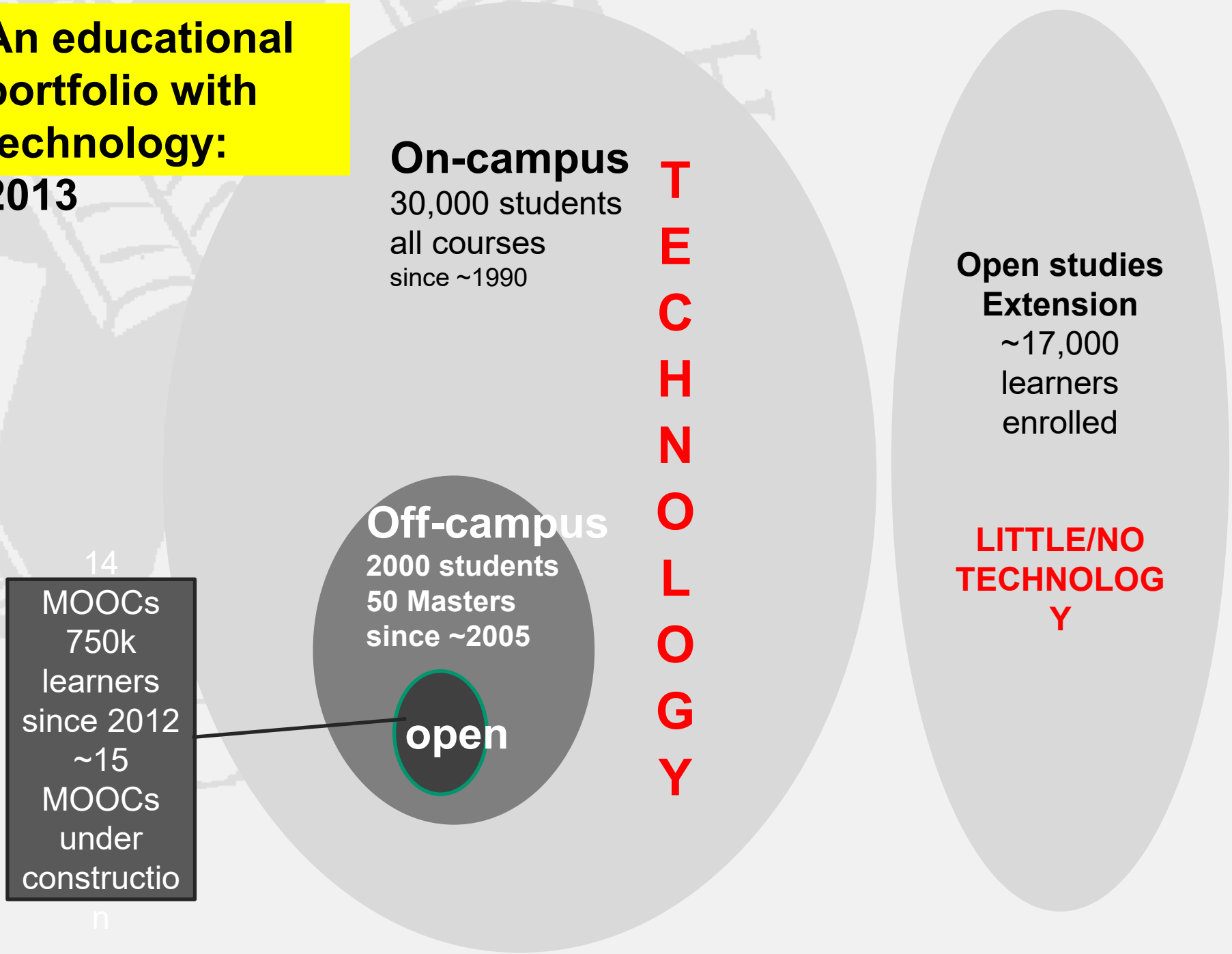


“Coding the teacher: teacherbot”

A sample of the sorts of automations we might consider building:

- **Automated twitter responses (*UoE ongoing*)**
- **Adaptive comparative judgement for peer assessment (*UoE ongoing*)**
- **Semantic analysis of discussion forums (TA dashboard)**
- **Group assigner (random, 1st come 1st served, learner choice, learner characteristics**
- **Group dynamics visualiser (TA dashboard)**
- **Objective test harvesting & piloting**
- **Random question delivery & analysis for mastery**
- **Intelligent automated learner ‘prompter’ (TA dashboard)**
- **Simple A-B experiment management system**

An educational portfolio with technology: 2013



MSc in Creative Writing by C

Overview

**Our internationally recognised pos
available online from wherever you
programme.**

About the programme

The programme enables you to focus in depth on your own creative practice at a pace which allows for work and family commitments.

› About the programme

What

You will
of a reas

Fiction or Poetry?

You can apply for either

structure

THE UNIVERSITY of EDINBURGH

MSc in Digital Education

Online Distance Learning

Online Distance Learning

- LLM degrees
- Postgraduate Certificate in Law

LLM in Law

Tailor your LLM degree to mee

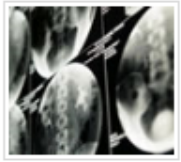
PG Cert in Global Development Challenges

Please note that the deadline for completed applications for 2014/15 entry is 21 July 2014. However, early applications are strongly encouraged.

Apply Online

ChM in Trauma & Orthopaedics

Based on the FRCS curriculum, this flexible online programme is intended for those in the advanced stages of their surgical training (ST4)... more >>

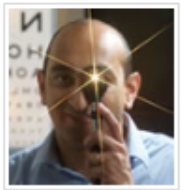


ChM in Urology

Based on the FRCS curriculum, this flexible online programme is intended for those in the advanced stages of their surgical training (ST4)... more >>

ChM in Vascular & Endovascular

Based on the FRCS curriculum, this flexible online programme intended for those in the advanced stages of their surgical training (ST3)... more >>



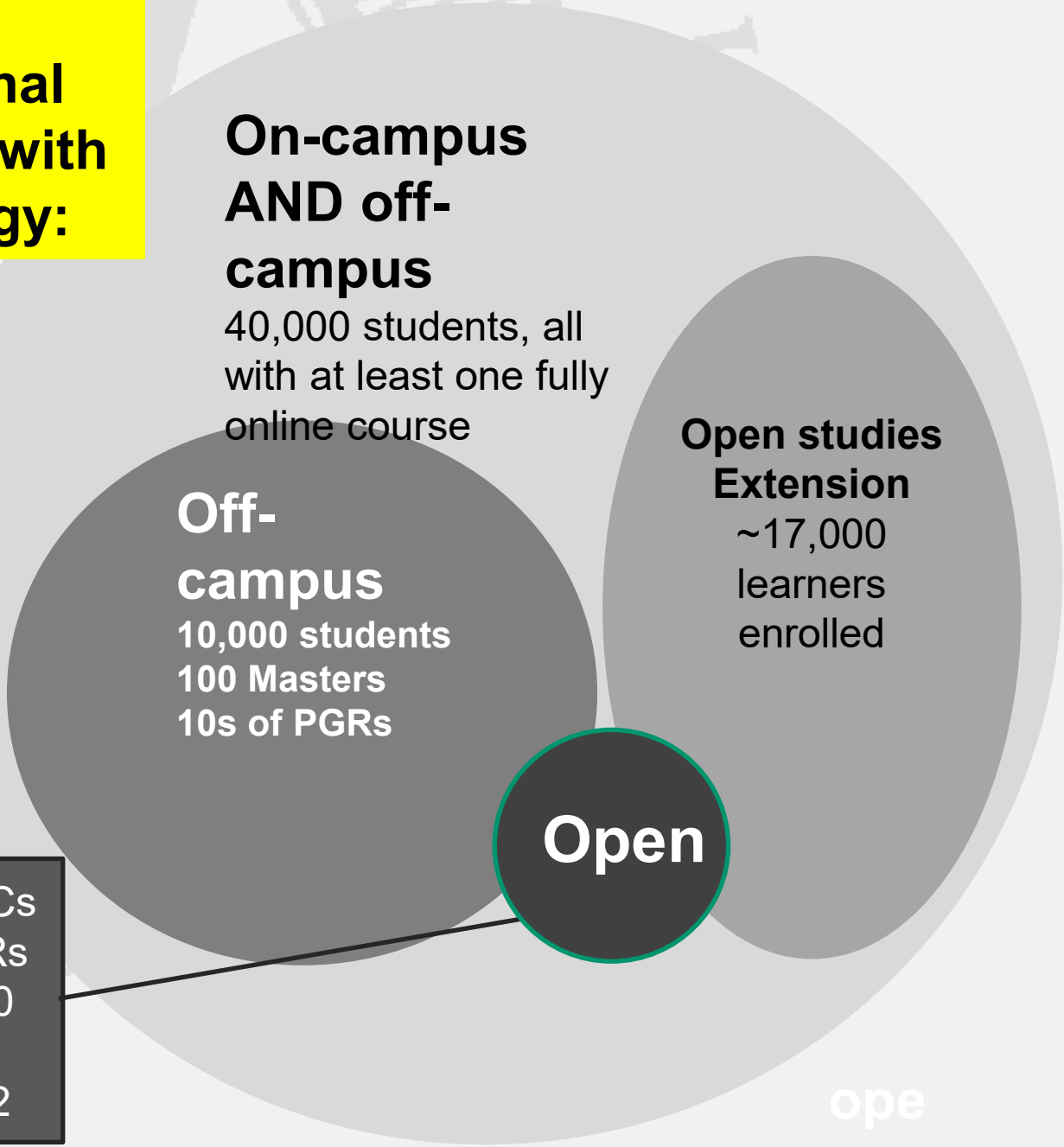
MSc in Primary Care Ophthalmology

This programme aims to provide high standard, flexible learning for the next generation of optometrists and medical and surgical ophthalmologists... more >>

So what does this mean for our mainstream business

- Credit-bearing education to Bachelor, Master and PhD levels, and CPD?
- Both on-campus and off-campus (and hybrid)?

An educational portfolio with technology: c2020



TECHNOLOGY

ope
n

Surprises

- Real-time MOOCs - elections
- Access activity – whole classes
- Continuing MOOC cohorts
- Books from MOOCs
- Driving online Master's recruitment
- Massive reputation boosts
- Successful use of open source
- Data homogeneity around World

Conclusions

- eLearning Not New
- eLearning Now Mature
- Hybrid will be New Normal
- Better to Borrow than do Badly
- Learning at Scale is Real
- Biggest Contribution is Access
- Ecology becoming Richer
- Surprising worldwide similarities

Credits

- Jeff Haywood
- Sian Bayne
- Amy Woodgate
- Eileen Scanlon
- Daphne Koller
- Roy Pea
- Peter Norvig
- Roger Hartley
- Jim Howe