

# Learning from MOOCs – lessons for the future

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# *“Learning Technology and Groundhog Day”*

Terry Mayes, 1995

**Seen it all before**

**It will blow over**

**“a faculty encamped just north of armageddon”**

**Robert Zemsky, “Checklist for Change”**

# Lessons from learning at scale: learners, technologies & directions

- Educational data from MOOCs – pro's & con's
- What have we learned?
- Some technology gaps
- Some new areas to explore

# 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

# “Who studies on MOOCs?”

What have we learned about.... ????

- Age
- Gender
- Country of residence
- Prior educational attainment & subject
- Prior MOOC experience
- Intentions for MOOC study
- Actual MOOC outcomes
- Behaviour on course

**All our analyses are openly available at: <http://moocs.is.ed.ac.uk>**

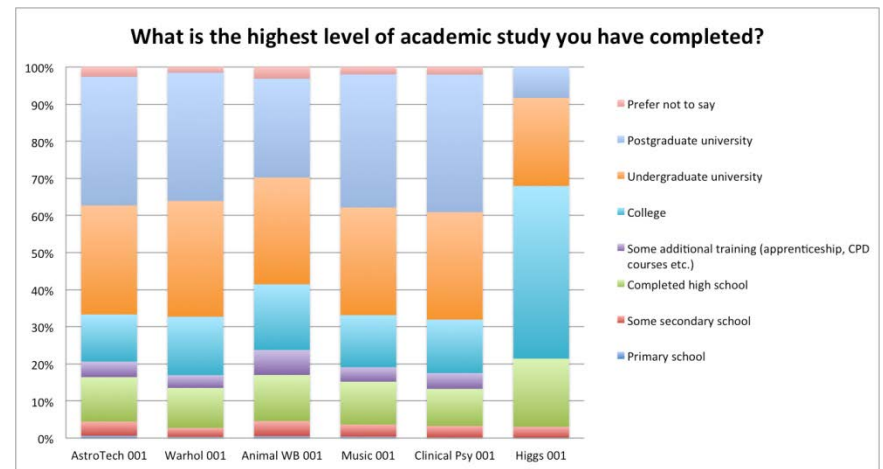
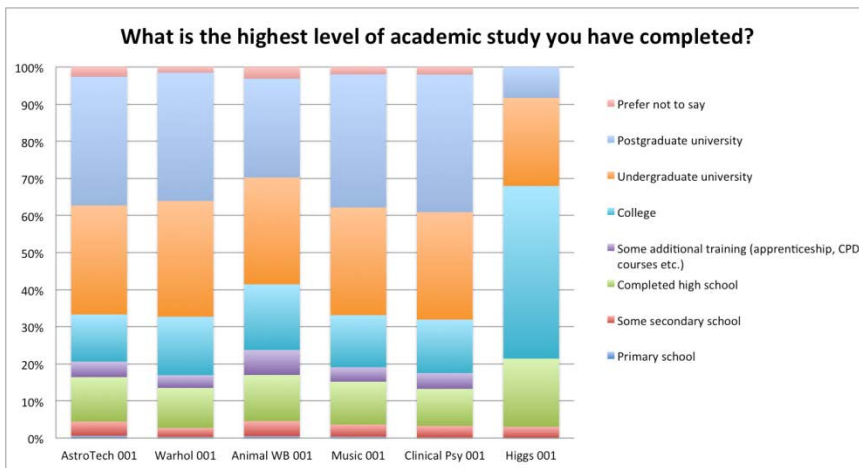
**1.4 million** sign ups - **over 1 million** unique people enrolled  
**10.5 million** video views  
**1.9 million** quizzes submitted  
**667,967** active learners  
**353,934** forum posts made  
**88,845** completion certificates awarded  
**745+** videos made  
**218** countries represented  
**85** academics + **109** TAs involved  
**38** live course iterations  
**24** courses  
**15** academic schools  
**6** core staff  
**2** platforms  
**2.5** years

**DATA....**

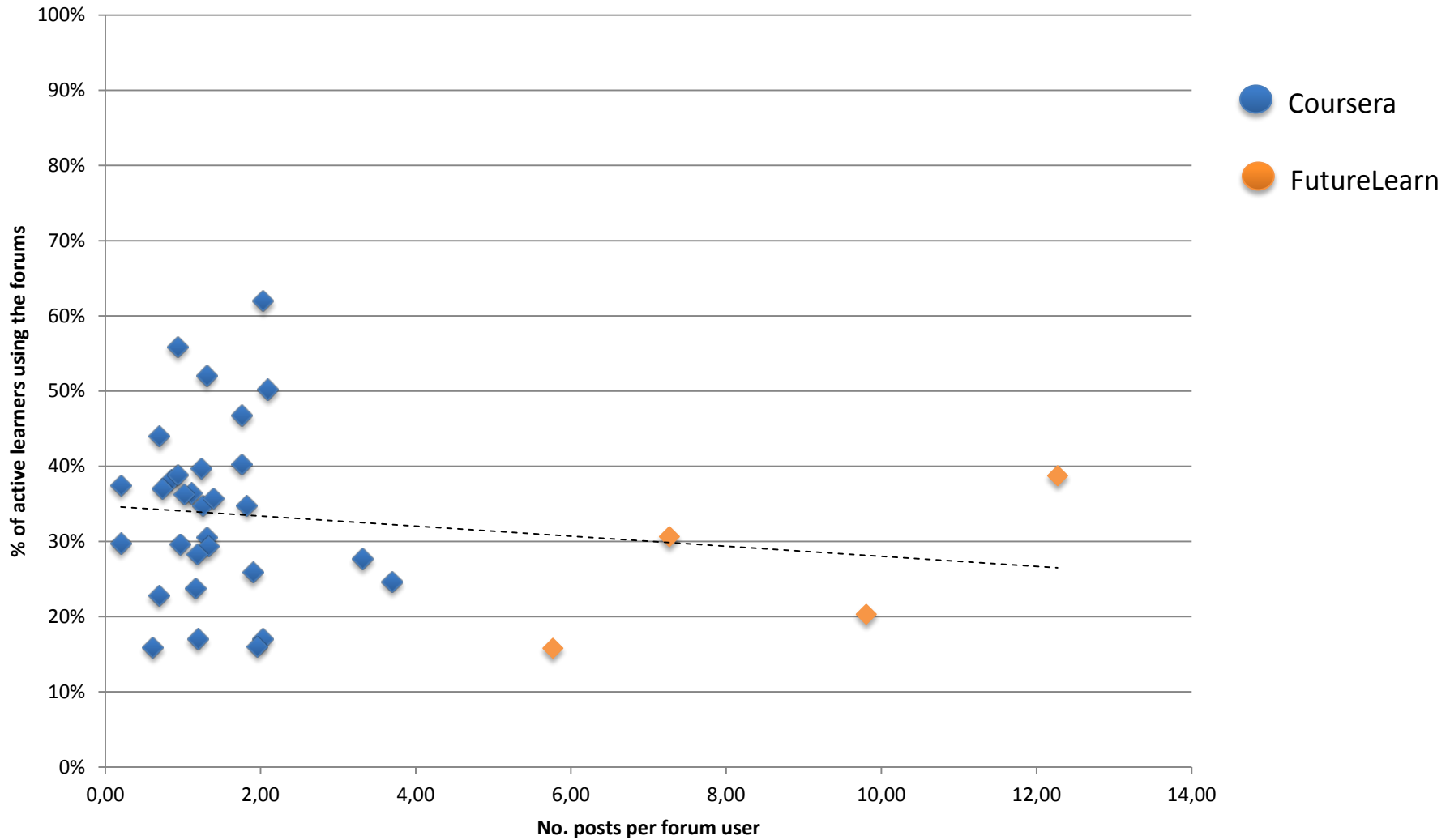
# Futurelearn vs Coursera MOOC data



MOOC platform audiences differ appreciably.....it may be both design and the 'maturity stage' of the platform

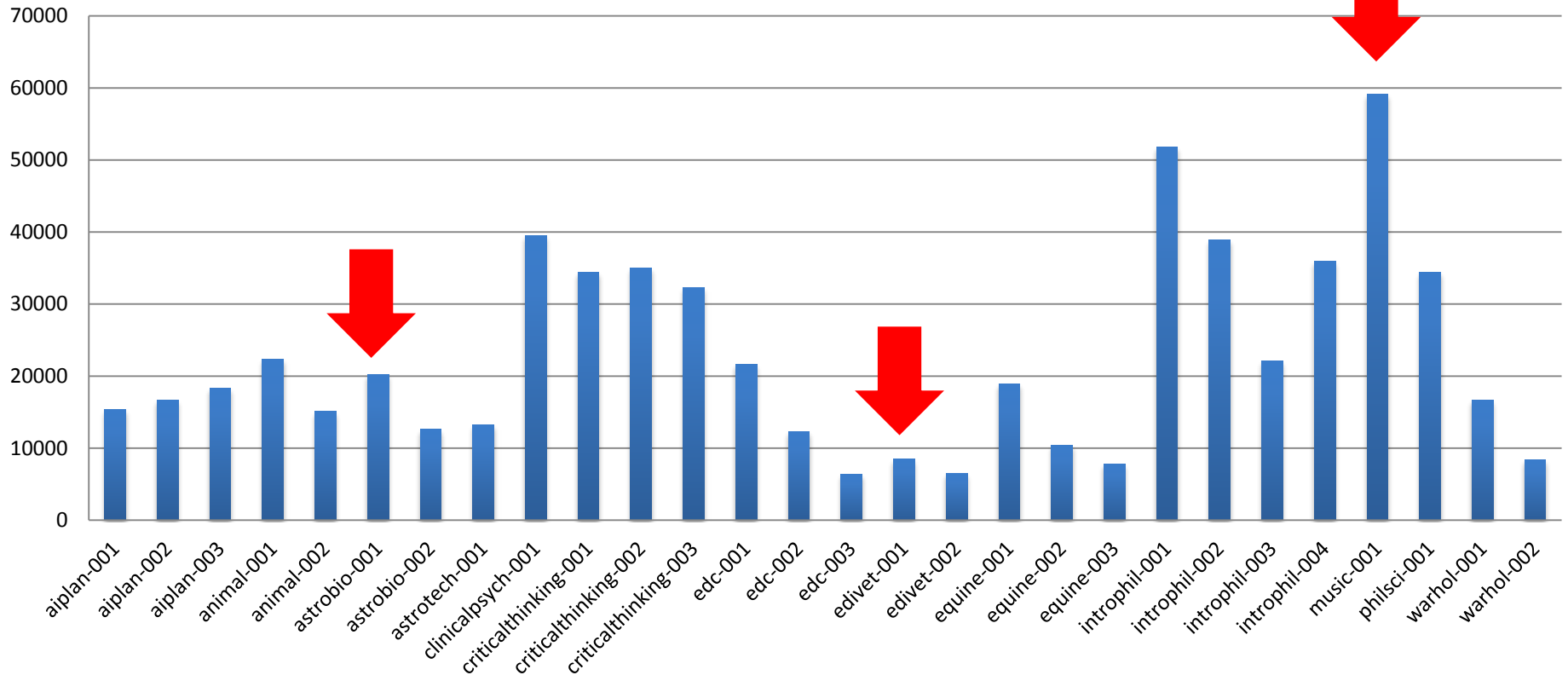


# Forum users per course vs. number of posts per forum user





# Course active participation



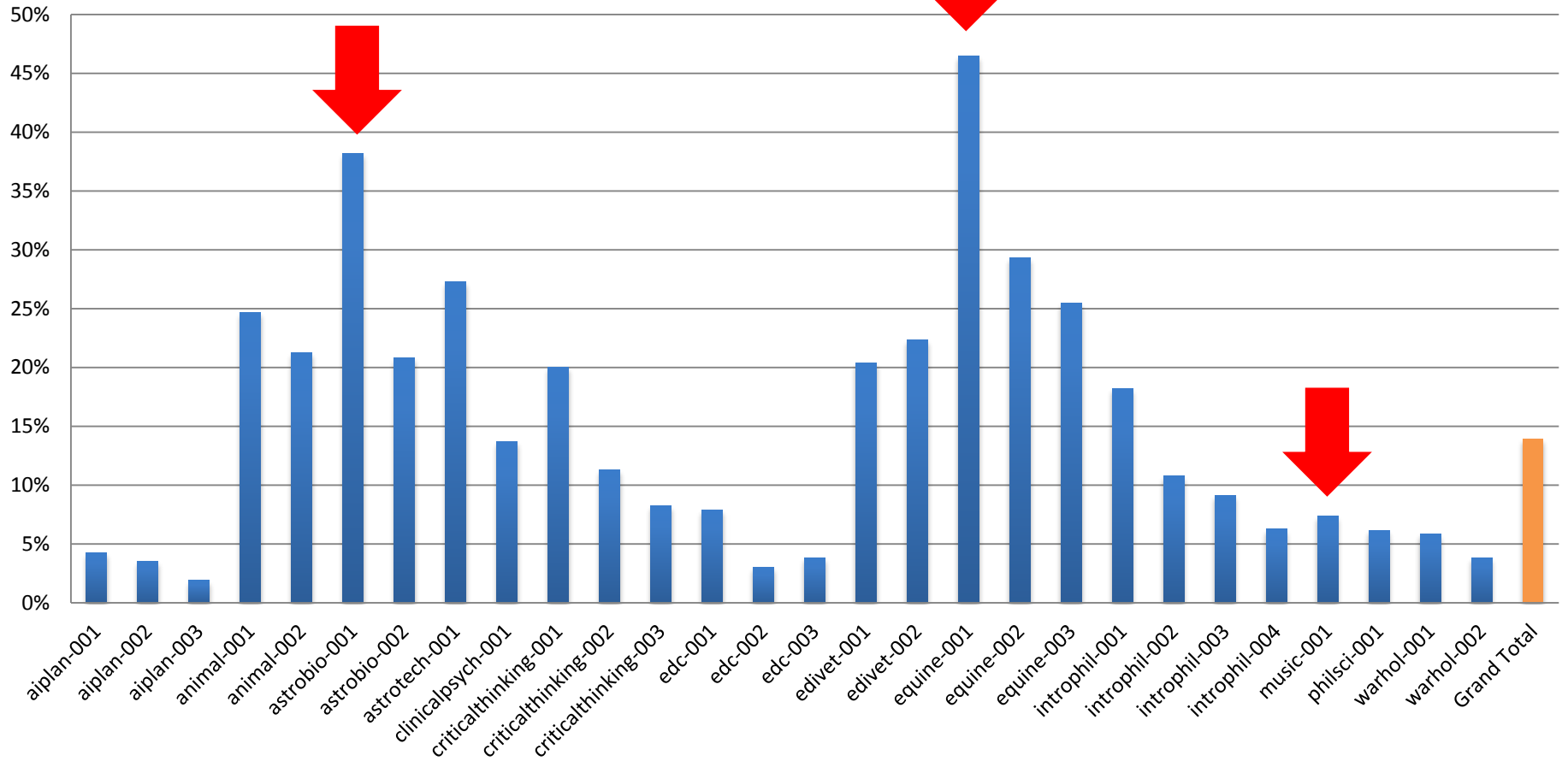
13 courses

28 iterations

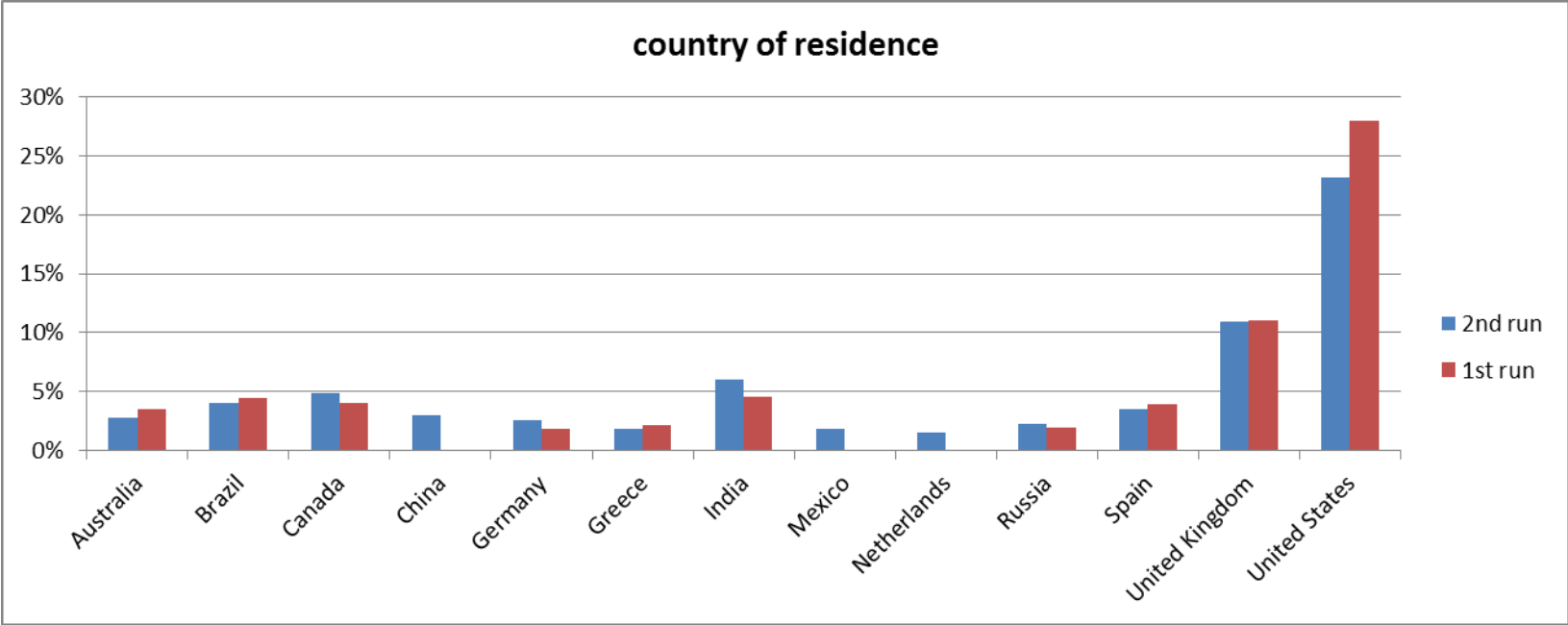
1.1 million sign ups

633,521 active learners

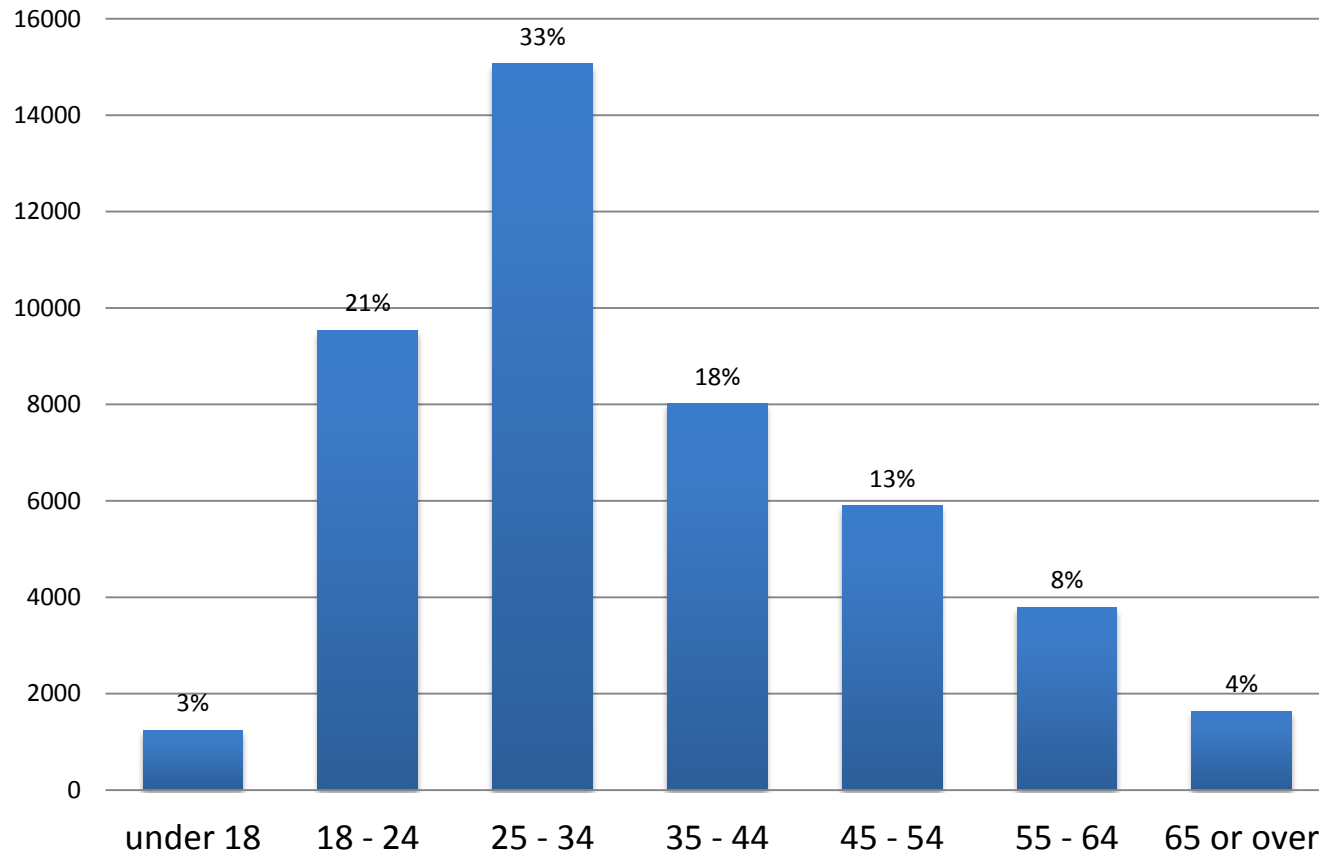
# Certificate attainment



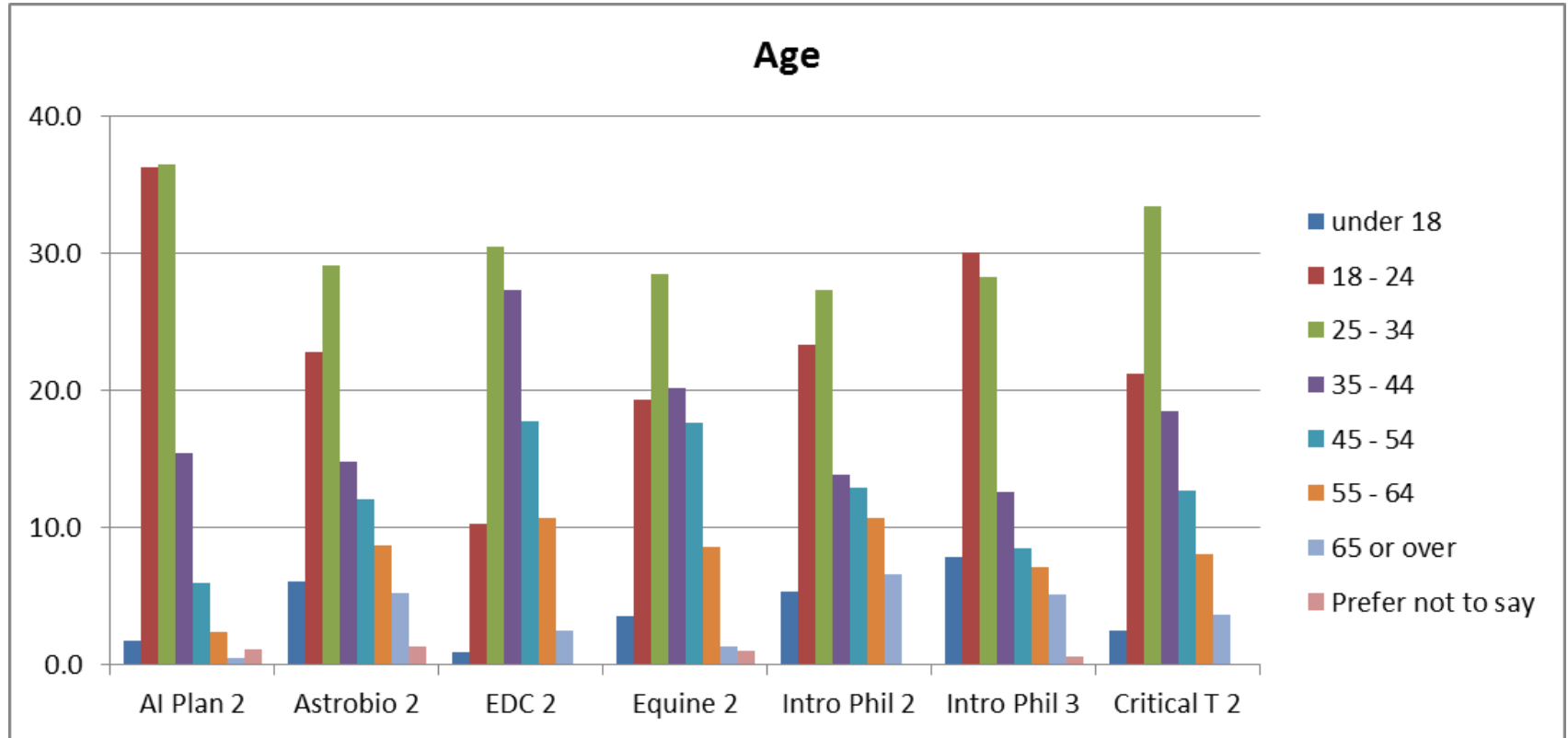
# Top countries supplying learners on 6 Edinburgh MOOCs



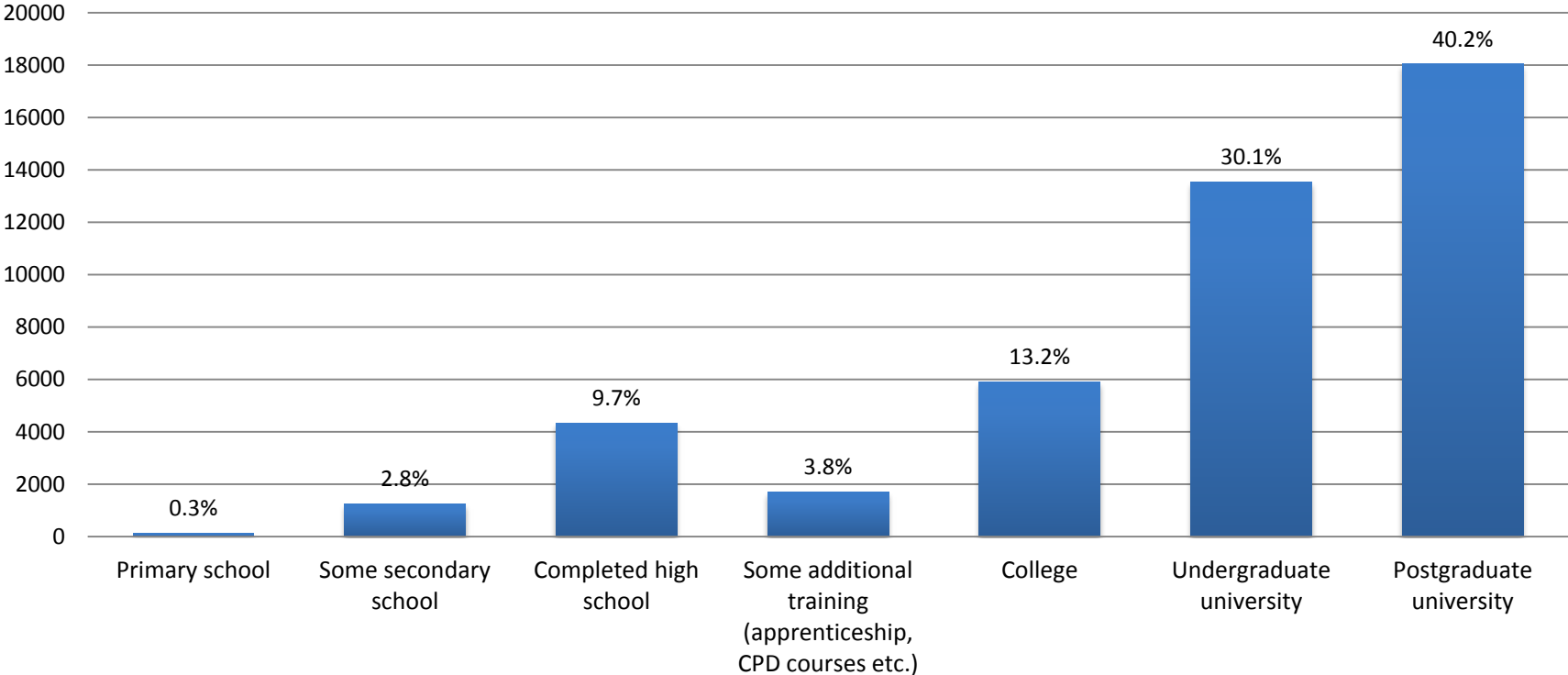
## Age in years



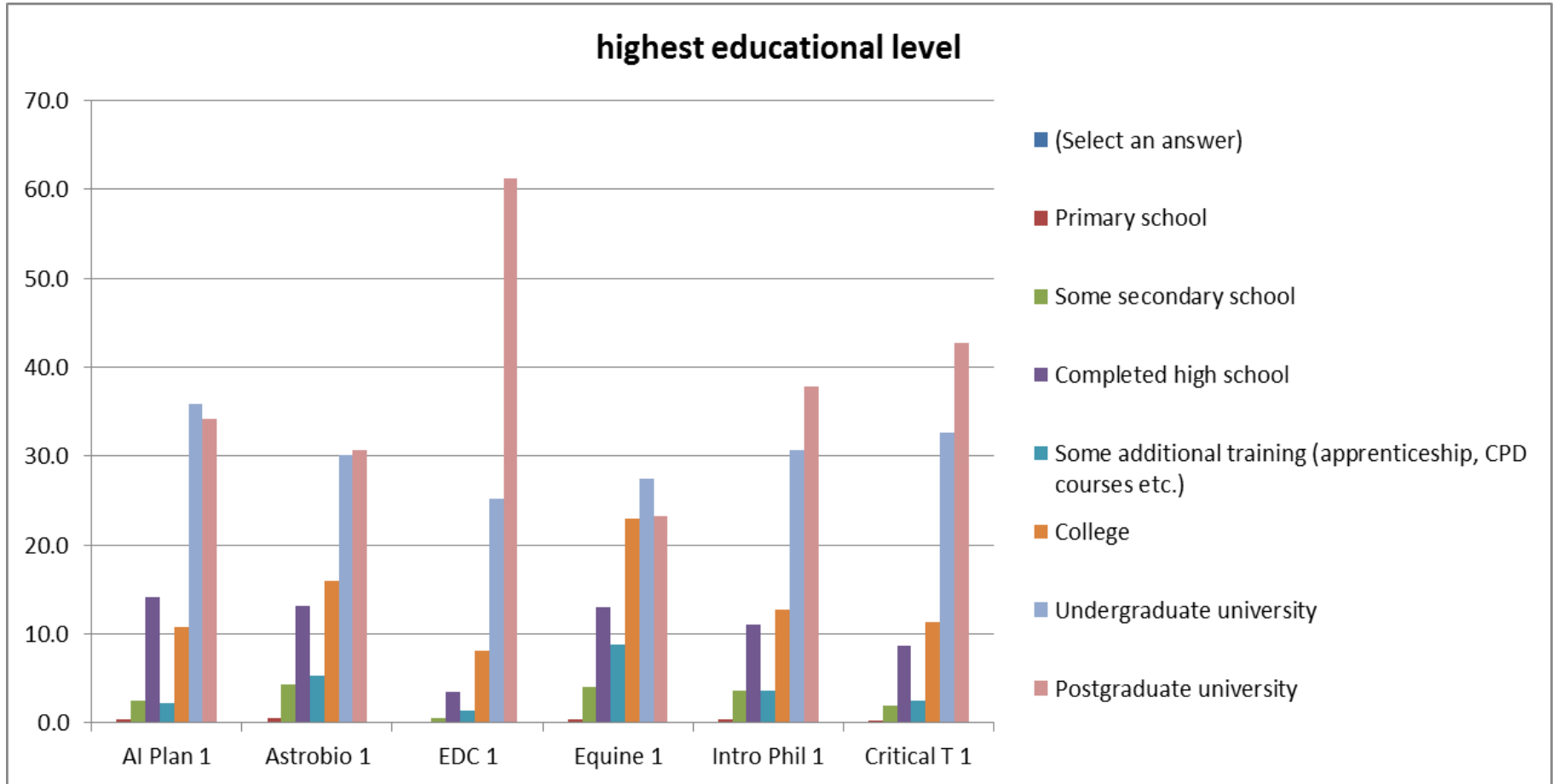
# Age profiles of learners on 6 Edinburgh MOOCs



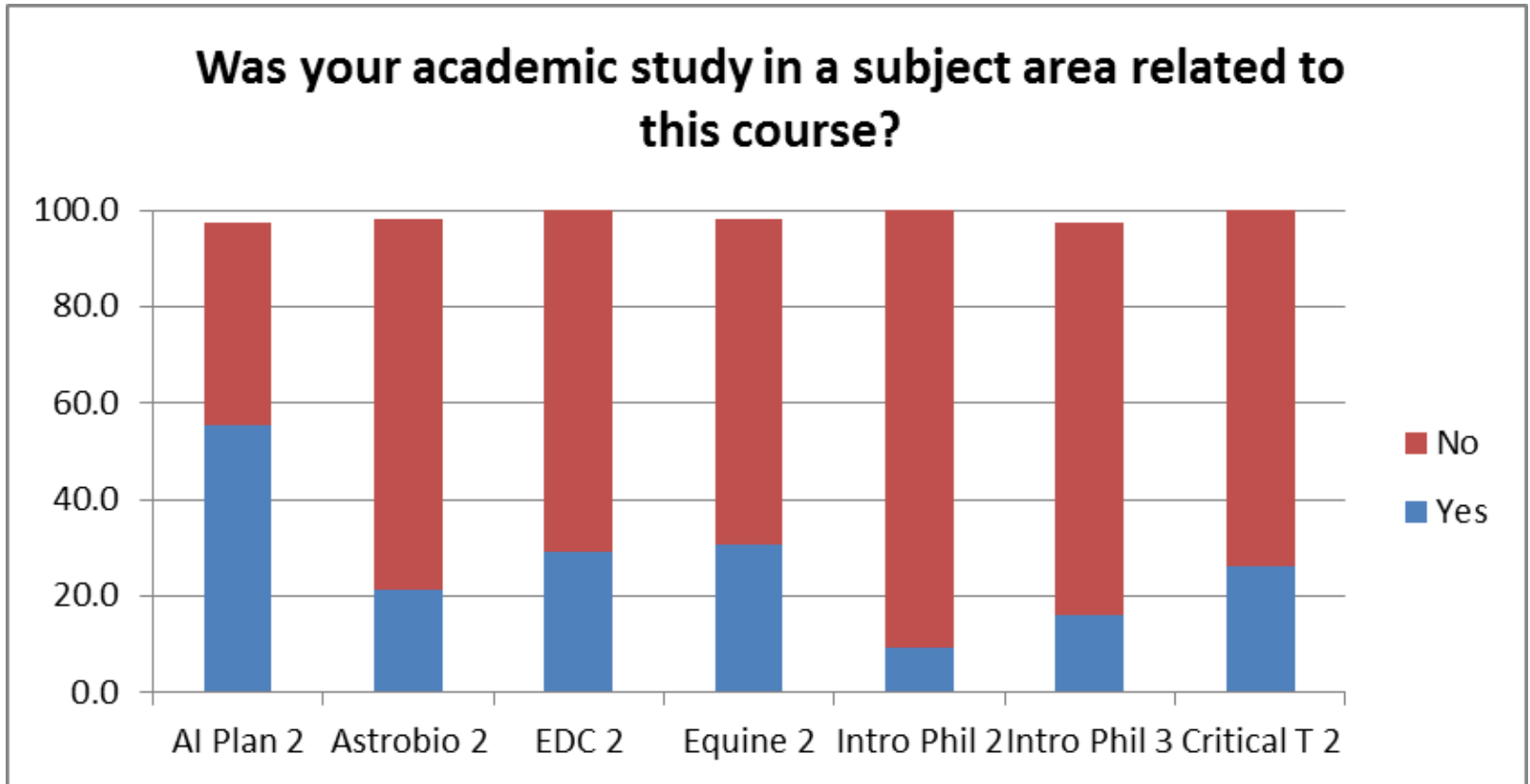
# Highest level of academic study completed



# Educational profiles of learners on 6 Edinburgh MOOCs

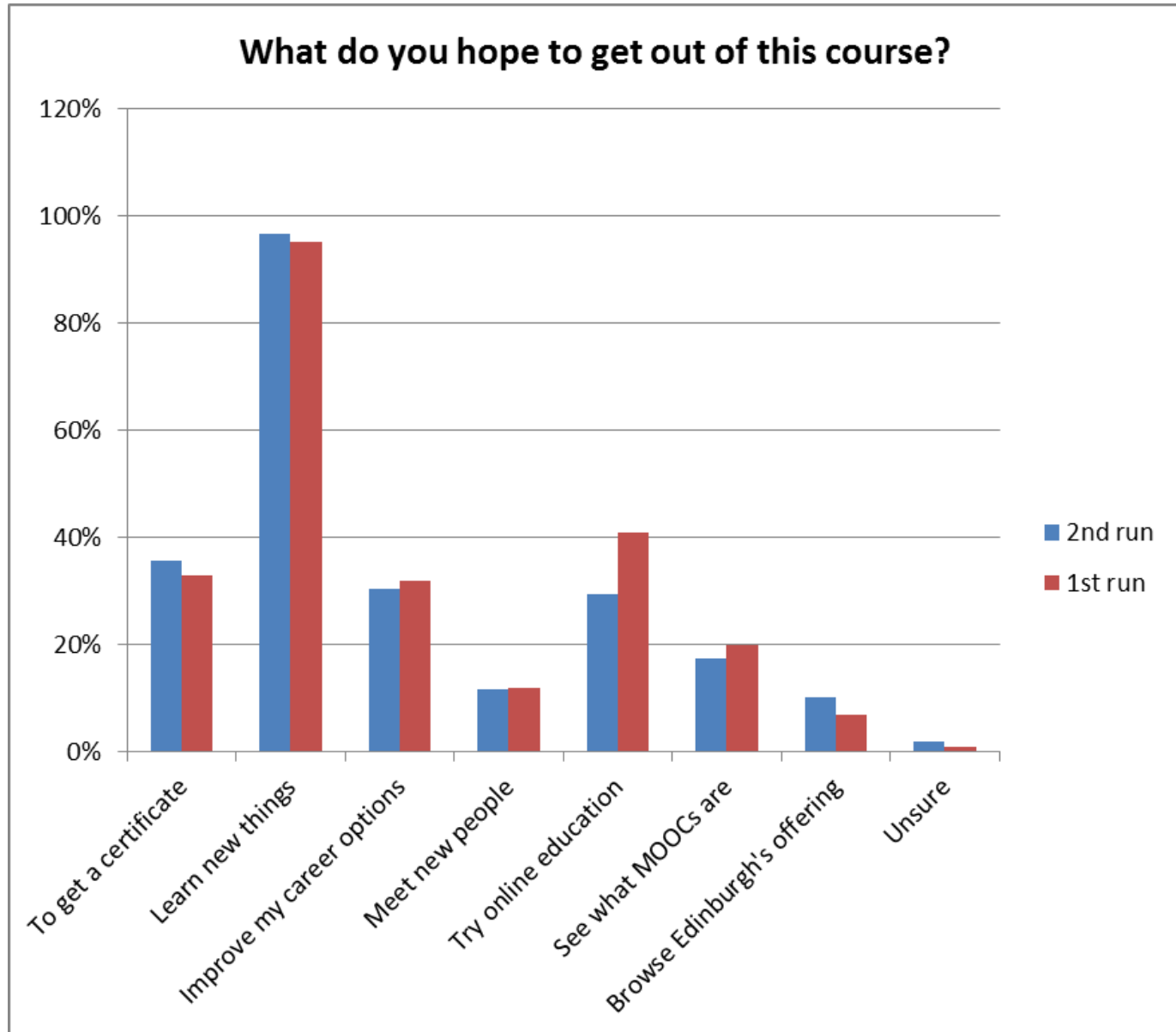


## Prior study subject of learners on 6 Edinburgh MOOCs

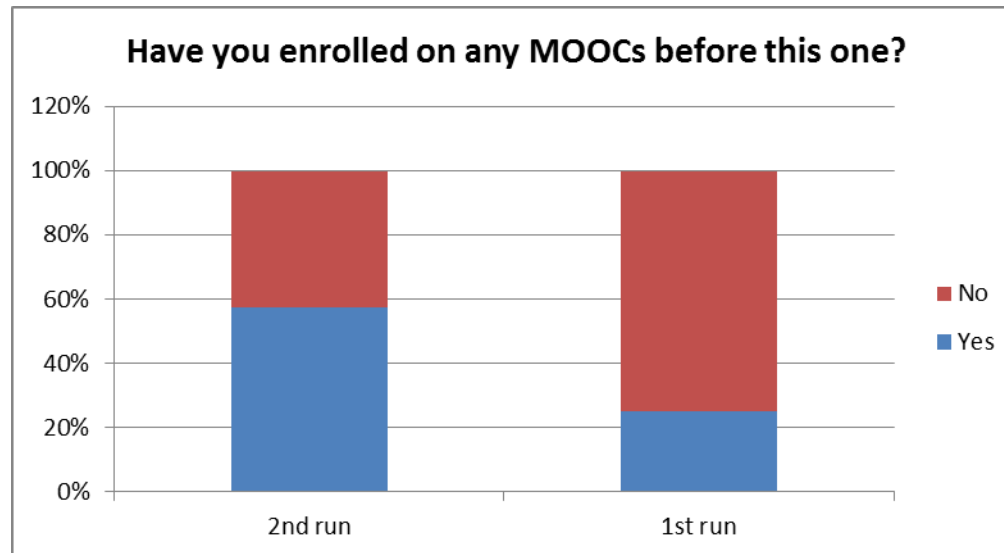




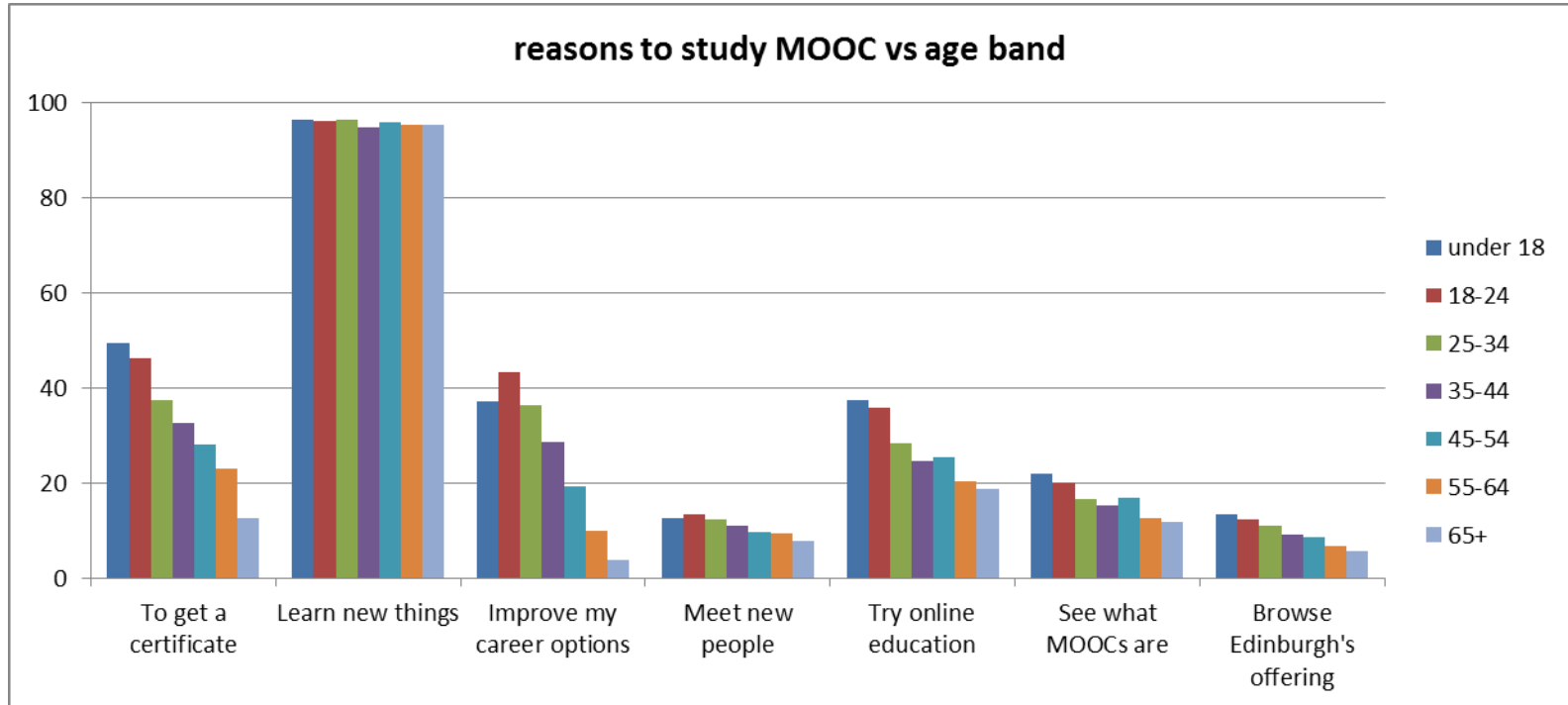
# Reasons for learners to study on 6 Edinburgh MOOCs



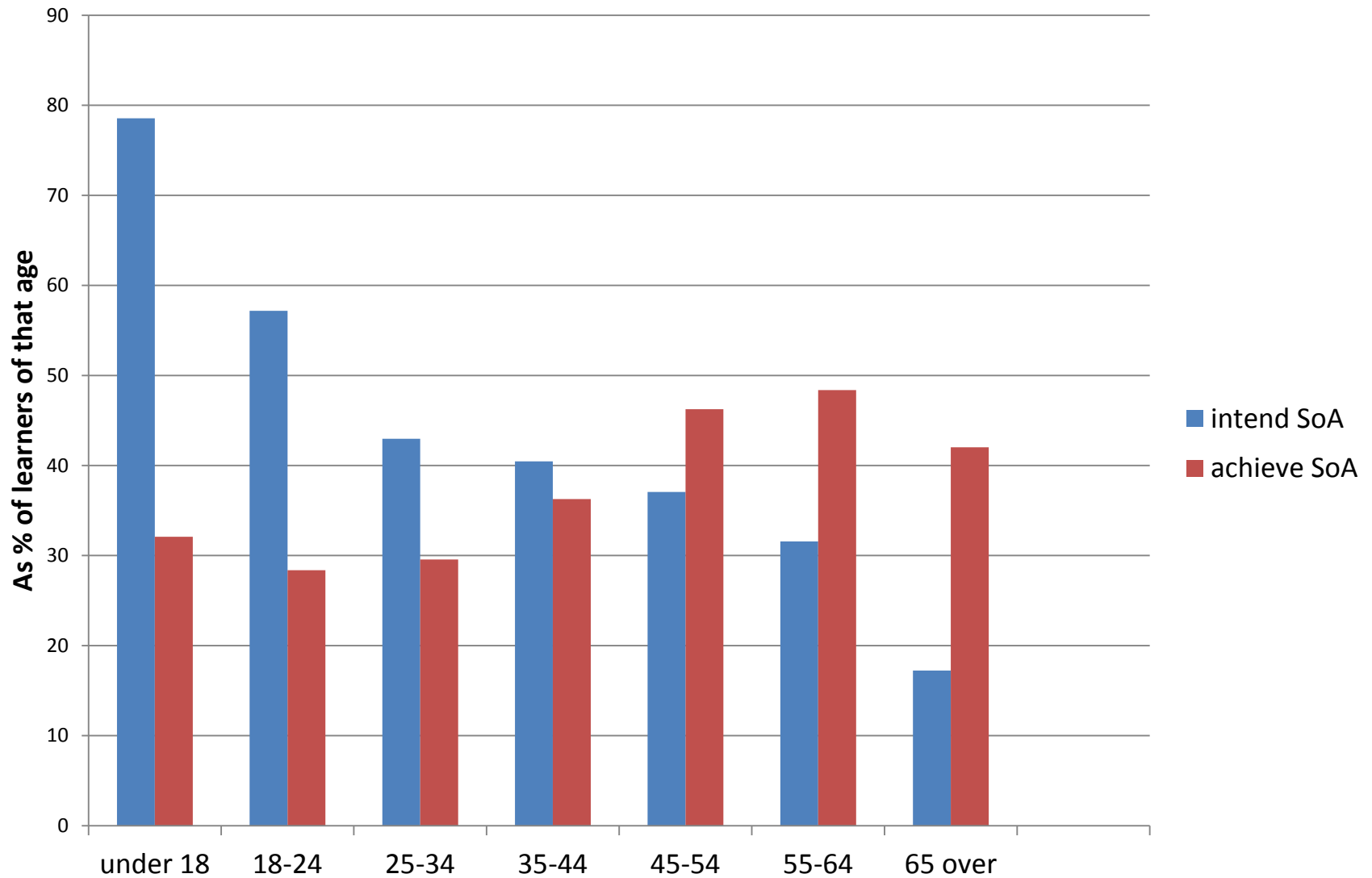
# Increasing repeat study of learners on 6 Edinburgh MOOCs



# Reasons for studying on a MOOC vs age profiles



## SoA intenders & achievers vs age



## 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

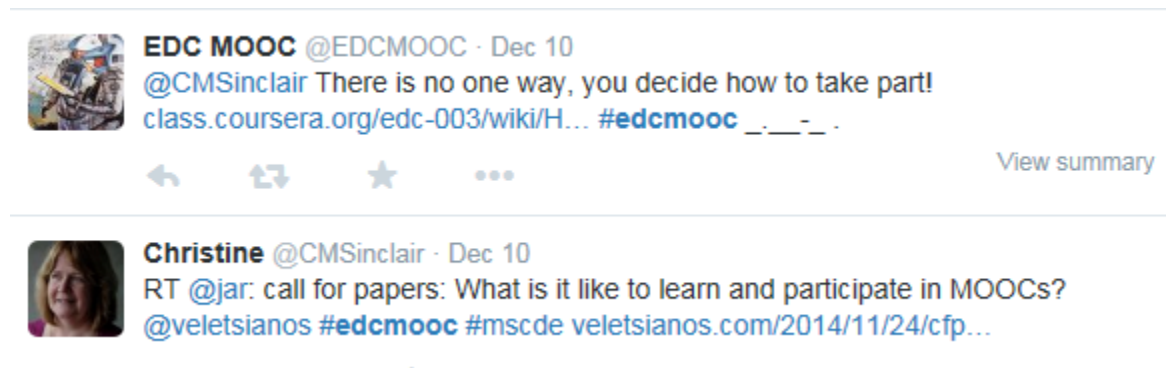
As with all online education, continuous study hard to sustain against external pressures

**Where next?**

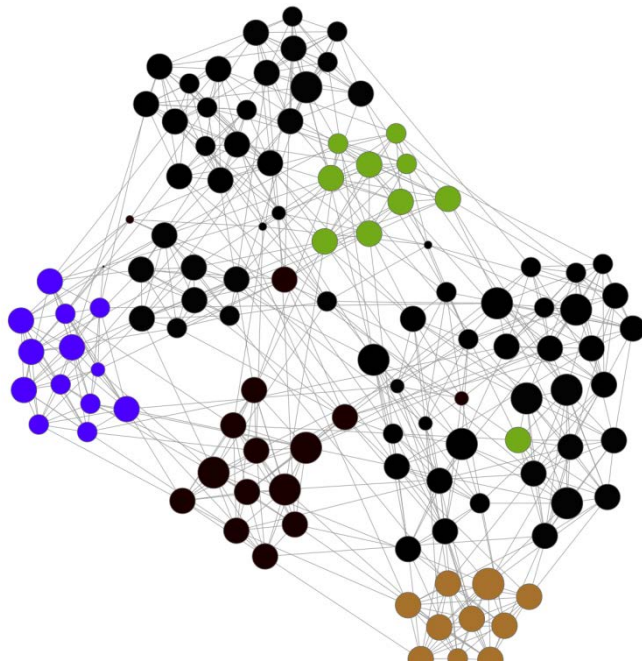
# Teacherbots: addressing mass communications with intelligent answers

Sian Bayne (2015) 'Teacherbot: interventions in automated teaching',  
Teaching in Higher Education 20(4): 455-467

Scanning the MOOC twitterspace for key words and phrases – deadline,  
assignment, lost, unsure.....and giving a teacher pre-prepared response



# Dashboard for quality of online discussion groups



Feb 11, 2015

is (data mining, information visualization) and basic learning background, so as to know what would be useful for learners or iteration of expertise. It's about, so maybe one of these and the ability to collaborate with someone from the Other Side would be a

Feb 11, 2015

I can do it all, and teams are important. Have you seen Andy Kirk's video on the 8 hats of visualization? <http://vimeo.com/44280380>

if context (e.g. business, news services), but I believe some of the roles are analogous in our domain: we need statisticians, comp (of reports), designers/visualization experts, etc. At minimum, a good coverage of the various roles for the uninitiated to analytics

is 8 Hats of Data Visualization Design" or from Orlan IDEAS or on Vimeo or

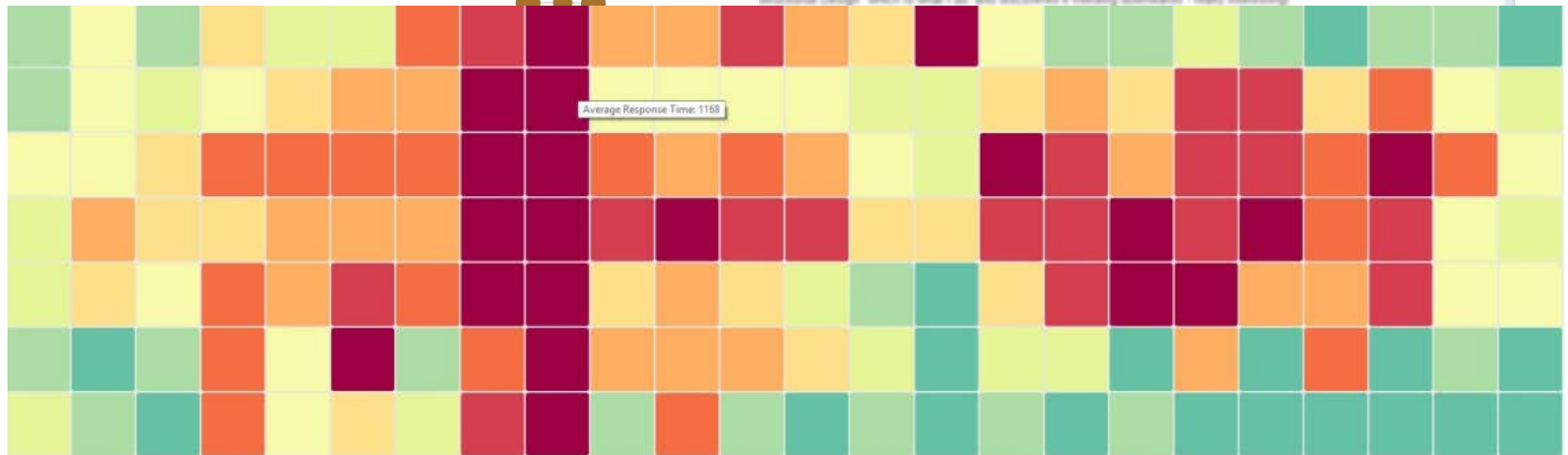
Feb 11, 2015

I

Thanks for sharing it - the google trends is interesting - I searched 2 terms - first "learning analytics" which is no surprise was of interestingly, the largest contributor was India - made me think of the IBM article for this week on India to BE the


A term I used in my post in this thread on Scholarship of Teaching and Learning (SoTL) - and found that 100% of the contributions so I wondered if this area of study is called something else in other parts of the world -


Structural Design" which is what I do, and discovered it heading downwards - really interesting!






# MOOCs & cultural backgrounds of learners

 = 45% non-US

 = 33% non-US

 = 18% non-UK



## MOOC学以致用

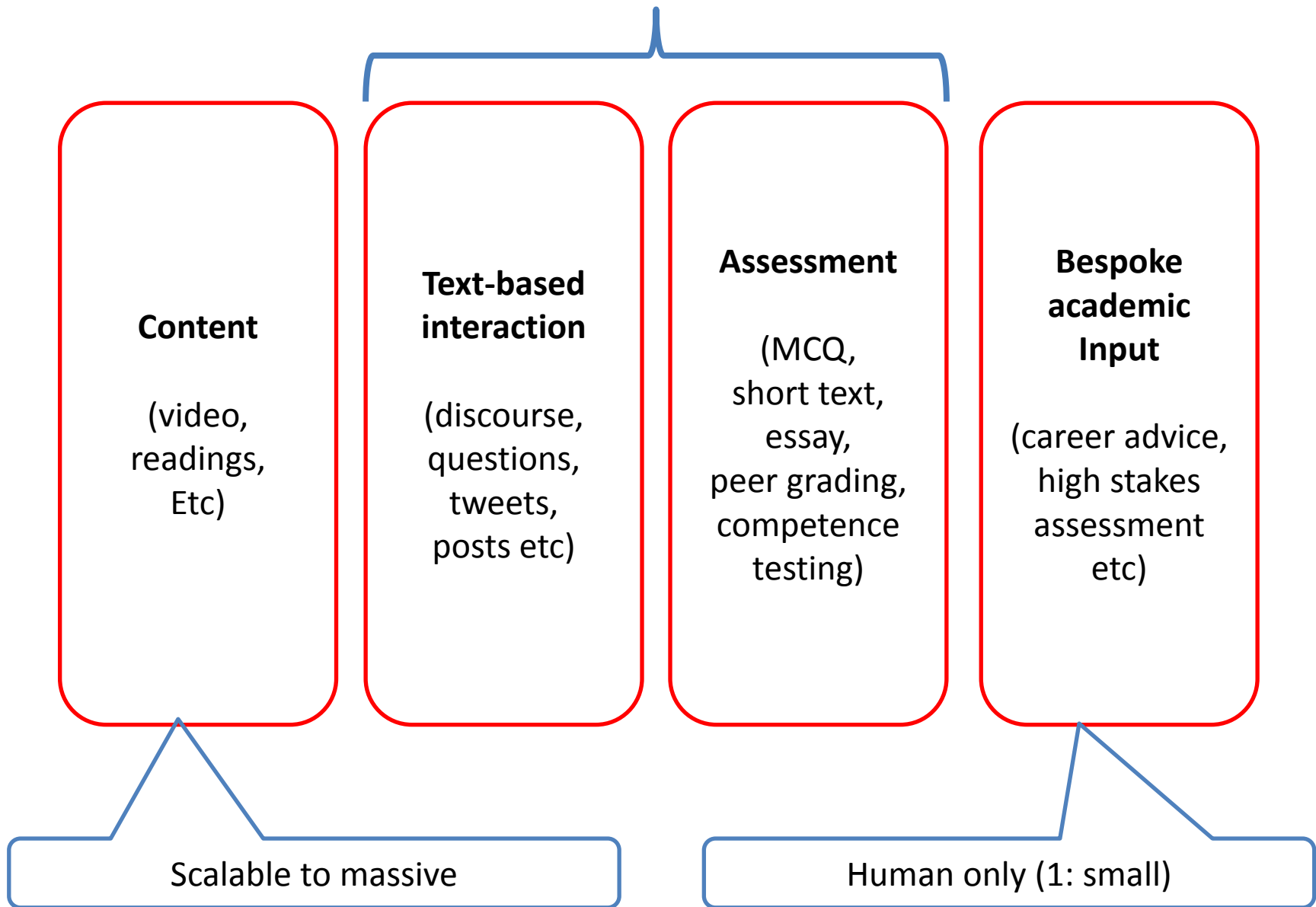
免费学习最好的课程！选择感兴趣的领域，加入课堂，开始学习吧！

# Potential for scaling up with technology??

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

# Potential for scaling up thru technology



**So, where does all this fit with a traditional university re-positioning itself for 2025?**

**An educational portfolio with technology: 2013**

**On-campus**  
30,000 students  
all courses  
since ~1990

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**Open studies  
Extension**  
~17,000  
learners  
enrolled

**LITTLE/NO  
TECHNOLOGY**

**Off-campus**  
2000 students  
50 Masters  
since ~2005

**open**

14 MOOCs  
750k  
learners  
since 2012  
~15 MOOCs  
under construction

**An educational portfolio with technology: c2025**

**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 studies Extension**

~17,000 learners enrolled

**Open**

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

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# Thank you for listening

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