

# Designing PreUniversity Courses to Prepare Students for a University Education

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# Transition

Transition occurs through the whole of the first year at university. But.....

Transition starts when students are ~16-17 years old – possibly earlier.



# Schools worry about.....



Getting students into HE - so getting the right grades.

Meeting expectations of the school and parents.

Lots of recalling information from content-heavy courses for assessments.

# Study looking at retention of knowledge from school

Five universities

(UEA, Leicester, Bristol, Birmingham, Cardiff)

All Bioscience Schools

594 first year students  
before any HE teaching

An MCQ of 38 questions  
on four areas of biology



# General findings

The mean score ( $\pm$  SD) for the test across all students was  $15.75 \pm 5.15$ ,

equivalent to 41.4%

ranging from 0/38 to 30/38.



# Comparison of student A level grade with mean test score

<b>Grade at A level biology</b>	<b>% pupils achieving the grade</b>	<b>Mean score/38 on test <math>\pm</math> S.D.</b>
<b>A*</b>	9.04	18.8 $\pm$ 4.86
<b>A</b>	49.41	17.1 $\pm$ 4.70
<b>B</b>	37.91	15.7 $\pm$ 4.32
<b>C</b>	3.40	14.0 $\pm$ 3.84
<b>D</b>	0.23	11.0

# Can we improve the transition?

School exams content heavy but they don't remember the content.

UK exam system does not encourage or reward curiosity or independent thinking.

Schools and exam boards are aware of the skills gap and would like to help students.



Pre-university courses can help students develop skills for HE.

# PreUniversity Skills Programme



MOOC – massive online open access course  
Preparing for University

PreUniversity Skills course – CPD training for school  
teachers

Skills for Uni – residential course for students before  
they get to university



# MOOCs

Can reach an international audience

First run ~50:50 UK:international

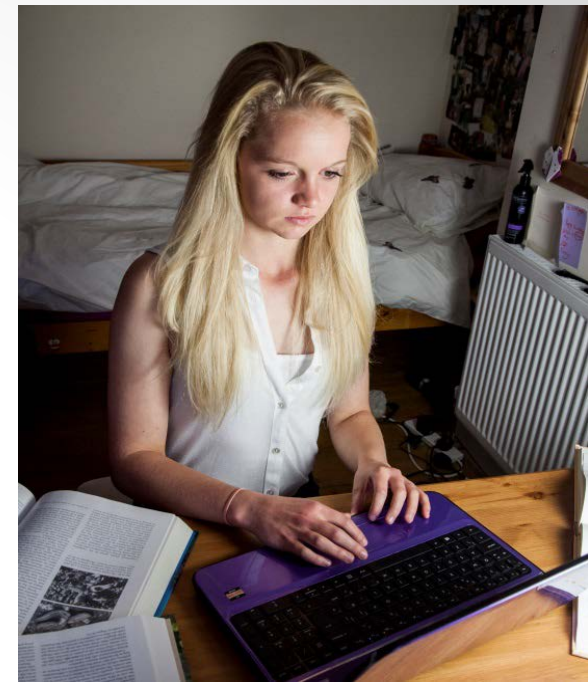
Students: 111 different countries.

Can be adapted by the end user to fit with their life-style.

Can work on a very large scale – more people in one run than a life time of lecturing.

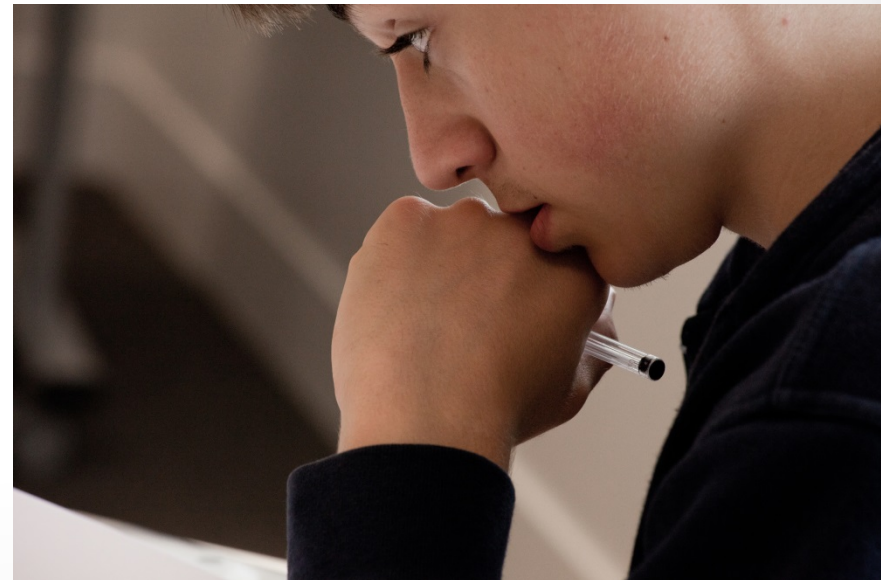
Futurelearn uses social media to facilitate interaction with users of the MOOC, so lots of feedback.

Schools can use it to encourage independent learning.



# How the MOOC tackles the skills gap

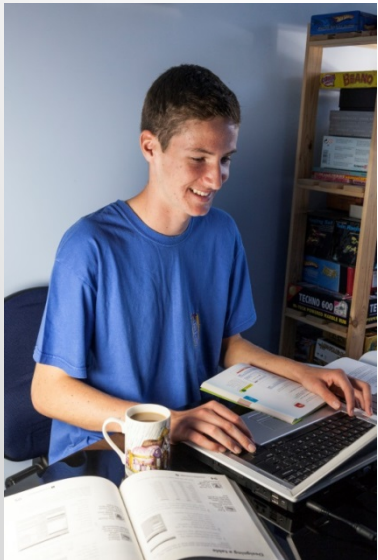
- Asking questions
- Working independently
- Referencing
- Data analysis
- Textual Analysis
- Structure



# Creating and running the 'Preparing for Uni' MOOC



Huge amount of work - 10 months from start to finish. Requires lots of resources



- Futurelearn courses involve social media
- Weekly e-mails to participants

Daily answering questions and responding to comments gives instant feedback and many comments interesting to read.



# Evaluating success

5,815 signed up  
874 completed on-line

Online evaluations very positive. But..... we don't know what is going on in schools.



Whole sixth forms signed up but they are not engaging interactively with the course itself and they are not completing the on-line evaluation forms.

# Following on from the MOOC

## PreUniversity Skills Course

[www.preuniversityskills.com](http://www.preuniversityskills.com)

Trains school teachers to teach an 8 lesson course to their school pupils

- The academic process
- Independent, interrogative study
- Referencing and plagiarism
- Handling primary material
- Synthesis of material
- Note taking
- Structuring writing



Data are showing that it helps with their A level tariff score.

# Skills for Uni Residential Course

[www.skillsforuni.com](http://www.skillsforuni.com)



Shows students:

- exactly what lecturers are looking for in a good student.
- how to cope in a university environment

Skills are around developing and supporting arguments.



# Studying perceptions of school pupils of university

To develop a successful transition programme once they arrive in HE you need to have some understanding of what they are expecting.

## Perceptions and practice in assessment and feedback

This study was an HEA-funded project, carried out in 2006/7  
Full report published in 2009  
Follow up study in progress.



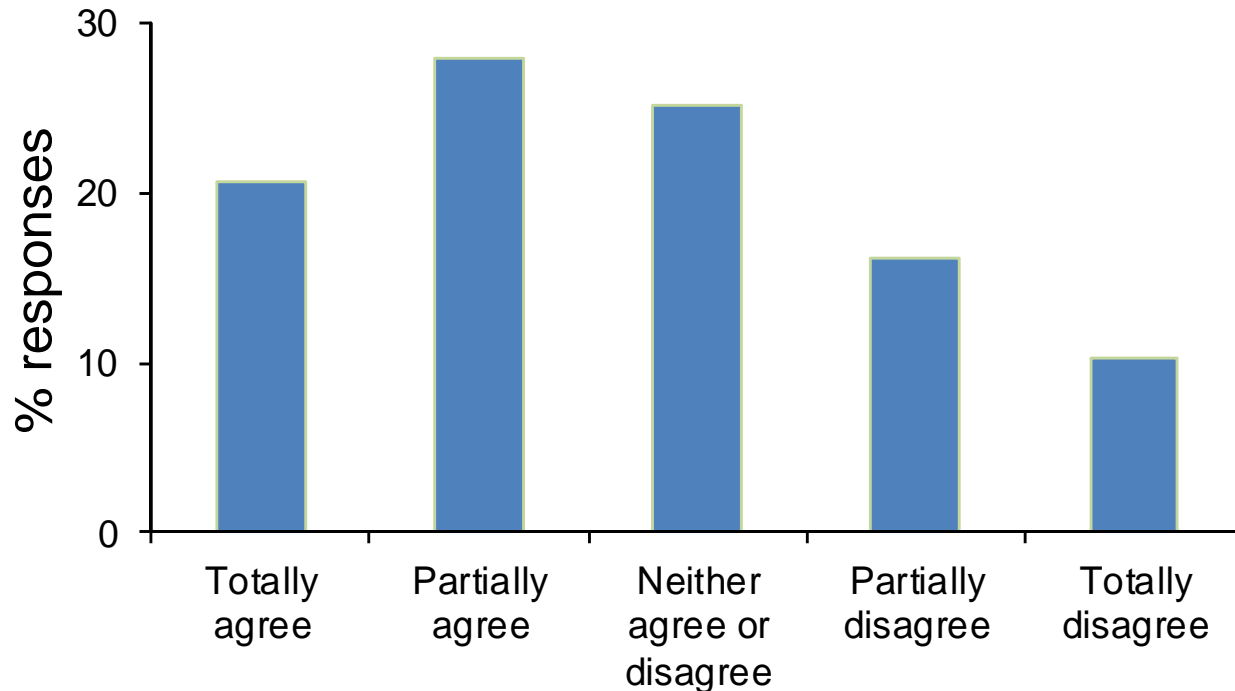
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# Student perception of university study

Percentage pupil response to the question:

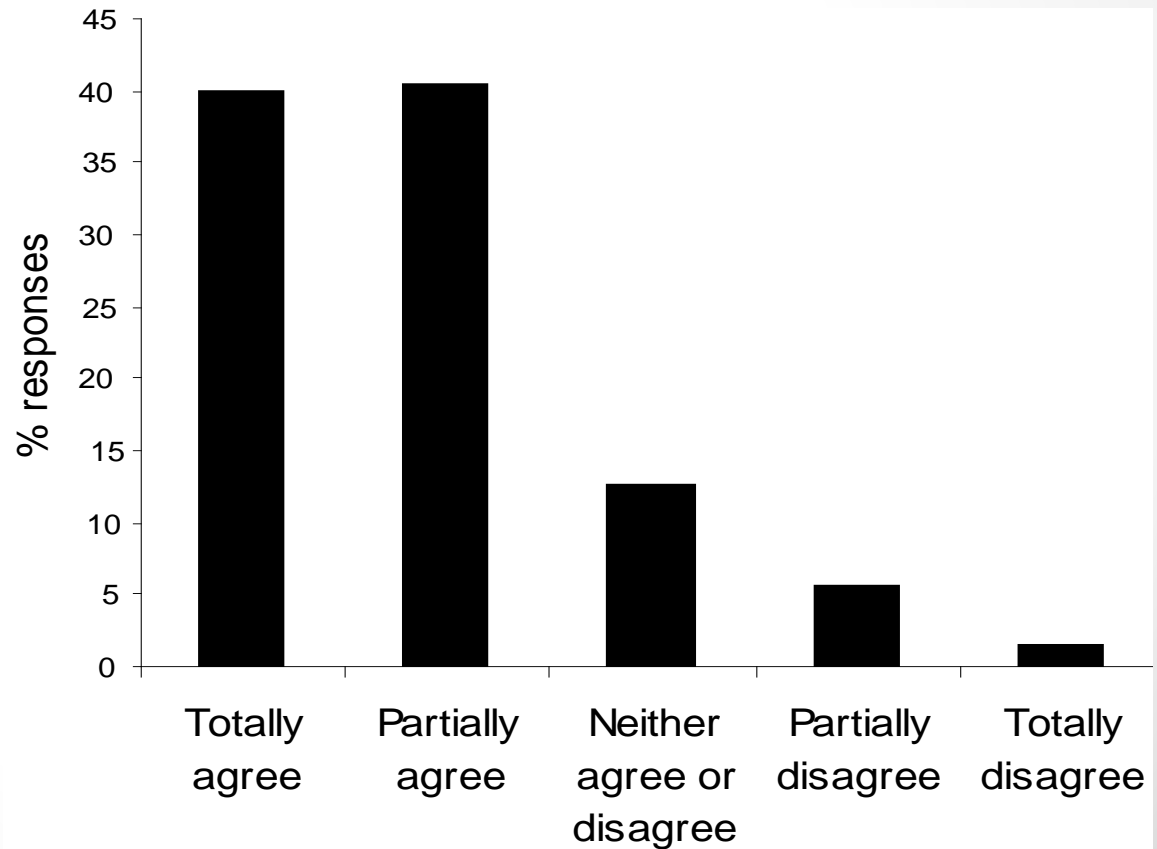
'When an essay is set I expect the university lecturer to read and correct a draft of the work before a final version is assessed.'





# Student perceptions about feedback at university

Percentage pupil response to the question:  
'I expect to have some personal verbal feedback about how I have done in an assignment.'



# Giving an induction talk in reaction to their perceptions

% undergraduates who answered 'yes' to the question: 'In general were you expecting more feedback to your coursework than you received?'

University	1 <sup>st</sup> yr undergraduates	2 <sup>nd</sup> yr undergraduates
A	43.8	50.6
B	47.0	56.9
C	68.4	82.5
D	43.5	48.7

2<sup>nd</sup> yrs were the control group who were not given a talk at induction.

# Addressing expectations through formative work

Can use formative work in the first year to address expectations and develop an HE-learning approach.

No 'dumbing down' is necessary.

Can push students on – allow them to explore the literature and re-learn the art of questioning through formative work.



# Demonstrating the power of formative work

Percentage of students engaging with the formative exercises and their final mark

Number of formative exercises engaged with	% students (n=116)	Mean mark for summative assignment (%)
0	1.7	58.5
1	2.6	60.1
2	25.0	59.6
<b>3</b>	<b>70.7</b>	<b>66.3*</b>

\* Significantly different to other mean marks ( $p < 0.001$ )

# The transition to HE

Starts early on in pre-university education.

MOOCs are a great way to reach many students pre-university and they also encourage independent study.

It is important to understand strengths and limitations of school study to address the skills gap effectively.

Understanding students perceptions of university study can help with induction and first year teaching.



# Acknowledgements

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College

