

# Inspiring teaching, inspiring learning: How we prepare learners for a lifetime of learning



## Cambridge Schools Conference

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# Welcome to Cambridge

- ▶ 200 + teachers, educators, educational policy makers
- ▶ Primary – Secondary, all disciplines
- ▶ From: Albania, Argentina, Bahrain, Bangladesh, Bolivia, China, Colombia, Denmark, Egypt, Germany, Ghana, India, Indonesia, Isle of Man, Italy, Ivory Coast, Latvia, Malaysia, Nigeria, Pakistan, Portugal, Qatar, Romania, Saudi Arabia, Serbia, South Africa, Spain, Sweden, Switzerland, Thailand, The Gambia, The Netherlands, Turkey, United Kingdom, Uruguay, Vietnam, Zimbabwe.



## Inspiring teaching, inspiring learning: How we prepare learners for a lifetime of learning

### Central Questions:

- ▶ What does excellent teaching and learning look like?
- ▶ How can I improve my own teaching practice?
- ▶ What is learning how to learn and how can it be infused in my own teaching?
- ▶ What can I learn from teachers of other disciplines [as well as my own]?

### Also:

- ▶ Consider other areas of educational interest with participants and establish new connections
- ▶ Attend various optional meetings and presentations
- ▶ Learn about developments in Cambridge qualifications.

### For Cambridge:

- ▶ How can we improve the support we provide to schools?

## Learning?

*The Times 25<sup>th</sup> June 2014*

# Most freshers have forgotten what they learnt

**Nicola Woolcock**

University freshers struggle to remember most of their A-level course, according to a study published today.

Researchers tested nearly 600 students at five universities in their first week and found that even A-grade students could remember only two fifths of the A-level syllabus. They blamed schools “teaching to the test”

for the undergraduates’ failings. Since many degree courses build on knowledge learnt at school, it suggests some students may struggle at university.

Harriet Jones, of the University of East Anglia, the lead researcher, said: “What our research shows is that students are arriving at university with fantastic A-level grades, but having forgotten much of what they actually learnt for their exams. This is undoubt-

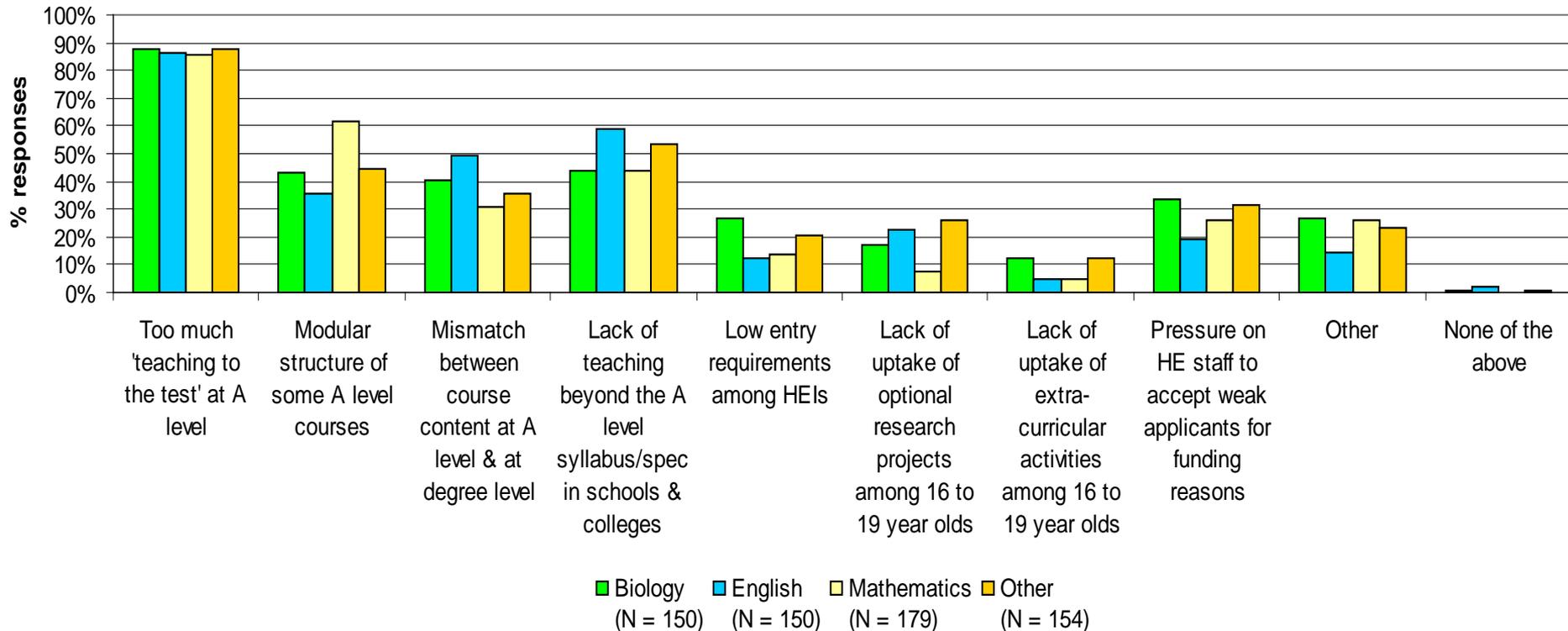
edly a problem caused by secondary schools gearing all of their teaching towards students doing well in exams, in order to achieve league-table success.”

Academics tested 594 first-year bio-science students at Birmingham, Bristol, Cardiff, Leicester and East Anglia. Almost all had a grade A at A level. Given 50 minutes to answer 38 multiple-choice questions, they answered 40 per cent correctly on average.

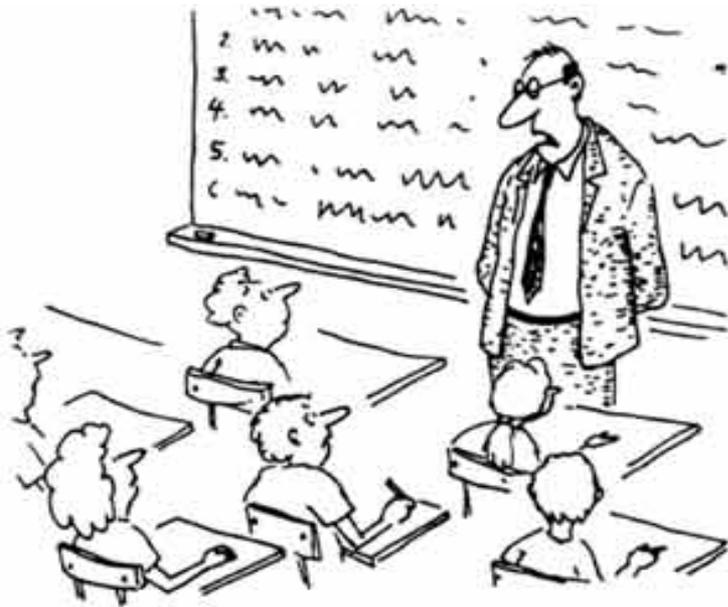
## Which of the following, if any, are contributing factors to 1st year undergraduates being underprepared for degree level study?

**Too much 'teaching to the test' is considered a major factor contributing to undergraduates being underprepared**

Source: Cambridge Assessment Research Division Study 2012



# Independent Learners?



*"I expect you all to be independent, innovative, critical thinkers who will do exactly as I say!"*



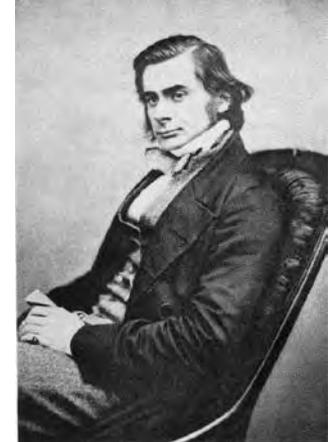
# Examinations



*“Students work to pass, not to know;  
they do pass, and they don’t know.”*

*“Examinations make good servants,  
and poor masters.”*

**T H Huxley, 1860**



# Inspiring Learning

Learning involves a process of making meaning which is:

- ▶ incorporated into prior knowledge
- ▶ “... a significant change in capability or understanding”
- ▶ Deeper forms of learning modify previous understanding
- ▶ transfer to new situations

Adapted from the introduction to *Testing Times: the uses and abuses of assessment*. Gordon Stobart. Abingdon. Routledge. 2008

- ▶ Learning is not a disembodied rational process, it is embedded in emotional functions [Immordino-Yang and Damasio [2007] We feel, therefore we learn. *Mind Brain and Education* Vol 1. No.1. Blackwell publishing.
- ▶ Learning requires effort , practice and resilience
- ▶ Learning is a never ending spiral into deeper levels of understanding requiring more competence to handle complexity
- ▶ Previous mental models *need to be constantly challenged*



# 1. Focus on a learning rather than a performance orientation

Source: Watkins, C. [2010] Learning Performance and Improvement. *Research Matters*. The London Centre for Leadership in Learning issue 34, summer 2010. [www.ioe.ac.uk/insi](http://www.ioe.ac.uk/insi)

We need to challenge and change culture

From	To
Proving Competence	Improving Competence
Performance orientation	<b>Learning Orientation</b>
'Looking good'	'Learning Well'
	Making Learning an object of attention, conversation and reflection

*“Students with more elaborated conceptions of learning perform better in public examinations”*

*“The evidence leads to the conclusion that learning about learning is a practically viable and educationally important strategy which also has the effect of improving performance”*

## 2. Nurture creativity, critical thinking and learning how to learn in all disciplines

*“Creativity is possible in every discipline and should be promoted throughout the whole of education”* [Ken Robinson, 2011]

Three related ideas:

1. **Imagination:** process of bringing to mind things that are not present to our senses
2. **Creativity:** the process of developing original ideas that have value
3. **Innovation:** the process of putting new ideas into practice



### 3. Focus on understanding: The importance of selective depth

*“Coverage is the enemy of understanding”*[Howard Gardner]

*“The most important thing I found out from [my father] is that if you asked any question and pursued it deeply enough, then at the end there was a glorious discovery of a general and beautiful kind.”* Source: Richard Feynman (1994) No Ordinary Genius



## 4. Connect learning to the real world, other topics in the subject, other disciplines and the experience of learners



## 5. Understand and apply assessment for different purposes

### Too much emphasis on summative assessment

- ▶ Most assessment should be about making learning and thinking visible to help guide future learning
- ▶ Criteria help to identify what matters, to **define what excellence looks like**
- ▶ When summative assessment is used we need to assess what we value.



*“If we seek better-developed higher order skills, including critical thinking and creativity, we will have to assess these skills to know if we have been successful....That is the challenge for teachers and the global assessment community. **How do we assess what we value rather than value what we assess.**”* Frank Crawford [2011] Teachmeet blog

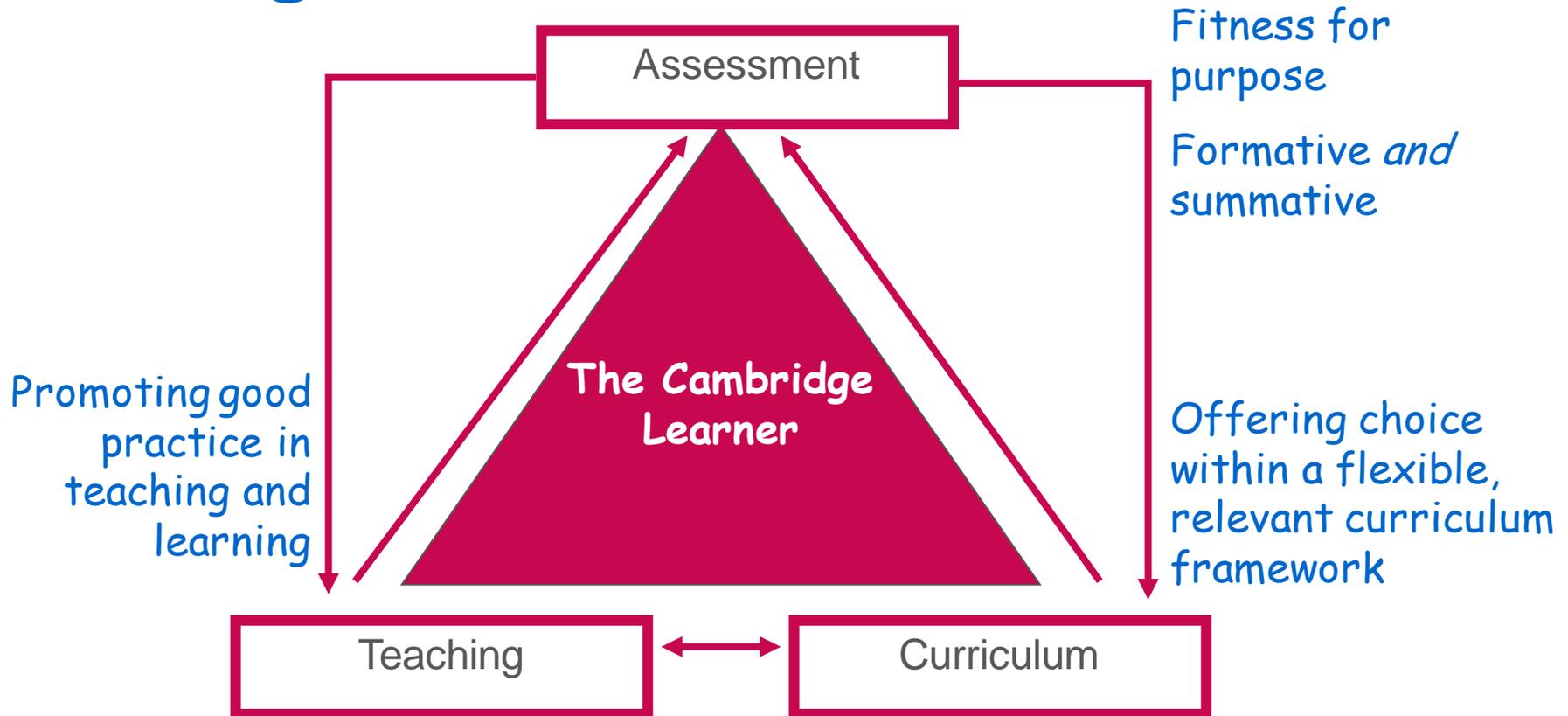


Exam syllabuses should embody a philosophy

- Of curriculum
- Of pedagogy

Qualifications and Examinations systems have a responsibility to ensure both

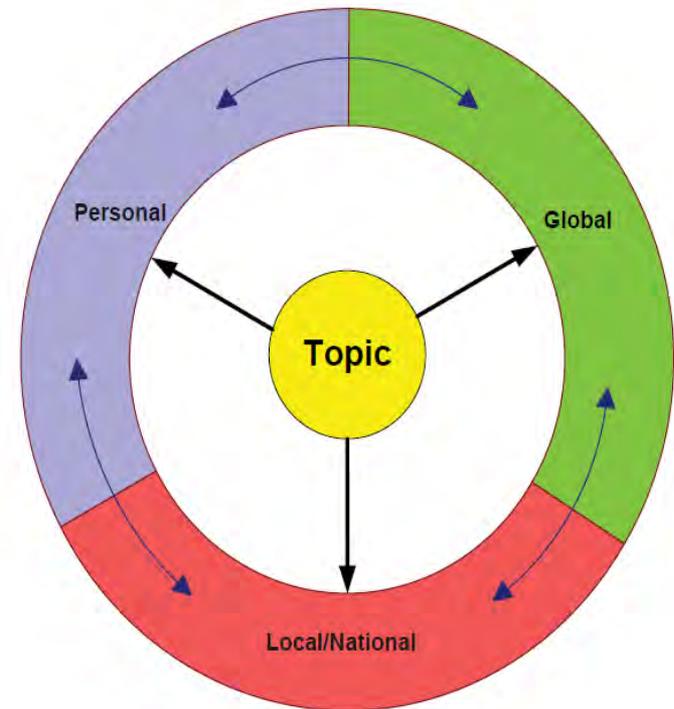
# Assessing what we value not just valuing what we assess



## 6. Offer creative offerings in a broad and balanced curriculum

Example: IGCSE Global Perspectives aims to develop learners who are:

- ▶ “independent and empowered to take their place in an **ever-changing, information-heavy, interconnected world**”
- ▶ “enquire into and **reflect on issues independently and in collaboration with others** from a variety of **different cultures**, communities and countries”
- ▶ “Can **support judgements** with lines of reasoning”
- ▶ “Can **communicate sensitively** with people from a variety of backgrounds”
- ▶ “work **independently** as well as part of a **team**, directing much of their own learning with the **teacher as facilitator**”



## 7. Focus on school culture, the informal / hidden curriculum and extra curricula activities

School mission and vision

Hidden and Informal Curriculum

School culture

Student leadership

community work

sport

Interstitial learning

competitions

music

school trips

Duke of Edinburgh's award

Qualifications are not the same as curriculum



# Inspiring Teaching

## Inspiring [Excellent] Teachers:

Source: Implementing the curriculum with Cambridge guide

1. Have mastery of and a passion for their subject area
2. Encourage learners to engage actively in their own learning
3. Connect learning to the real world, other topics in the subject, other disciplines and the experience of learners
4. Understand and apply assessment for different purposes
5. Teach for understanding as well as coverage by scaffolding learning in the student's zone of proximal development
6. Use a variety of teaching strategies and activities appropriately
7. Are collaborative and supportive colleagues in the school and the school's community considering themselves as mentors as well as teachers
8. Are reflective and creative practitioners engaged in continuous professional learning

Excellent teachers **make learning visible** [John Hattie]

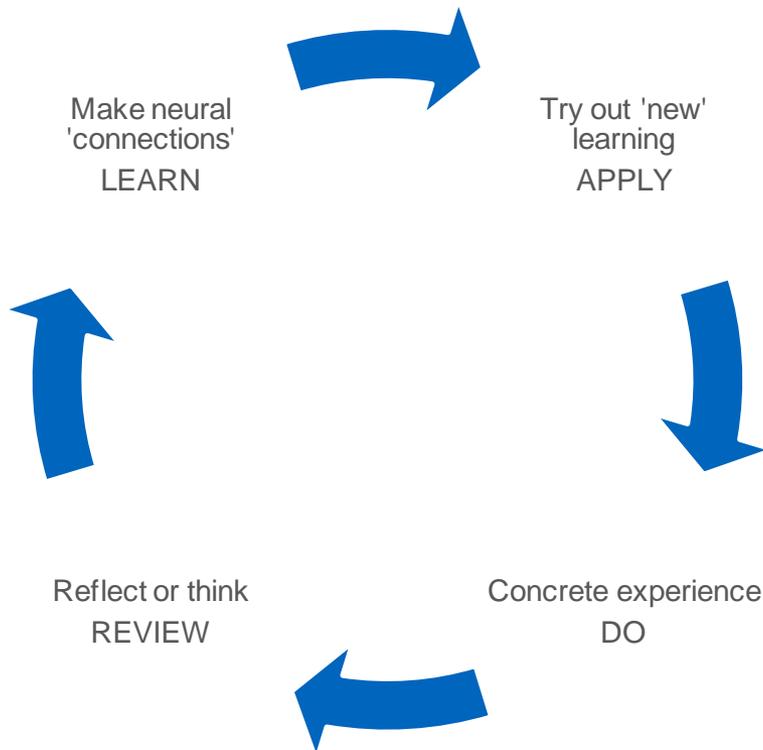
## Inspiring Teaching

**A variety of appropriate teaching and learning activities** Source: Hattie, J. [2009] Visible learning

Effect Sizes for teacher as activator and teacher as facilitator:

<b>Teacher as Activator</b>	<b>d</b>	<b>Teacher as Facilitator</b>	<b>d</b>
Reciprocal teaching	.74	Simulations and gaming	.32
Feedback	.72	Inquiry based teaching	.31
Teaching students self-verbalization	.67	Smaller class sizes	.21
Metacognition strategies	.67	Individual instruction	.20
Direct instruction	.59	Problem based learning	.15
Mastery learning	.57	Different teaching for boys and girls	.12
Challenging goals	.56	Web based learning	.09
Frequent/ effects of testing	.46	Whole language reading	.06
Behavioural organizers	.41	Inductive teaching	.06
<b>Average activator</b>	<b>.60</b>	<b>Average facilitator</b>	<b>0.17</b>

# Developing Professional Practice



Effective professional development:

- ▶ is integrated into the everyday life of the school and the teacher
- ▶ considers teachers' prior knowledge and experience
- ▶ offers opportunities for reflection and learning from experience
- ▶ encourages and supports innovation and collaboration
- ▶ helps teachers to develop, and critically engage with, their own theories of learning
- ▶ enriches teachers' learning through critical engagement with the theories of others
- ▶ is sustained over time and supported by people with expertise.

# Cambridge Schools Conference 2014

## Postcard

“

and learning during this conference? ” g teaching

### Attributes of a Cambridge teacher

**Confident** – how has the conference prepared you to work better in your school?

**Reflective** – what have you seen, heard or experienced at the conference that you would like to explore and reflect upon further?

**Responsible** – how has the conference helped you review your responsibility as an educator with regard to the conference theme?

**Innovative** – to what extent has the conference made you want to try something new in your teaching and as a teacher?

**Engaged** – how has the conference enabled you to engage with the wider community of Cambridge teachers?

**Twitter feed:** Follow @CIE\_Education for all the news, information and live updates from the conference. Use the hashtag #csconf14 to join the conversation.

**Conference App:** Download our Conference app to get even more from your conference experience [www.cie.org.uk/app](http://www.cie.org.uk/app)