UCL

Generation Research: helping students become well trained economists for the challenges of the 21st century

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CTaLE

CENTRE FOR TEACHING AND LEARNING ECONOMICS

Question 1: What skills does the 'economic researcher' of the 21st century need?

Environmental Economics

Computer Simulation Project

RESEARCH IN OUR COURSES

Industrial Economics

Case Study Project

Economics and Earth Science of Environment

Weekly 2 hour lecture for 10 weeks

Weekly 2 hour Mathematica-based computer practical for 10 weeks

Environmental Conference

Project work

- Policy discussion is model-based

- Sensitivity of model simulations to parameter choices.

- Learning through experience.

Environmental Economics Project

We prepare MATHEMATICA notebooks for each session

Theoretical textbook narrative

Applications and tasks where students understand, adapt and interpret simulation results.

Why?

- Appreciate sensitivity of simulations
- Understand process
- Modeling insights
- Interpret simulation graphs

Research Project   **Environmental Economics**   **Econ7007**   **University College London**

What is the project aim?
We would like to give students the opportunity to engage in a research experience using some material introduced in during lectures and practicals as well as material from independent reading.

What do you have to do?
We ask you to work on your project in groups of 1-3 students. Working with others is highly encouraged and single authored work should be an exception. If you single author your project it also means that you have to present it on your own.

Within your groups you should:
- Come up with an **interesting research question** which you would like to analyse given the Mathematica models introduced in this course (All main models have now been introduced but we will work on variations and specifications of the models during the next weeks. Feel free to add some of this additional material to your project while you are working on it). Be creative when finding an interesting research question. Newspapers and the public debate on current and historical issues may help you finding a good topic.
- Use **reading week** to **specify your research topic**. Questions you want to ask yourself are:
  - o   What do you want to work on?
  - o   Why is this question interesting and relevant?
  - o   How would you like to approach the research project (i.e. which Mathematica model will you use, what do you have to change within the model? What other resources will you need and where do you find them?)
- Write an **abstract or research proposal** for you project (max half a page) and submit it via turnitin using the link "Problem set Week 5" by ***Wednesday 19. November*** at noon.
- Over the next couple of weeks you should work on your project in Mathematica and do some literature work to motivate your topic. You may want to use data to either do some descriptive statistics, which relate to your topic or to find sensible data values to choose for the parameters in your Mathematica model.
- Write **a small research report** on your topic. Use a sensible structure (i.e. Introduction – Main analysis – Conclusion). Make sure you explain what you do and why you do what you do. Add your Mathematica Output (graphs). You may want to write your paper directly within Mathematica. Please add the Mathematica code you used as Appendix.
- Make sure you correctly **reference** the **literature** you use.
- Hand in your project by **Wednesday December 4th**.
- After that **work on your presentation**. You can either produce a poster or a short powerpoint presentation. You will present your work in front of your fellow students during the last week of the term. More information about the presentation will be given at a later stage.

Why should you put effort in this project?
- First of all by engaging with self-guided learning you will better understand the course material which will also be beneficial for your final exam.
- Second, you get exposure to a research task, which involves both reading and writing – skills which are invaluable for your later career. Very often employers complain that university graduates lack those skills.
- Third, Part C, which accounts for 30% of your final exam, will be free essay type question where you can link your independent project with the course material and show off the effort you put into this project.
- Finally – if you properly engage in it, group research work can be loads of fun! Make sure you physically meet up in your groups and discuss your questions.

If you have any more questions please do not hesitate to contact the course lecturers.

Some topics from last year's cohort:

"The environmental cost of increased Arctic shipping: A model describing the possible effects of shipping on Arctic Biodiversity and the associated economic costs."

"The effect of shocks in animal populations and their impact on the humanity."

"A comparison of the costs of gas-powered versus electric car ownership in the UK."

"Sea Turtles – The Tortoise of the Sea: On the extinction of the Sea Turtle Population."

Econ @ UCL retweeted

Frank Witte @Alarcos · Mar 23

ECON7007 Environmental Economics student presentation about to start @EconUCL

🔁 1   ⭐ 1   •••

Econ @ UCL retweeted

Frank Witte @Alarcos · Mar 24

Miller & Tettamanti discuss corals & icean acidification @EconUCL in #ECON7007 's #Environmental #economics talks.

Econ @ UCL retweeted

Frank Witte @Alarcos · Mar 23

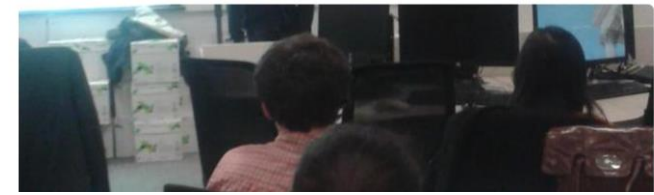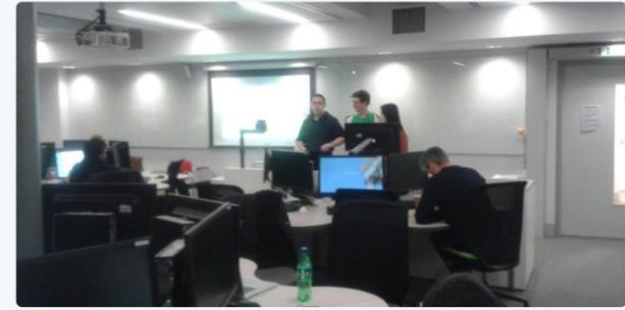@EconUCL the #ECON7007 talks now pick up again with Mekonen & Korykora on The Beijing Smog.

Beijing Smog: An Economic Outlook

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Econ @ UCL retweeted

Frank Witte @Alarcos · Mar 24

@EconUCL the closing talk in #ECON7007 by Chatralia & Uppal on climate change & polar bear populations.

Econ @ UCL retweeted

Frank Witte @Alarcos · Mar 24   View translation

@EconUCL Zhao, Sun & Anzolin in #ECON7007 discuss #Environmental #economics of Australian rabbits & the myxoma virus

🔁 1   ⭐ 1   •••

Carbon Capturing Report
MeadeAtkeson
JohannesFerstad

by Meade Atkeson

'The environmental costs of increased Arctic shipping'

A preliminary investigation into modelling groundwater exploitation in Botswana

Agnes Norris Keiller and Hermione Fleck

Section 1 - Introduction

Faced with a rising population and ... ome increasingly variable in the future, water security in Africa looks set to deteriorate and i... ing water stress and scarcity could reach 200-300 million (Arnell 2006). It is believed ... that hold water deposits that can be ...

'The Effects of Deforestation on the Giant Panda Population in China'

'Technology intervention in a struggling Cambodian community harvesting wild rice.'

Student Feedback

'The last project we did was interesting and inspiring! It would have increased the ambition if this project was graded.'

'probably the best lectures i've had in an economics module'

'I found working with Mathematica very challenging'

'I think the approach to modeling has in it the seeds of an outstanding module. Creating models has been quite poorly covered in most of my undergraduate course.'

'Modeling is cool!'

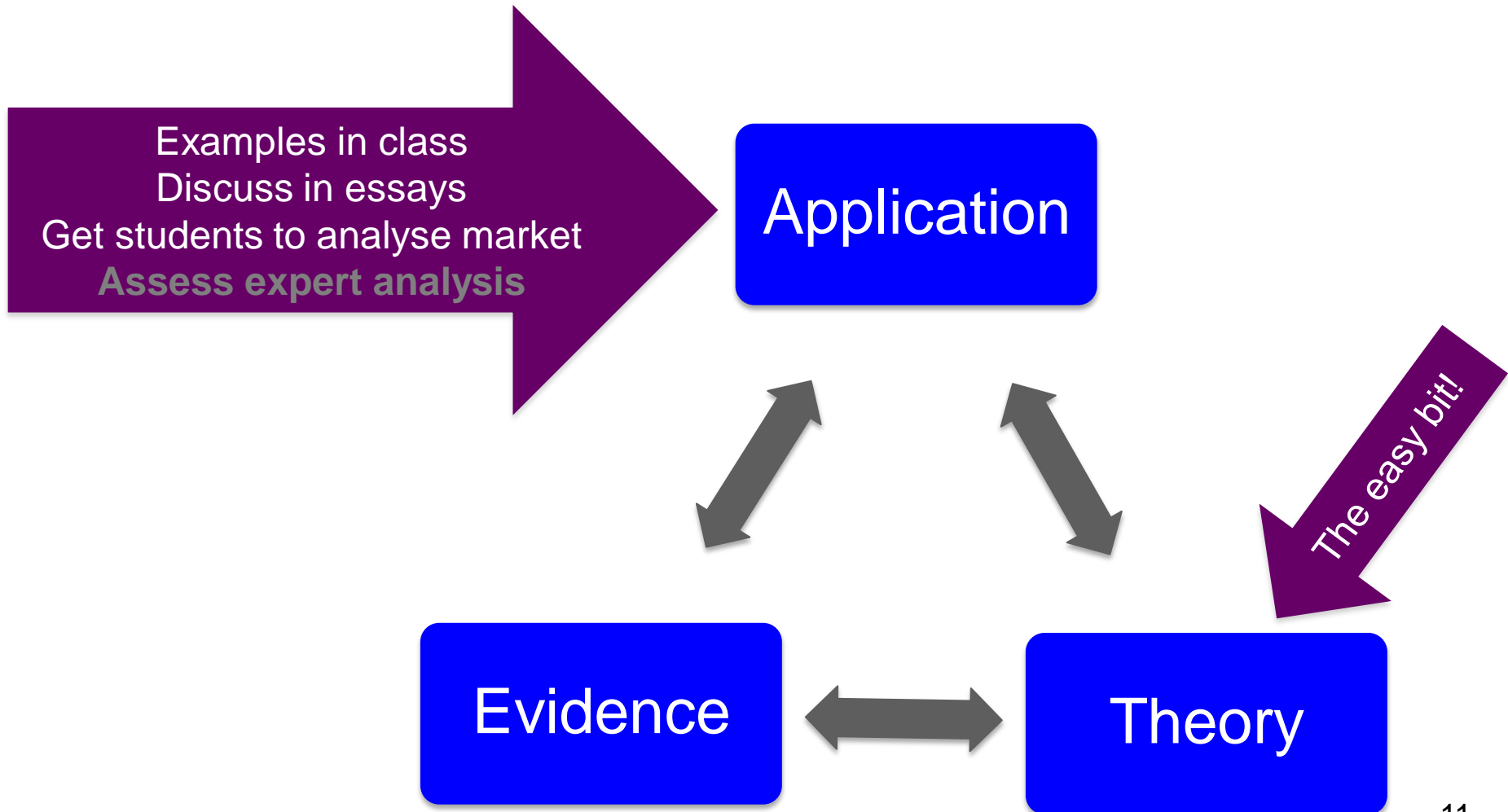'Very open learning process, opportunities for discussions always available'

Is a freeze on energy prices in the consumer interest?

Is competition working?

http://www.theguardian.com/politics/video/2013/sep/24/ed-miliband-labour-energy-price-freeze-video

How do we teach it?

Examples in class
Discuss in essays
Get students to analyse market
Assess expert analysis

Application

Evidence

Theory

The easy bit!

Introduction

In this Wiki, Team Zipcar A discuss the Competition Commission investigation into the merger between Zipcar Inc and Streetcar Ltd.

On 10 August 2010, the Office of Fair Trading (OFT) referred to the Competition Commission (CC) for investigation and report under the Enterprise Act 2002 (the Act) the completed acquisition of Streetcar Limited (Streetcar) by Zipcar, Inc (Zipcar). The information and issues of the market, methodology of investigation and analysis of the merger would be examined, in order to take a better insight into the case.

This Wiki consists of the following sections:

Market description

Outline and structure of car club market in London are discussed.

Market definition

How does the Competition Authority define the market.

Theories of Harm

Basic thoughts on possible negative effects that the merger might bring.

Information used to define the market

Methodology and data gathered by the Competition Authority for analysis.

Core competition issues

Main issues arise from the merger, regarding possible substantial lessening of competition.

Findings & Remedies

Findings and remedies based upon the permission of the merger.

Ryanair

Introduction

In this Wiki, Team Ryanair discuss the European Commission Investigation into the proposed merger between Ryanair and Aer Lingus.

'Description of the market

Page 2

Page 3

Page 4

Page 5

Student experience

- Better understanding of case and theory
- Value of working with others
- Develop critical assessment skills

- Too much work for little return
- Free-riding (limited team working in reality)
- Limited interest in learning application

Question 2: What kind of research projects do your students work on?

Question 3: What are the main challenges you've faced and how did you overcome them?
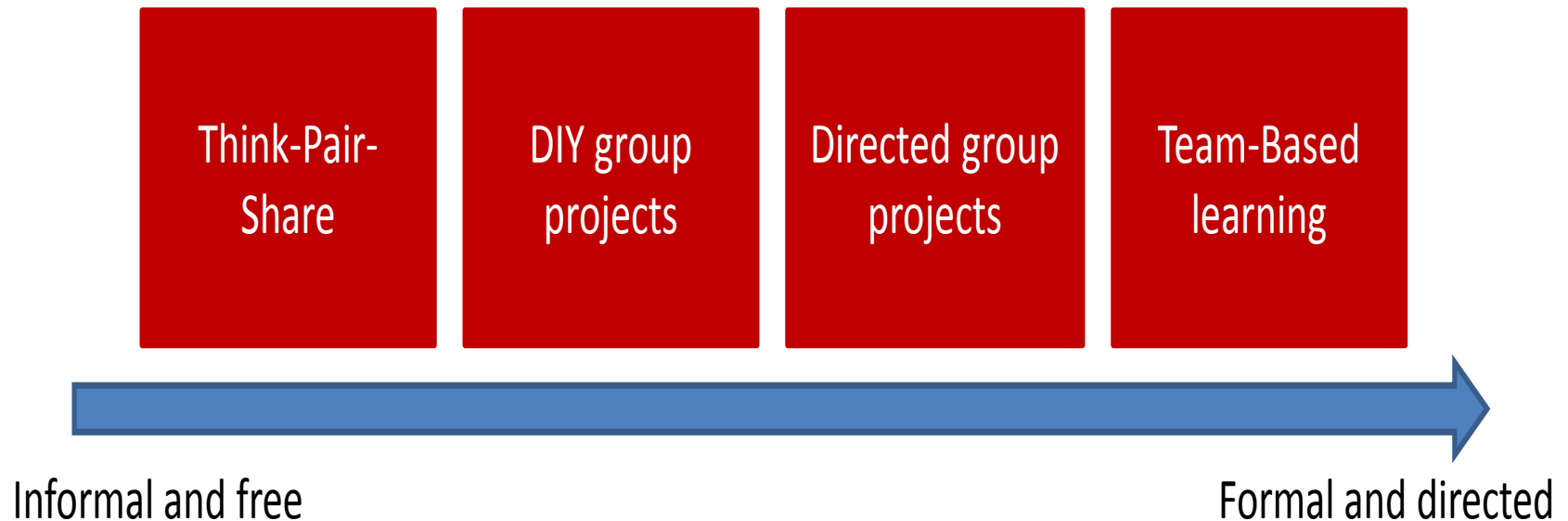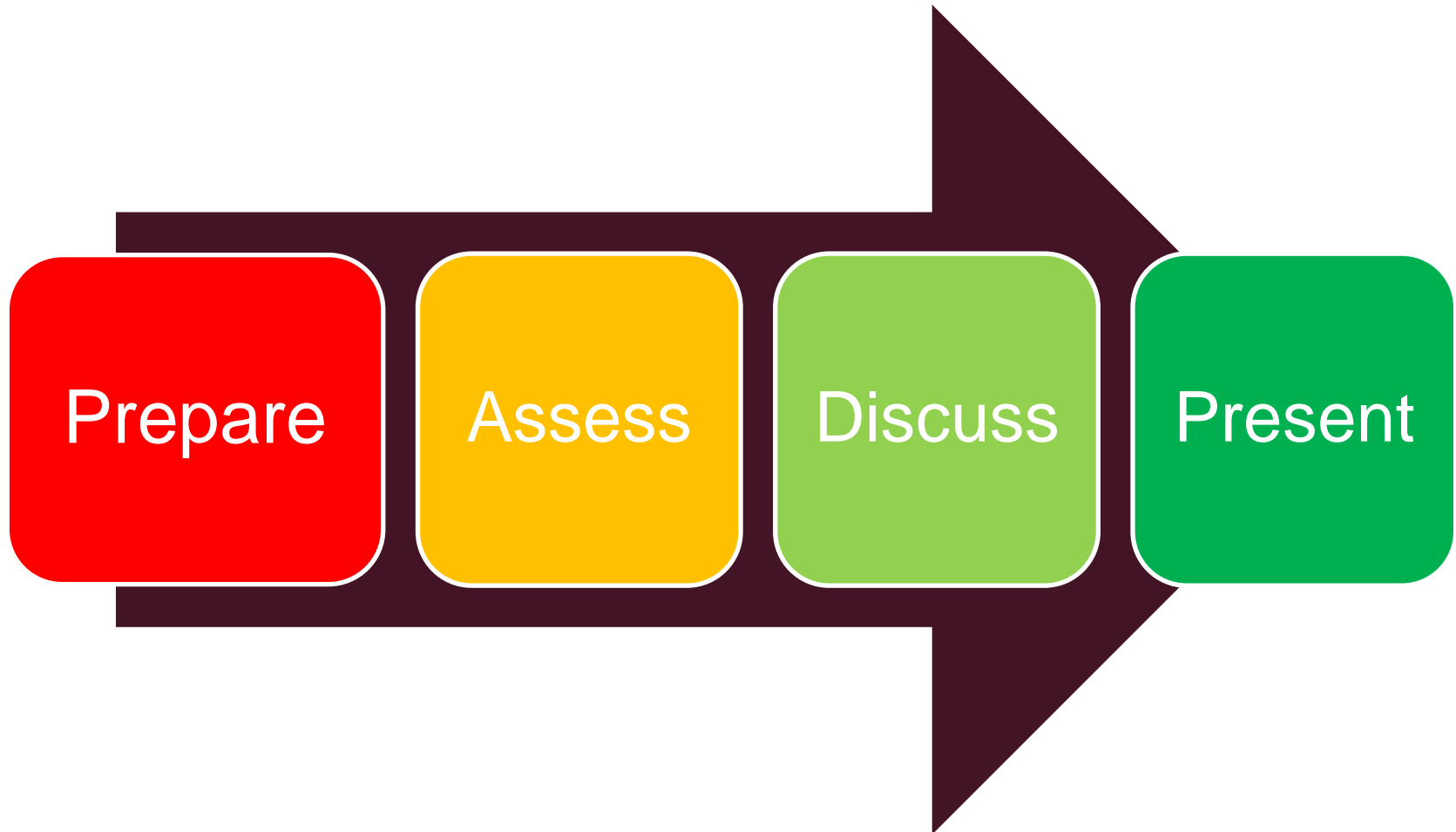
PEER LEARNING IN CLASSROOM

RESEARCH COLLABORATION

WHAT KIND OF PEER LEARNING?

Think-Pair-Share	DIY group projects	Directed group projects	Team-Based learning

Informal and free → Formal and directed

TEAM-BASED LEARNING

Prepare → Assess → Discuss → Present

TEAM-BASED LEARNING

Preparation and Assessment

Assigned readings/videos/podcasts

⬇

Individual Readiness Assessments (iRA)

⬇

Team Readiness Assessments (Team RA)

TEAM-BASED LEARNING
Discussion and Presentation

"Bite-size" Lectures

Team Applications

Team Presentations

Why might firms in the Los Angeles and Miami areas use more labour-intensive techniques compared to similar firms in other areas of the US?

8 responses

Greater labour supply in Miami due to high amount of immigrants.this means labor is relatively less expensive to capital.

Los Angeles and Miami have a great supply of immigrants that are willing to work for lower wages. Therefore, the cost of labour compared to the cost of capital is relatively lower than in other parts of the US.

LA and Miami are hotspots for immigrants to settle in. A large proportion of immigrants to LA and Miami are low-skilled and willing to accept a lower wage, so the relative cost of labour to capital is lower for these firms. This is why their technology is more labour intensive.

These two cities are areas of high immigration (particularly workers with a low level of skills) (Los Angeles has a high number of Mexican immigrants, and Miami has a high number of Cuban immigrants). Therefore there is a greater supply of lower skilled labour in these cities, so wages are likely to be lower, so it may be cheaper for firms to use labour intensive techniques.

If the relative price of labour and capital is low, than they will use more labour-intensive techniques while if it is high, they will look for other sources of labour. Also, if there are more immigrants who cannot get benefits and transfers, the labour supply will be more inelastic so employers can set lower wages.

– Abundance of labour due to immigration – Relative cost of labour is lower than the cost of capital – They can control the level of employment much easier

Los Angeles and Miami experience more immigration, hence labour supply is higher, making wages lower. It

📱 **To text in your answer send '305042 [your answer]' to 442033229895**

| Finish | Polling **Open** | Polling | Result | Answer | Reset |

OPPORTUNITIES OUTSIDE THE CURRICULUM

Practice makes perfect – but who has time?

Squeeze course content?

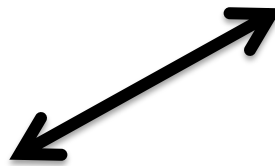**Step outside the curriculum?**

Skills development inside and outside the core curriculum

Question 4: How do you/we provide the support to facilitate students' development

Always learning

CENTRE FOR TEACHING AND LEARNING ECONOMICS

- Blog
- Project summaries
- Economics Education Seminars

- www.ctale.org
- Twitter: @CTaLEatUCL

- ANY COMMENTS?

A final thought….

The early bird catches the worm.