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Teaching Economics to Built Environment Students

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Abstract

Teaching economics to construction economists is paradigmatically different to teaching economics to 'pure' economists. While the principles of economics don't change, the philosophical aim and the methodology of teaching the subject do change. Understanding and executing this philosophical variant enhances the students' learning experience.
Teaching economics and finance can open students' eyes to a new way of thinking about the world. The study of economics looks at the world in a unique way because economics is a truly social science and it makes advances in finding solutions to the challenges that society faces. However, it approaches these solutions with the dispassion of a science and by using the scientific method. The appropriate philosophical goal is to convey this way of thinking to built environment economics students in a way that enhances their thinking and which illuminates much about valuations, the environment and business – the learning pillars of the course.
A prolific writer and teacher of economics Prof Gregory Mankiew of Harvard University said that "economics is a subject where a little knowledge goes a long way, something that cannot be said, for instance, of the study of physics or the Japanese language". The responsibility that comes with teaching economics is that it helps promote deeper understanding and better policymaking. It makes for a better society.
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1 THEORETICAL PERSPECTIVE

Theoretical foundations are essential to make informed judgments. But most importantly it is the ***delivery of theory in the context of applications and policy*** that enhances the learning experience for the built environment economist. The economist, as scientist, must not ignore the principles of economics and finance when making judgments on value much in the same way that engineers cannot ignore the principles of physics when designing structures. However, there is considerable anecdotal evidence that the global economic crash indicates that basic economics principles have been ignored. This philosophy is best executed by individual learning because it is more suited to this task than group work, particularly at first year. However, Individual learning is challenging and students often demonstrate a degree of

anxiety when learning on their own. The teaching methodology used must assist the individual learning process and is designed to remove the anxiety attached to learning. The evidence from student feedback demonstrates that once the engagement takes place this strategy leads to an enriching learning environment. Individual learning is more suitable and more effective to achieve this philosophy. Indeed a recent study by Arum and Roska suggests that studying alone is more effective than studying in groups. (*Academically Adrift: Limited Learning on College campuses* by Richard Arum and Josipa Roska).
This paper assesses the core competencies in a teaching methodology that accommodates this philosophy – communication, organization, flexibility and active learning.

2 How teaching methodology accommodates this philosophy? Core competencies – empathy, communication, organization, flexibility, active learning.

Empathy: The methodology used is to accommodate students from diverse backgrounds and abilities. To do this endeavour to make complex subject matter real and earthy. Plan a thorough knowledge of the subject matter and provide a degree of empathy within the learning environment. No student should feel lost or 'out of place'.

Good listening skills are required on the part of the teacher to capture, inter alia, the interest of students. As valid evidence, both the structure and the presentation of material are presented professionally. **Empathy** is generated for instance in tutorial sessions that are used to get feedback and opinions. Any disagreements and any 'issues' students have are dealt with immediately. Students are encouraged to raise issues of concern to them about the course and about delivery. This can be as direct as "can you write more slowly and bigger on the whiteboard" to "can you do more on the current financial crises".

The strategy is to focus on the theoretical principles of the subject to ensure that property and construction economists can apply economic analysis to their chosen profession. Each lesson must set the **context.** This is crucial – how does this lesson fit with the overall **aim** and **learning pillars** of the course. For example it will not always be clear why welfare economics is relevant to surveyors. But relevant it is. If taught in an abstract way it will lose the students and the dreaded question "is this coming up in the exam" will ensue, a clear sign that the teacher will have 'lost' the learners. So teach the theory of welfare economics in the context, for example, of the provision of social and affordable housing as a solution to market failure. Similarly, the economic concept of elasticity can be abstract and boring. The philosophical approach in this case is to explain the theory of elasticity in terms of site values and taxation. The **aim** is to capture the student's imagination.

Students are constantly challenged to raise issues of theory and how they relate to the real world and the built environment. This requires an **empathetic learning environment**. Another important aspect of generating empathy is basing ones teaching on humility and respect. Teaching is not passive (you teach – they learn) but requires joint participation. Teaching and learning is, after all, two sides of the same coin. This is emphasised at the beginning of each semester. This teaching/learning project is a team effort and **together,** with humility and mutual respect, we can get through this successfully. More importantly and particularly for first years, respect for learners may be as simple as turning up for lectures/tutorials AND turning up on time – a fundamental role the teacher plays in retaining students.

Organisation: Furthermore, a core competency for this teaching strategy is **organisation** for student learning. Students and more importantly first year students need an organised structure to their learning. This helps in removing the anxiety that students have and it supports effective teaching because the goals of each teaching episode are matched with appropriate readings, assessment tasks and other resources. Lessons are linked together to help in the overall understanding of the subject matter. In addition, the provision of pedagogical tools supports the **flexibility** of student learning and enhances their ability to work on their own.

The **organisation** of webcourses is designed with the idea of managing and linking the lessons together. All the resources on webcourses are presented in a way that advances student learning, providing additional sources for self-learning. For example:

Excel for each episode (Financial Management)

Weblinks for each episode, (Economics and Financial Management)

Video clips for each episode: These videos provide a visually appealing introduction to the various lessons.

Online quizzes for each episode (Economics and Financial Management). This facilitates test preparation, scoring.

Tutorial Problem Sets (Economics): Specific sets of questions for each learning episode that covers theory and application. Students are asked to use these as basic tutorial material. These are specifically linked to the learning outcomes from the lectures.

In the News - A section on current articles (Economics and Financial Management): The philosophical perspective is to get an informed understanding of news from around the world. Make available articles from newspapers and other popular forums. They offer additional material for class discussion.

Communication: An additional core competency for this teaching strategy is **communication.** This supports effective teaching because it requires clear explanations and where all presentations have a structure. Real world examples (providing context) are presented in tutorial problem sets and project work. Students are asked appropriate questions and respect is given

to all answers. There are a number of important attributes that students should have acquired on completion of their studies. The first is a *conceptual understanding* of the principles of the subject area. To do this I must use my discipline knowledge base effectively to develop student understanding of concepts. In addition, ***scholarly activity is best aligned with the learning outcomes***. (section E).

At the beginning of each teaching session place the content of the lecture material in **context** – where it fits into the bigger picture of the map of the course. This may be a simple scenario building exercise, e.g:

"*You are working as part of a team on the valuation of a commercial property in, say, Grafton Street. News has broken that credit default swaps on Irish sovereign debt has spiked. Let's discuss how this will impact on the valuation process".* Then, a set of learning objectives is outlined for that session.

Planning: Ideally, plan teaching sessions in a way that incorporates lecturing, video presentations, short case studies that 'set the scene' and questions and answers. **Planning** in this fashion helps the overall communication between the teacher and the student. Using these different strategies of teaching demonstrates a level of enthusiasm for the subject area and this is a positive influence on students. It helps create:

- *Greater active student involvement*
- *An understanding of what is needed and required for student learning*
- *A Plan that assists students identify the outcomes of their learning*
- *An overall empathetic learning environment.*

Effective Teaching using evaluation

The formative and summative assessments used with learners

2.1 Justification of the methods used

It is best practice to prioritise *intuition* and the application of this intuitive understanding of learning outcomes to real world events. It is the intuitive understanding of complex learning outcomes that enhances student learning. The teaching and practical application of finance and economics to undergraduate built environment students is more challenging and more exciting than ever before. The world's economy and financial markets are more integrated than ever before and given the pace in which the theory and practice of finance and economics are moving ahead the teaching of these subjects must keep ahead and this is particularly more challenging for non-cognate students. Built environment graduates end up in business organizations of one kind or another. They will not be employed as pure economists or 'financial experts' but will need to have an intuitive and practical understanding of theoretical concepts to help them make informed managerial decisions.

- Advise students to consider solutions to problem sets attached to each lesson.
- Each week provide **instant** feedback. Students can feed from each other because of the responses given.

3 An explanation of how assessments used are valid indicators of student learning and appropriate marking and standards

A core competency of teaching is **active learning**. Effective teaching involves, among other things, designing questions and problems that requires active student participation and to investigate some topics in detail. Examples are individual case studies. For example, students may be required to analyse individual companies to assess their valuation (book, market, economic and fundamental) and to monitor all relevant published economic reports on the economy and to submit a report on how these impact on the various sectors of the property market (commercial, residential, office etc.). An additional core competency in this teaching strategy is to **identify the intended learning outcomes** of all teaching episodes. Effective teaching means students are aware of the assessment standards and criteria before they embark on the learning. Examination papers and other assessment criteria should reflect the module descriptor *in proportion*. All of the learning outcomes from each lesson are assessed. Examination papers ideally should consist of questions, the weighted marks and the learning outcomes that are been assessed by each question. This format ensures that appropriate learning outcomes and any weighting attached to those learning outcomes are covered. Students are aware of the assessment standards and criteria at the beginning of the learning period.

4 How this method contributes to student learning? Formative and summative assessments.

Formative assessments are given to students and designed to involve the student in the learning process and provide feedback to students on their learning. The assessments are a direct companion to the lessons that incorporate the learning outcomes and are used to provide the student with advice on how to maintain and improve their progress. These do not form part of the summative assessment. Each of these assessments has a mission statement with conceptual questions/problems/vignettes/ case studies. These serve as **checkpoints** for students to test their understanding of the material. The main benefit of regular formative assessment is **identification of strengths and weaknesses**. **The task of this formative assessment is to emphasise that grades will improve by embracing this formative assessment.** By engaging with formative assessments the student is helped learn and also remove the anxiety attached to summative tests.

5 Some examples of summative assessments and why they are valid indicators of what I want students' to learn

*Example 1:*A family has decided to spend one third of their income on house maintenance. What is its income elasticity of maintenance demand? What is its price elasticity of maintenance demand?

> **Why this is a valid indicator of learning outcome?** Note that this question avoids any mathematical evaluation of elasticity. It concentrates on a real world example which the student can answer with the intuitive understanding of the concept.

Example 2: In the market for beachfront resorts explain and illustrate what happens to equilibrium price and quantity if a rise in population doubles demand.

> **Why this is a valid indicator of learning outcome?** Note that this question is designed to test a student's ability to apply the concept of elasticity to the market for land. This question can be altered to bring in the notion of site value tax – a*g*ain*,* the important learning here is intuition and application of principles.

Example 3: Explain the effect of each of the following events on equilibrium price and quantity in the market for private sector housing:

1. **Mortgage interest tax relief is abolished**
2. **A reduction in the costs of construction**
3. **A fall in gross domestic product**
4. **A rise in interest rates**

> **Why this is a valid indicator of learning outcome?** This illustrates the application of elasticity rather than taking a mathematical approach.

Example 4: The construction company you manage has just invested €5m in developing a new energy saving product but the development is not yet finished. However, a recent sales report suggests that because of increased competition the expected sales of this new product will only generate €3m in sales revenue. If it costs €1m to finish the development and make the product, should the company go ahead and do so? Explain in terms of the concept of marginalism and sunk costs.

Why this is a valid indicator of learning outcome? Students prefer this applications approach to the explanation of utility theory and marginalism. This learning outcome could be taught using the mathematical formula: (mux/px + muy/py) s.t. pxqx +pyqy = m.

Example 5: Explain whether the following policy decisions are motivated by concerns about equity or efficiency:

1. **A ban on smoking in public places**
2. **The provision of social and affordable housing**
3. **Implementing laws making it an offence to drive while intoxicated**

Why this is a valid indicator of what I want student to learn? This question applies the theory of equity and efficiency – an important learning outcome.

Example 6: The debate over the National Asset Management Agency (NAMA) has shown that economists offer conflicting advice to policymakers. Explain the two principal reasons why economists offer conflicting advice to policymakers?

Why this is a valid indicator of learning outcome? Economists offer conflicting advice to policymakers, the "there is no such thing as a one handed economist" syndrome. This question tests one of the important concepts in economics – why economists disagree.

Example 7: "The best way to destroy a city apart from bombing it is to introduce rent control." Explain in the context of price ceilings and the so called Mia Farrow Law.

Why this is a valid indicator of learning outcome? Why and how governments intervene in the economy and the law of unintended consequences. Note the application (using real world example) of principles.

6 How to use reflective and evaluative processes – how this is accomplished? How feedback is given to learners and how this improves their performance

Assess and monitor students' action/reactions, their boredom/interest, enthusiasm, eagerness, fear, by watching their body language and keeping eye contact. This is the most informative feedback a teacher will get. There are many different types of students with different backgrounds and different learning styles and one should try to accommodate them all. This is challenging. The effective way to tackle this is to vary the teaching style. Through eye contact one may spot a student who is 'lost' – not necessarily because of a lack of ability, but possibly because of intimidation and lack of confidence. It is important to get immediate trust and friendship and when necessary one-to-one tuition. This level of empathy generates much valuable informal feedback. All of this is accomplished by the weekly formative assessments outlined above which provide instant feedback.

Ongoing feedback is provided on a weekly basis. This is in the form of individual oral feedback for projects and theses where any technical issues can be resolved and more importantly on the student's *research process*. The concentration here is as much on '*feedforward*' as it is '*feedback*'. The final feedback/ feedforward is in written format where details of where marks were won and lost and on corrective advice. In general there are two aspects to this

feedback/feedforward – **process and content**. Time is then devoted to brief students on this written feedback.

6.1 How my scholarly activity is used in support of teaching and learning

Find ways to direct scholarly work so that it enhances teaching and student learning. Effectiveness as a teacher is improved by applying scholarly work to fit with the subject matter. Contemporary economic and financial events spur student questions and this inspires research and scholarly activity. This work increases teaching awareness and currency. Regularly review a module's aim, objectives and learning outcomes because this provides an opportunity to integrate scholarly work into teaching programmes so that students can learn from it. **This cycle of reflection - student feedback, scholarly activity and then module reviews enriches, develops and improves teaching**.