



Editorial Issue 9.1

What effect do we really have on students' understanding and attitudes? How do we know?

Prof. Peter Davies, Prof. Ross Guest, IREE Editors

Typically, evaluations of teaching in universities currently rely more on students' views than on evidence of change in students' understanding. In principle, it would be much more appropriate to use evidence from assessments of students' understanding, but this requires a 'before and after' measurement that is generally uncommon in higher education. Breaking this mould, Caviglia-Harris and Hill undertook an evaluation of teaching on the basis of evidence of change (or not) in students' understanding. They describe how teaching was changed in the light of assessment evidence and they also present evidence that these changes led to improvements in student performance after taking relevant background characteristics into account. This is a much more expensive approach to evaluation than relying on students' views, but improvements in learning are not easily achieved. A key feature of the evaluation undertaken by Caviglia-Harris and Hill is the design of a new assessment tool. Their approach, like many antecedents in economics education uses Bloom's (1956) Taxonomy to distinguish between different types of outcome (e.g. application, analysis, evaluation) and these are applied across a set of topics (e.g. price and elasticity) that are largely uncontroversial for any assessment of economic understanding at introductory levels.

This prompts a couple of questions. First, Bloom at al's (1956) Taxonomy, though still very influential in the design of economics curricula and assessment, is now rather old. In the past fifty years, the theory of learning has moved on a great deal and more recent evidence (e.g. Pang and Marton 2003, 2005) of critical differences in levels of economic understanding draws on those theoretical developments. Is Bloom's Taxonomy still fit for our purposes? Second - a question raised by the authors - to what extent does this kind of approach foster 'teaching to the test'? When target outcomes are finely specified there is an incentive for teachers to focus on helping students to perform against these targets whether or not there is any fundamental change in the structure of their understanding. When teaching succeeds in changing measured outcomes it is always difficult to avoid the suspicion that the change is more appearance than substance. This problem applies as much as to changes in teaching that are based on more recent theories of learning as it does to interventions based on Bloom.

The importance of good formative assessment is a theme pursued also by Galizzi. The ultimate question raised by her paper is: How do we know whether formative assessment is working? She finds evidence that online multiple choice questions may not be an effective formative assessment tool, even when student responses are corrected interactively online. The message is that it is not sufficient to simply direct students to an online multiple choice test bank with online feedback and expect that learning will occur. This work, along with that in Caviglia-Harris and Hill, emphasises that formative assessment instruments require two things: careful alignment with learning objectives, and diagnostic use by instructors to identify problems and guide teaching. Building on earlier work by Rubenstein (2006), Brosig and colleagues address an issue that has wide relevance in economics education: to what extent does the framing of a problem affect the way in which students interpret and respond to the situation that is posed to them? The answer to this question has implications for every experiment, interview and questionnaire that is used in teaching and research in economics education. There is a substantial literature in psychology that has attempted to address this problem. One famous piece of research constructed by Margaret Donaldson (1978) showed that when a puppet ('Naughty Teddy') was used to present a conservation of number problem to young children they were frequently able to solve a problem which Piaget had concluded was beyond their cognitive capacity. More recently, research by Halld n and colleagues (e.g. 2007) has explored the extent to which a participant's perception of the situation in which a problem is posed affects the kind of understanding of a problem that is revealed through what they say and do. Brosig and colleagues consider two framing issues: Do differences in expectations of future roles (e.g. becoming a manager of a business) frame the way in which students respond to

questions about markets and profits? Does variation in self-interest affect students' responses to problems in which they are asked to adopt the role of a manager? They provide valuable evidence in relation to the second question and helpfully prompt the first question as an area for further research.

Putting students in the role of a manager is also the focus of the study by Kerry King, but from an experiential learning perspective. In her study students participate in a simulated version of the reality TV show "The Apprentice," versions of which has been shown in the U.S. and the U.K. Students form groups and act as a management team faced with a real world business scenario or problem. The success of simulations such as these depends very much on the quality of the guidance and de-briefing provided by the instructor. As King also found, trying new teaching activities is often a process of trial and error – students are not the only ones who learn by doing!

One of the enduring and important questions concerning the outcomes of economics education remains the question of gender difference. Opstad and Fallan throw new light on this question by building on earlier work by Borg and Stranahan (2002) which combined analysis of gender and personality type differences. They find that only females falling into particular personality types tend to achieve lower outcomes than males in economics. Whilst this result is broadly in line with Borg and Stranahan's work there are some differences. Given that we know that students tend to adapt their approaches to learning according to the way they are taught it seems possible that these differences have arisen from differences in the way that teaching is conducted. That is, whilst Opstad and Fallan provide valuable new evidence on a longstanding question they are also opening up further lines of enquiry.

Lawson and Lawson summarise the arguments for the use of (video) games in teaching and learning, provide a set of criteria for what makes a particular video game more useful in teaching and use these principles to review the usefulness of a range of games. Against this background the authors describe how they have developed a videogame for use in their teaching of economics and also discuss ways of effectively including videogames in the teaching process.

The global financial crisis (GFC) has led practitioners and educators alike to question the realism of macroeconomic models. In economics pedagogy the GFC has emphasised the importance of real world applications of models. In this Issue, Kapinos builds on earlier work in IREE (Guest, 2003; Turner, 2006), among others, in Excel-based applications of macroeconomic models. The particular application here is a New Keynesian model which has a little more realism than the more traditional Keynesian model. Students learn about the effects of different macroeconomic shocks by playing with the model – that is, by trying different parameter values that

define the shocks and the assumptions in the model. The model applied in the paper is probably best suited to students at third year undergraduate and postgraduate level. In a similar vein, Miller explains a strategy for teaching the market for money balances, which students perhaps see as a rather arcane model, with more realism. His strategy is to relate the market for money to the market for shares in public companies – a market with which students are more familiar. This method allows students to more easily see that the idea of money neutrality does in fact make sense in the long run.

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