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Editorial Executive
Co-Editor
Professor Rod O’Donnell
Telephone: (+61 2) 9514 7738
Email: rod.odonnell@uts.edu.au

Co-Editor
Dr Peter Docherty
Telephone: (+61 2) 9514 7780
Email: peter.docherty@uts.edu.au

Co-Editor
Mr Joseph Macri
Telephone: (+61 2) 9850 6069
Email: jmacri@efs.mq.edu.au

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AUSTRALASIAN JOURNAL OF ECONOMICS EDUCATION

MISSION STATEMENT

The Australasian Journal of Economics Education is a peer-reviewed journal that publishes papers on all aspects of economics education. With a view to fostering scholarship in the teaching and learning of economics, it provides a forum for publishing high quality papers and seeks to bring the results to a widening audience. Given both the increasing diversity of the student clientele, and increasing calls for greater attention to the quality of tertiary teaching, this Journal seeks to foster debate on such issues as teaching techniques, innovations in the teaching of economics, student responses to such teaching, and the incentive systems which influence the academic teaching environment. The AJEE is interested in research involving both quantitative and qualitative analyses and also in interpretative analyses based on case studies. While the Journal is Australasian-focussed, it encourages contributions from other countries in order to promote an international perspective on the issues that confront the economics discipline. AJEE aspires to:

1. Report research on the teaching of economics, and cultivate heightened interest in the teaching of economics and the scholarship of teaching.

Pedagogical issues will be a central feature, and will encompass work on the teaching of economics in diverse contexts, including large and small classes, undergraduate and postgraduate classes, distance learning, issues confronting foreign students on-shore and off-shore, and issues related to the teaching of fee-paying MBA and other postgraduate groups from diverse disciplinary backgrounds. Though economics is the prime focus, consideration will also be given to work on other subjects that have a demonstrated relevance for the teaching of economics.

Such issues will also involve evolutionary issues in the teaching of economics, in terms both of effective ways to teach evolving theory and of evolving technology with which to teach that theory (including on-line teaching).

Recognition will be given to the fact that economics as a discipline has not fared well in CEQ results (course experience questionnaire
results) since the reporting of those results began in Australia. Nor has economics teaching typically been well received in the USA or UK, according to survey evidence. In that context the relevance to teaching of changing administrative arrangements in universities will also be highlighted (eg in terms of contemporary quality assurance procedures and other government policy changes in Australia and New Zealand).

2. Report research on **the nexus between teaching and research** (including research on the diverse, changing and potentially conflicting incentives within the academic industry). Papers exploring the extent to which research and teaching activities are complementary or competitive will be welcomed.

3. Recognise the relevance of some more deep-seated **implicit assumptions and issues of economic philosophy** embedded in what is commonly taught, (as in Sen’s work on economics and ethics, for example). Inter alia, the question arises as to the way in which students respond to economics taught as a path to scientific certainty, as against economics taught as reflecting unsettled debate and vigorous controversy.

4. **Recognise the place of history in the teaching of economics.** Both HET and economic history tend to play a diminishing role in professional economics training, as emphasis on technique dominates. This a-historical approach to the teaching of economics has been criticised by many influential economists (including Joan Robinson, Leontief, Myrdal, Colander, and Robert Clower in his acerbic remarks about the value of much that is published in such prestigious journals as the AER). This line of criticism has been continued in the recent growth of heterodox economics associations in a number of countries (including one for Australia and New Zealand) and on the web through the Post Autistic Economics (PAE) newsletter. Historical and institutional factors will thus provide one focal interest.

5. **Recognise interdisciplinary issues** important to the presentation of economics in various contexts. On the one hand, economics students are not systematically exposed to the insights of other social sciences and the conformity or otherwise of their conclusions with those of economics. On the other hand, other disciplines within the social sciences and humanities (e.g. the Social Work profession) do not always include even an introduction to economics for their students, notwithstanding that economic issues are often very important
determinants of the environment within which they operate. More fundamentally, questions arise as to whether social science is more than the sum of its respective parts, and as to whether the roots of economics can be fully understood in isolation from the history not only of economics but also of politics and philosophy.

6. Establish a link to the teaching of economics in the secondary schools, given that tertiary enrolments in economics reflect fluctuating enrolments in economics in the secondary schools.

7. Encourage on-going surveys of student response to the teaching of economics across Australasian (and other) institutions, including response to experimental teaching and to differences between institutional approaches. (c.f. Colander and Klamer’s 1988 survey of economics students at USA ivy league institutions.)

8. Monitor trends in the teaching of economics both globally and in the Australian and New Zealand university systems (such as enrolments, staff-student ratios, international-domestic student ratios, offshore offerings etc), and the implications of those trends for various funding arrangements.

9. Promote a series of papers on specialised themes within the overall province of the teaching of economics e.g. on the teaching of Principles courses, the teaching of History of Economic Thought, the teaching of intermediate microeconomics and macroeconomics, the teaching of development economics, and likewise regarding teaching in such streams as Quantitative Methods, large first year classes, non-English speaking background students, the teaching of economics to non-economists, product differentiation in teaching economics, and professional education in economics in executive education programs outside conventional university contexts.

10. Monitor the measuring and rewarding of quality (economics) teaching within Australasian universities.
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THE GREAT DEPRESSION AS PEDAGOGICAL THEME FOR UNDERGRADUATE BUSINESS, ECONOMICS AND FINANCE CLASSES *

Cameron Gordon  
Faculty of Business and Government,  
University of Canberra

ABSTRACT

The Great Depression was a seminal event in history and is, therefore, widely covered in history courses of all types. It tends, however, to be ignored in current core and advanced undergraduate business, economics and finance courses, as is most history. This paper discusses ways in which the Great Depression can be used as an organizing principle for introductory curricula in such courses, it offers some illustrations of such uses, and it provides a basic assessment of the strengths and weaknesses of these approaches.

Keywords: Great Depression, Gold Standard, money, banking, teaching.

JEL classifications: A20, A22, N12.

1. THE USE OF HISTORY IN TEACHING CURRENT TOPICS

This paper examines the use of a particular historical event – the Great Depression – as a way of organizing, discussing and teaching material in contemporary non-history courses dealing with business, economics and finance. Why is history important to the study of current business, economics and finance? The arguments are well rehearsed in many respects, though perhaps not too well appreciated. One economic

* Correspondence: Cameron Gordon, Associate Professor of Economics, Faculty of Business and Government, University of Canberra, ACT, 2601, Australia. E-mail: cameron.gordon@canberra.edu.au.

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C. Gordon historian makes the case this way (and in reading this selection, one can feel free to replace “economists” and “economics” with “teachers of business” and “business” without any loss of logic):

Economists should study economic history for at least three reasons. First, it is fun. A skilful narrator and analyst can bring alive exciting or important events, and that is enjoyable. Second, a study of history alerts economists to [the fact that economies] are sometimes strongly affected by non-economic factors – not only wars, but political impasses, charismatic leaders, or ideological beliefs deeply rooted in public or official psychology – and that contrary to what is usually assumed in formal modeling, the structure of economics changes over time as public attitudes change and as institutions evolve. Third, economists should study history...because it is usually impossible to understand our institutions and attitudes that shaped the legacy from our parents and grandparents.

(Cooper, 1992, p. 2120)

To summarize the pedagogical philosophy underlying this paragraph, one could say that history reveals the drama, context, and process behind different current events and thus elucidates theories and ideas that have been formed to understand (or misunderstand) those events.

Assuming one accepts the argument that history should be used in the classroom, the question arises as to how it should be used? There is no one answer to this question, but I will make the case that it can be very effective to use history in both an extensive and intensive way. By “extensive,” I mean using historical examples broadly, to illustrate a wide range of topics and phenomena that may, on their face, have little to do with history. By “intensive,” I am referring to the use of history not just as a gloss or an aside, but a way of delving deeply into historical dynamics and facts. To use history in these ways can both increase students’ appreciation for history generally, and sharpen their understanding of things that are seen by most people as purely contemporary.

There is an additional argument, frequently made, but worth repeating. The ‘laboratory’ of most social science and professional disciplines is the real world, and so deep and sustained study of past events can be likened to the prolonged exposure of a theoretically trained natural scientist to empirical procedure. Perhaps this is one meaning of Santayana’s idea that to know how something has

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1 His original and now famous phrase was: "Those who do not remember history are condemned to repeat it".

evolved, and to know how it is both similar and dissimilar to analogous things in the past, is to know more deeply the true nature of the thing and also to grasp what might be solidly known, less solidly known, and truly unknown. Students with such understanding have an advantage over students without it when it comes to navigating their way through the modern world of business and finance.

2. THE GREAT DEPRESSION AS A TEACHING TOOL

The Great Depression, touching almost every facet of the economic and political system, was also a full-blown, international epic, affecting every major national economy and the international economic system as a whole. For these reasons alone, the Great Depression can be a useful focus for discussing current topics in economics, business, and finance, to say nothing of other fields such as public policy. Almost nothing was unaffected by the crisis and almost everything was transformed by it. Any significant topic a teacher can think of – financial markets and institutions, organizational form, international trade, public tax and spending, industrial organization, and so on – can be richly explored through the lens of that massive downturn.

In addition, the event shook everything in its path to its fundamentals. This was not merely a superficial, if severe, shock; it was something akin to a seismic shift, which got deep into the inner workings of economies, institutions, and ways of thinking, turned them upside-down and inside-out, and left matters fundamentally altered. In this sense, the rubric of the Great Depression is a good way of exploring basic relationships, concepts and causal dynamics of a variety of phenomena. The Great Depression fits the criteria for a teacher who wants to use a single epoch for both intensive and extensive use of history (as defined in the first section above) to teach current topics. Many different topics can be taught under this rubric, and each topic can be gotten into very deeply if desired. Moreover, very basic cause-and-effect relationships and fundamental theoretical, philosophical and practical questions can be examined in the laboratory of the economic history of the thirties.

The fact that there is still lively controversy, and continuing scholarship about the causes and effects of the crisis adds to the currency of the event. The clash of different models and views of the world, of different empirical methods and findings, and the limits of
modern analysis, are all richly demonstrated by current study of the Great Depression.

The Great Depression also offers a fine opportunity to explore the way in which different events fit into a larger cultural, political, social and economic framework, and particularly in showing how institutional details matter. The economic crisis of the 1930s was intricately related to the particulars of the International Gold Standard (not just an automatic winding and unwinding of anonymous forces as textbook presentations of exchange rates might suggest), the structure of the banking industry, the institutions of the labour market, including labour unions and the corporate personnel “movement” of the 1920s and 1930s, and the inner politics of central banks. But this list is far from exhaustive.

Finally, the Great Depression is an excellent macro-example, with many micro-cases, of historical process, namely how and why things change in the way that they do. Economists have used the rather clumsy term “path-dependence” to name this concept and the crisis of the 1930s is filled with examples of such dependence. Although it occurred close to eighty years ago now, most economic, financial and business institutions were shaped by the event and are still responding to it in many ways. Examples include the international trade and foreign exchange systems, banking and securities regulation, central bank regimes, national fiscal and monetary policy regimes and social insurance. In the United States, which came later than most industrialized nations to large-scale government, social and economic regulation, the links between past and present are even stronger.

There are many different topics, therefore, that can be taught using the Great Depression. Table 1 provides some examples (with scattered academic references that make for excellent course resources). The author himself has taught courses in financial management (public and private), corporate finance, money and banking, public policy, and public finance, and this discussion is focused on topics particularly relevant to courses such as these. A wide range of other economics, finance, management, business and public administration classes which include topics such as industrial organization, labour economics, corporate form and so on, could be discussed as well.

The remainder of the paper outlines two specific cases of actual classroom usage from the author’s teaching experience. The following section outlines how the Great Depression was used to teach a course
in money and banking while the section after focuses on a course in open economy macroeconomics and the functioning of the Gold Standard. The final section of the paper then summarises the argument and draws some broad conclusions.

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<th>Especially Useful Resources</th>
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<tr>
<td>Labour Economics</td>
<td>Jensen (1989); Margo (1993)</td>
</tr>
<tr>
<td>Monetary Policy</td>
<td>Temin (1993)</td>
</tr>
<tr>
<td>Asset valuation: institutional aspects</td>
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<tr>
<td>Asset valuation: non-institutional aspects</td>
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<td>International trade</td>
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<td>Business Cycles</td>
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<tr>
<td>Counter-cyclical economic policy</td>
<td>Stein (1969)</td>
</tr>
<tr>
<td>Corporate finance and financial management</td>
<td></td>
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<tr>
<td>Stock and other financial asset markets</td>
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<td>Economic development and growth</td>
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<td>Market Structure</td>
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<td>Public policy and politics</td>
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### 3. ISSUES IN MONEY AND BANKING

An image indelibly connected with the Great Depression is the sight of people standing in line outside their bank, waiting hopelessly to take out their money. If there is one system that withstood the most assault during the conflagration, it was the banking system. This was especially true in the United States where large segments of the banking system simply collapsed.

First consider the extensiveness of the crisis, confining the discussion to the American scene. In 1930, 5.6% of all operating banks in the US failed. In 1931, another 10.5% failed; in 1932, another 7.8% failed; and in 1933, the first year of the new Roosevelt Administration, 12.9% failed (Bernanke, 1983, p. 259). Between 1930 and 1933, 9,000 banks suspended operations (Romer, 1993).

The causes and effects of this collapse can be used to illustrate almost any dimension of money and banking that one can think of. Do you want to examine bank asset and liability management? The erasure of $2.5 billion in corporate equity value by 1933 (equal to
2.4% of nominal GDP in 1929; see Romer, 1993), defaults on mortgage loans, and general collapse in the value of most real and many financial assets provide a dramatic and detailed case study in a banking asset value squeeze, while the runs on banks and the clamour to remove deposits was the corresponding liability squeeze which put many financial institutions into a desperate corner.

Interested in risk management? Its limits, if nothing else, are demonstrated where even strong banks often could not withstand a general ‘contagion’ of fear and a liquidity crisis in which debt service of borrowers skyrocketed (from 9% of national income in 1929 to 19.8% in 1932-33), where outstanding corporate notes rose from $26.1 billion in 1920 to $47.1 billion in 1928, and where non-federal public debt rose from $11.8 billion in 1920 to $33.6 billion in 1928 (all this against a 1929 national income of $86.8 billion; see Bernanke, 1983, p. 260). There is also considerable evidence that American banks in particular had managed their risks poorly in the 1920s and many were technically or even fraudulently insolvent when the various implosions of the early 1930s commenced the rolling cycle of bank runs and mass shutdowns (Calmoris & Mason, 1997; Grossman, 1994; Wicker, 1980).

How about banking structure as a topic? There is a large literature on the topic demonstrating that concentrated branch banking systems (Canada being a prominent example which faced economic conditions similar to the US) tended to avoid crisis whereas decentralized unit systems (like those found in the US) were more prone to collapse. The nature of banking regulation obviously is intertwined with banking structure, and thus offers another topic that can be explored in detail. And international exchange (explored in more detail in the next section) is a good Depression-era case study as is the effect of monetary policy on the financial system. A large and contentious literature about the conduct of monetary policy during the Depression was spawned by initial contributions from Friedman & Schwartz (1963) and Temin (1976). According to this literature, the Federal Reserve made significant, though perhaps not fatal, policy errors at the beginning of the Depression, and defence of the Gold Standard significantly constrained the course of reflationary policy. Such issues provide excellent case study material with on-going relevance to contemporary economic problems.
The Great Depression spread wide, but it also cut deep, and one can probe down to as fine and fundamental a level as one wishes in exploring its effects. Two examples of how “deep” one can go in the area of money and banking are financial intermediation and money creation processes. The general process of financial intermediation is an especially interesting case. The general price deflation of the era caused a great amount of disintermediation, and not just in terms of banks failing. Deflation, in pure theory terms, should be a neutral process of debtors experiencing welfare losses and creditors experiencing welfare gains. In fact, because of non-neutral effects from the operation of institutions, deflation caused the cost of financial intermediation to rise, thus creating a credit squeeze that very possibly turned a sharp economic downturn in 1929 into a general crisis. In particular, nominal interest rates could only fall to zero while real interest rates could continue rising (an interesting case, by the way, of a portfolio risk that macro-conditions have made harder to hedge against). And defaults caused banks to involuntarily shift (through foreclosures) large parts of their portfolios into real assets, the prices of which were falling, while their financial liabilities were rising in real terms (obviously nominal deposits had to be paid out in dollars which now possessed increased purchasing power in the face of lower commodity prices; see Bernanke, 1983; 1995). The extent of this process is subject to some debate. Hall argues\(^2\) that the Depression turned the US into a “temporarily underdeveloped economy,” something that Bernanke (1983), for example, disputes. But the facts make clear that disintermediation was occurring and that suboptimal reintermediation took up the slack afterwards. Trade credit, for example, grew as traditional finance channels collapsed. One example of such a collapse is that mortgage loans by life insurance companies fell from $525 million in 1929 to $10 million in 1933 (Bernanke, 1983, p. 273).

Of course one fundamental role of modern commercial banking is money creation in which fractional reserves are used to create money from an existing monetary base. The concept is straightforward enough: the government issues money (so-called “high powered money”) that is then taken by people and deposited into banks. Those

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banks then leverage those deposits by keeping only a fraction in their vaults to meet normal cash needs, and lending out the rest. Loan proceeds are redeposited and the process starts again, continuing until there is nothing left to loan out.

Money creation is a fundamental banking operation, fairly straightforward, miraculous in a way, but also mechanical and a bit dry from a pedagogical point of view. The banking runs of the Great Depression, both in the US and abroad, represent an excellent way of bringing this concept to life, and also of exploring the full implications of a leveraged banking system (thus illustrating the important concept of leverage itself). The collapse of the US banking system and Roosevelt’s Bank Holiday is an excellent way of discussing these points and segueing into discussions of monetary policy and financial stability. Fractional reserve banking only works when existing depositors demand, at any one time, no more than the sum total of the reserves on hand. During the Depression, this condition often did not hold, and the fundamental vulnerability of banks to runs and other ultimately unpredictable forms of capital flight is a good way of introducing the subtleties of modern leveraged banking.

For example, what caused the runs on the various banks? And how important were bank runs relative to other ultimate causes of bank failures? The “contagion of fear,” basically an “animal spirits” sort of irrational panic, is one possible cause of runs. Other possibilities which assume rationality on the part of depositors include: increases in liquidity preferences on the part of consumers where shifts in household balance sheets and declining wealth, along with general uncertainty about the economic future, caused depositors to withdraw cash from institutions and hoard it (Mishkin, 1978); monetary policy errors, where central banks lowered the supply of base money and thus the basic stuff of money creation (Friedman & Schwartz, 1963); and logical actions by depositors who withdrew money as fast as they could from genuinely insolvent banks (Calomiris, 1993; White, 1984; Wicker, 1980).

There are any number of foreign and domestic case studies in bank failures, runs and panics that can be used in classroom discussions, some of them quite detailed. A good example is Wicker’s (1980) treatment of Caldwell and Company, a large southern bank whose failure precipitated a regional south eastern bank crisis in the US in 1930. This resource could be used as the basis of a teacher-led case
study session for graduate or advanced undergraduate classes. Table 2 reproduces a consolidated balance sheet for the Caldwell bank on the eve of the Great Crash, and a year before the bank’s failure. A summary scan of this sheet shows a clear mismatch between liquid short-term assets and short-term liabilities. There are also key questions to be asked about the nature of the bank’s securities and particularly its investments in controlled companies, which constitute two-fifths of its total assets. It turns out that most of these assets were essentially fraudulent. This exhibit is but one bit of “colour” and a specific example that can be used to teach all manner of financial topics, not just confined to banking.

Table 2: Consolidated Balance Sheet Caldwell Enterprises, June 30, 1929

<table>
<thead>
<tr>
<th>Assets</th>
<th>Millions of dollars</th>
<th>Liabilities</th>
<th>Millions of dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>1</td>
<td>Notes Payable</td>
<td>8</td>
</tr>
<tr>
<td>Receivables</td>
<td>2</td>
<td>Deposits</td>
<td>10</td>
</tr>
<tr>
<td>Securities</td>
<td>15</td>
<td>Due to Controlled Companies</td>
<td>7</td>
</tr>
<tr>
<td>Investment in Controlled Companies</td>
<td>14</td>
<td>Other liabilities</td>
<td>3</td>
</tr>
<tr>
<td>Other assets</td>
<td>3</td>
<td>Payable (Not Current)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Net worth</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 35 35

(Source: Wicker, 1980, p. 575)

Clearly the financial crisis of the 1930s makes for good and riveting story telling. But it is also topical, especially now, with the onset of the financial crisis in the US and the emerging sovereign debt crisis in Europe. And to those using PowerPoint or other graphical displays in teaching, there are some good pictures as well. Figure 1 provides one example that I have used in my own classes.

The discussion thus far should make clear the role that context plays in understanding financial crises and the way in which Depression-era cases can put the spotlight on that context. This can be approached in a cause-and-effect way. For example, the causes of the crisis can be
linked (again, focusing on the US in this case) to the agricultural depression of the 1920s, which weakened rural and farm region banks particularly; the rise of mass consumption of consumer durables and the exhaustion of that consumption near the end of the 1920s; the nature of bank and securities regulation, especially the lack of separation between investment and commercial banking, the prohibition against branch banking (which arguably made for smaller, weaker, unit banks), and the lack of uniform oversight of securities issuance and trading; the Gold Standard; and even the continuing effects of World War I, which thoroughly disrupted trade relationships, and almost overnight turned the US from the net debtor to a large net creditor worldwide (Garraty, 1986; Romer, 1990; 1992; 1993).

As for effects, this discussion includes both context and process. As already mentioned, the effects of the Great Depression are far ranging and persistent. I use the Great Depression as a way of describing both the history of and reasons for the structure of current banking regulations in the United States that are direct lineal descendants of that crisis. Many current issues, especially financial deregulation, and the weakening of the “Chinese Wall” between investment and commercial banking that the Glass-Steagall Act erected and which has
been subsequently eroded, can be usefully discussed and examined in light of the Great Depression. The same could be said of central bank policy, something that has obviously been greatly altered by this historical watershed.

4. ISSUES ASSOCIATED WITH THE 1930s GOLD STANDARD

International foreign exchange is at best an obscure topic for many students, particularly undergraduates. The nature of exchange rate dynamics and their effects on movements of goods, services and capital, is often a trying thing to study for all but the technically-minded, and difficult to illustrate with any excitement. Also, there is a real tendency to abstract away from very real and concrete institutions that make foreign exchange possible.

It might seem that the Great Depression is a definite anachronism, given that much of the world started the period in a system of fixed exchange rates in which the monetary base was backed by gold. However, it was the failure of that particular system which set the stage for the Bretton-Woods system which dominated until the early 1970s, and which still dictates some of our trade policies, particularly the postwar “consensus” on free movements of goods across national borders.

Like banking collapses, the Gold Standard is a cross-cutting issue, something which is therefore “extensive” as a teaching tool. The way in which the Gold Standard “transmitted” deflation and monetary shocks across different nations is alone a good case study of interdependency and complexity in economic phenomena. Eichengreen – one of the major scholars in this area – and Sachs identify four ways in which currency depreciation in the 1930s affected gross output (or, to put the matter in terms of economic theory, how “financial” shocks managed to have “real” effects):

1. through its determination of the world interest rate;
2. through its effects on real wages;
3. through its effects on profits (and hence gross investment); and
4. through its effects on international competitiveness (Eichengreen & Sachs, 1985).

In this construct alone, one can see a number of major economic and financial topics that can be explored. In many ways, the Gold Standard is an even more “intensive” topic than financial crisis. Here it is very clear that institutions do matter. For the Gold Standard, far
from having been the neutral \textit{deus ex machina} that ‘gold bugs’ assert, was in fact an incomplete and very complex web of laws, organizations, customs and arrangements, all of which can be grist for a rich pedagogical mill.

One definition of the Gold Standard of the 1930s is that the system had five distinct elements to it. First it allowed for the free flow of gold between countries, and between countries and individuals; second, it called for the maintenance of fixed exchange rates between currencies, convertible into gold; third – and this is a critical element in many analyses of the failure of the Gold Standard – an international coordinating organization, like the current IMF, was absent, and in particular there was no transnational “lender of last resort (LOLR)” which could bail individual countries out in the event of insurmountable trouble; fourth, there was an implicit asymmetry between capital account deficit countries which had to export gold whereas capital surplus countries could either export or import gold, even when importation might not be in the international interest; and, fifth, the adjustment for deficit countries had to be in domestic price deflation and (typically) domestic output declines, rather than currency depreciation (Temin, 1993).

A whole raft of issues, ranging from arcane to sublime, comes out of this basic, and essentially accepted, definition. Of course, basic international trade and finance theory is embedded throughout it (particularly in the fifth point, in which students of the history of economic thought will recognize Hume’s price-specie-flow mechanism theory of international trade; see Temin, 1993). The LOLR is a basic tenet of both current domestic and international monetary policy practice and theory. The mechanics and ideas of exchange rate determination are obviously part and parcel here. And there is that juicy controversy over whether Federal Reserve policy missteps in the 1930s were due to incompetence or to the imperatives of a rigid international exchange regime.

The institutionally minded will find solace in the workings of this case since institutional issues are so important. For example, devaluation was not just a matter of changing numbers in a central ledger. Central banks could, and did, do any number of things to make their currency depreciate after devaluing it. For example, the simplest method was to write up the book value of foreign gold reserves to reflect the now higher price of gold in terms of the newly devalued
domestic currency. But many countries did not do this. Many countries kept the book value of their gold reserves at par but then reaped domestic currency profits from devaluation since they then sold their ‘lower-priced’ gold (in terms of pre-devaluation domestic currency) at a higher price after devaluation. These profits could be put to various uses, such as purchasing government securities or transferring profits directly to fiscal authorities (actions which would increase domestic money supply), giving them to newly established exchange stabilization funds, or to buy down government debt (which had no reflationary effect) (Eichengreen & Sachs, 1985).

There is, of course, an important relationship between international exchange rates and domestic banking stability as well. For on the Gold Standard, as constituted during the Depression, the supply and value of gold had a direct relationship to overall domestic money supply. Equation (1), adapted from Bernanke (1995, p.5), shows the relationships:

\[ M1 = \frac{(M1)}{BASE} \times \frac{(BASE)}{RES} \times \frac{(RES)}{GOLD} \times P_{GOLD} \times Q_{GOLD} \quad (1) \]

where: \( M1 \) represents notes and coin in circulation plus commercial bank deposits; \( BASE \) represents the monetary base made up of notes and coin in circulation plus the reserves of commercial banks; \( RES \) represents international reserves of the central bank made up of foreign assets plus gold reserves both valued in domestic currency; \( GOLD \) represents gold reserves of the central bank valued in domestic currency and equal to \( P_{GOLD} \times Q_{GOLD} \); \( P_{GOLD} \) represents the price of gold in domestic currency; and \( Q_{GOLD} \) represents the physical quantity of gold reserves measured in something like metric tons.

First and foremost, while worldwide gold supplies were growing during the 1930s, they were growing at a rate of around 2% annually, while money supply needed to be growing by around 3% to sustain ‘normal’ economic expansion. So \( Q_{GOLD} \) in Equation (1) was constrained more than baseline monetary growth required it to be. This is one failing of the Gold Standard: it was tethered to the rather arbitrary growth in worldwide gold supplies.

Equation (1), however, shows that more than the quantity of gold is involved in determining total money supply. Overly restrictive monetary policy by the US Federal Reserve kept the monetary base,

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3 In general, identities, such as \( Y = C+I+G+M \) and \( PV=MT \) are an especially good way of exploring the complex occurrences and dynamics of the Great Depression.
and hence the ‘money multiplier’ \((M1/BASE)\) too low, exacerbating the deflationary pressures caused by the international currency crisis. Additionally, there was a seemingly perverse dynamic where countries that were last to leave the gold standard had more gold outflows than countries that had left earlier. Bernanke (1995) explains this by saying that people had greater confidence in the currency stability of countries which had “bitten the bullet” earlier, than in countries, like the United States, that held on longer and which were increasingly seen as maintaining something that was fundamentally untenable.

The link between the Gold Standard and banking crises is fairly well established. Countries that stayed on the Gold Standard were more likely, \(ceteris paribus\), to have banking panics than countries that went off it (Choudri & Kochin, 1980). The identity above makes it clear how this could happen – the presence of gold reduced liquidity, and put domestic monetary authorities between the proverbial rock and a hard place, where domestic conditions might clearly call for reflation, while preservation of the Gold Standard called for deflationary policies to ‘defend gold.’ Countries that went off the Gold Standard also generally recovered from the Depression much more quickly than countries that did not. Once countries went off gold, they generally had markedly improved economic performance. A lessening of fiscal panic certainly helped, as did the removal of the dead weight that gold preservation seemed to put upon countries choosing to labour under it.

Pedagogically, the unfolding of gold’s collapse has all the elements of a good potboiler (with the following narrative drawn mostly from Eichengreen & Sachs, 1985, pp.928-929). First Argentina and Uruguay suspended gold payments in December of 1929. Hungary, Paraguay and Brazil were unable to maintain their currencies at par. In 1930 Chile, Venezuela, Peru, Australia, and New Zealand fell below the gold export point. Then the watershed: the Pound Sterling detached from gold in September 1931. Germany had already imposed exchange controls in July of that year, foreshadowing the action. By the end of October 1931, all of the British Dominions, save South Africa, the rest of the British Empire, and a number of Scandinavian, European, African and Latin American nations had followed suit. Six months after that Japan, Greece, Siam and Peru were off of gold as well.
Then the US left gold in 1933. That process has its own dramatic
details, typical of the cagey Roosevelt who tended to blow one way,
then another, and made sudden gestures. One of these was Roosevelt’s
sudden pulling out of a worldwide economic conference held that year
(Stein, 1969). The story hardly ends there, but has gone far enough for
our purposes.

The big lessons learned from the collapse and perverse incentives of
late-stage gold-ism, found their way into the system of international
exchange erected at the Bretton-Woods conference in 1946. The
elements of this agreement included a managed exchange rate for
currencies, subject to agreed upon parameters; free capital
movements, subject to government intervention if need be; the
construction of an international LOLR to deal with unanticipated and
nationally unmanageable crises; and an absolutely unfettered trade in
the current account (Cooper, 1992, p.2125). Bretton-Woods is no
longer operative, but these four elements, modified, shape foreign
exchange and foreign trade today.

5. CONCLUSIONS AND CAVEATS
A major conclusion of the reflections offered above is that history
should be an integral part of teaching current topics and theories in
economics, finance and business. The Great Depression is an
historical epoch that is well suited for such a mode of historical
teaching because of its breadth, depth and continuing relevance to
today’s institutions, problems and prospects. The Great Depression
meets the criteria of extensiveness (covering a wide range of issues
and elements), intensiveness (going down to the core of most of these
issues and elements, with many rich choices available to the teacher
about what level of detail to go into), drama (almost self-explanatory,
in that this is a dramatic story than can captivate students), context
(with many clear, if controversial, linkages between particular events
and the general fabric of the prior age) and process (with clear
lineages between events of those times and developments later on).
This is not to say that the Great Depression should be left to carry the
whole teaching load or that it is right for every student or every
course. The following caveats, perhaps obvious, should be noted.

First, except for historically minded or very advanced students,
links between the past and present do need to be made clear and
current-day examples and cases also need to be addressed. While the
stories of the Depression are compelling, many students have a ‘who
cares’ attitude towards the past, doubting its utility and perhaps drifting off when it is discussed in detail. This syndrome can generally be overcome, but it must not be ignored and has to be addressed.

Second, past is not necessarily prologue. There can be a tendency among lovers of history (like myself) to over-interpret it, and to lapse into a sort of historical determinism. There is much to learn from the past, but past events are, by definition, as unique as current events. Even if a second Great Depression occurs, it will not be exactly like, nor exactly determined by the same causes and effects as, the first Great Depression. Instructors need to keep this in mind, lest they get carried away.

Third, most students probably need a brief introduction to historiography and appropriate uses of history. This need not be done as a separate module, but can be scattered throughout the course material. History is potent, but also difficult to use wisely, and students should be at least rudimentarily trained in its use. Some instructors probably need such instruction too.

Finally, there is much to be said for supplementing the Great Depression with other historical examples outside of the period. These need not just be analogous experiences, such as latter-day banking crises, but also counterfactual experiences as well.

But bearing these caveats in mind, there is much to be gained by making increased use of the Great Depression in the teaching of a wide range of courses in economics, finance and business.

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THE ACCIDENTAL AGONY AUNT: REFLECTIONS OF AN ON-LINE TUTOR*

Craig Freedman
Australian School of Business
University of New South Wales

Alexander Blair
Faculty of Business and Economics
Macquarie University

ABSTRACT

This paper presents a case study that examines whether a nearly anonymous on-line tutor can provide significant assistance to the teaching of large introductory courses. By confining the on-line teaching role to queries concerning subject matter alone and by limiting contact to what can be accomplished in such a virtual teaching environment, the case study shows that effective assistance to students can be provided while at the same time relieving pressure on tutors and lecturers in a noticeable way. As in any instance of teaching, success rests largely on the skill and patience of the teacher and the willingness of administrators to refrain from micro-managing.

Keywords: undergraduate economics, on-line teaching, tutorials.

JEL classifications: A22.

* Craig Freedman, Australian School of Business, University of New South Wales, NSW, 2052, Australia, Email: cfreedma@hotmail.com. The role of on-line tutor was undertaken solely by Craig Freedman and the experience then explored and analysed by the two people responsible for this work. Use then is made of the first person singular when actually describing the course of this particular adventure into the realm of the on-line. Accordingly, the authors would like to thank all the online students who made what could have been a tedious task, lively. Thanks also to Michael Dobbie for running a well-structured first year course and as always to a pair of anonymous referees for pointing out shortcomings.

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1. LEAPING INTO THE VOID

be not afraid of greatness: some are born great, some achieve greatness, and some have greatness thrust upon 'em.

(Malvalio, Shakespeare’s Twelfth Night)

In July of 2009 I was returning to work after a profitable six month sabbatical. Unfortunately, a chronic problem with a set of inflamed vocal chords was no better despite some sixteen months having passed since the initial infection. (The problem had been exacerbated by continuing to lecture while barely being able to croak out a sentence louder than a whisper.) After consulting numerous specialists and undergoing many unpleasant tests, I was no closer to a solution than I had been at the start of my difficulties. With a new semester soon to begin and a complete inability to hold conversations of more than five minutes in duration without seriously irritating my already inflamed larynx, resuming normal lecturing responsibilities was not an option. I was instead assigned the task of providing online tutorial support for a large (1300+ students), first year microeconomics course. This paper provides some reflections on this role, its challenges, its benefits and value, and the best approach to take to such a task in order to execute it effectively. It was an unusual teaching experience for the author concerned but one that revealed much about the nature of teaching economics generally as well as about teaching in an online context.

2. CIRCUMSTANCES ARE EVERYTHING

I used to be Snow White … but I drifted.

(West and Weintraub 1975, p.47)

The actual role of online tutor had to be constructed from whole cloth since no prior consideration had been given to such a position and no one else except me, as the designated tutor, seemed particularly concerned. There was no prior idea as to how much time performing as an electronic presence would require. That was left largely in the air as was what would constitute satisfactory performance of such an innovative role. (None of the other courses had this type of assistant. Previously, whether in classes large or not so large, answering posted inquiries remained the responsibility of the lecturer-in-charge of the course, or in some cases was delegated to a second in command – a tutor-in-charge.) Feeling a responsibility to the hordes of confused students, I did take the position quite seriously. Because I felt obliged
to answer each enquiry clearly, painstakingly and intuitively, I ended up spending on average ten hours a week formulating my answers, some of which were detailed and lengthy. More time was naturally spent around impending exams and assignments than at other periods of the semester, though questions continued to flow week in and week out. The total number of active users (students asking questions or providing answers) fell a shade under ten per cent of those enrolled. However, there is every indication that many times that number did keep track of the on-line interchanges. When this passive component is added, about a quarter of those enrolled checked this discussion board regularly. If we then add the more sporadic users, total numbers increase to just under forty per cent. With users building as the course progressed, there is every indication of a word of mouth effect creating this success. Satisfied students tended to spread the word and those who used the service remained remarkably loyal for the rest of the term.

Participation was larger than expected since students came to realise that although their name appeared when entering an enquiry (the program did not allow for anonymity or for pseudonyms), I had no influence on their assessment. In fact, they would not ever have the chance that semester of meeting me in person. My fragile voice made more than a ‘hello’ difficult. So my sole relation to these students was a rather phantom one. Such boundaries perhaps encouraged shyer students (as well as more indolent ones) who would be loath to appear during consultation hours and uncomfortable in dealing directly with those doing the actual assessment in the course. Many overseas students, particularly those who found it difficult to express themselves fully in English fell into this category. Conclusions of this type are buoyed by the fact that in periods before the mid-term and final exam, noticeably fewer students appeared to consult those directly responsible for teaching the course compared to previous years. We could undoubtedly assume that there was something radically different about this particular group of students, but more careful inspection showed no noticeable deviations from prior years. The result then was that the on-line tutor acted as something of a safety valve for the rest of the staff involved in the course. Smaller numbers at their doors before exam dates meant an improved ability to deal with those students who did appear, as well as less of a drain on their time. It is however difficult to judge whether on-line tutoring
improved performance since it is difficult to determine the effect on the more phantom users. However anecdotally, some of the more active users did perform well. Whether this is a case of self-selection or not is again not simple to discern. However, a number of students did go out of the way to thank the on-line tutor for his assistance. Given that there were no existing incentives for students to do so would indicate that these were genuine responses.

I was thrown into this tutoring role shortly before the beginning of the semester. I had little time in which to prepare. Again, I felt that I could more than adequately combine the necessary ingredients to provide successful advice for students. I subconsciously adopted the position of a successful agony aunt. In those columns the key to success is patience, empathy and the ability to tell a good story. Above all, when lending a kindly ear to the woes of a posting student, an online tutor must never be curt or short tempered with those who enquire, unless the questioner is being persistently unreasonable or obnoxious. On-line discussion boards can promote humour but never a lack of mutual respect. Again it is the responsibility of the designated agony aunt to set and enforce effective boundaries.

The first task for an e-learning teacher is to develop a sense of trust and safety within the electronic community. In the absence of this trust, learners will feel uncomfortable and constrained in posting their thoughts and comments.

(Anderson 2008a, p.350)

In essence, the same characteristics needed for good parenting also form the base for success as a digital agony aunt to a horde of students taking their very first economics class. Without patience and empathy, no other tricks of the trade will have a hope of success. These key elements are what will see you through even during those times when you are at a loss for a successful strategy. While patience allows you to grasp what a student’s problem might be, it is empathy that brings you to the level of that very confused student. Only by understanding what is impeding any further progress can a teacher begin to provide effective assistance. This would seem to be the most difficult leap that anyone in the educational sector is required to make. It would be sufficiently difficult to make such a Proustian journey if it only required slipping back to that time when the teacher was a beginner, a raw student who had never been confronted by the complex mystery of economics. But the actual task confronting lecturers, textbook
writers, let alone on-line tutors, is far more difficult. Those who became fully fledged economists are atypical of most of the first year students they subsequently attempt to educate. Such individuals are unlikely to have faced a time or state when economics was totally incomprehensible to them. The instructional implication is that explanations have to be geared to those students who are the most puzzled. The stories drawn in the way of providing insight have to be constructed in a basic, intuitive manner that is laid out step by step with each and every connection spelled out. Nothing under these conditions can be taken for granted.

Lastly, an educator must remember that responses should be individually tailored. There is no such thing as a representative student. What is most helpful under these very realistic circumstances is to try to identify exactly where the student’s difficulty lies. Much like a doctor, the key is to ask probing questions to pinpoint the source of any problem. Instead of having students simply say that they don’t understand a question, it is far more effective to try to elicit from a student the source of confusion about this question, namely what exactly the student doesn’t understand in this particular example or case.

Thus the effective online teacher is constantly probing for learner comfort and competence . . .

(Anderson 2008b, p.48)

3. WHEN CONSTRUCTIVISM CEASES TO BE PRODUCTIVE

Difficult do you call it Sir? I wish it were impossible.

(Samuel Johnson quoted in Seward 1797, p.267)

How people learn is one of those debates where every teacher assumes expertise much like every customer in a restaurant thinks they know how to run one. Over the years there has been a certain tone of superiority attached as first each philosopher, then educational expert and finally psychologist has felt entitled to pontificate on the subject. Certainly education forms a core component of Plato’s Republic (1968), Locke’s tabula rasa¹ (2009) or Rousseau’s Emile (1979).²

¹ Locke’s tabula rasa has proven to be more of a palimpsest that an empty canvas. Very few educationalists these days would imagine that teaching involves sketching on a blank surface. We have returned to the days when teachers were required to be
Given the right environment and small enough numbers, by both training and instinct the authors would tend to adopt something of a constructivist approach to education since it is consistent with our experience that students tend to learn best when they are taking an active and at times a leading role in the activity.

Contrary to criticisms by some (conservative/traditional) educators, constructivism does not dismiss the active role of the teacher or the value of expert knowledge. Constructivism modifies that role, so that teachers help students to construct knowledge rather than to reproduce a series of facts. The constructivist teacher provides tools such as problem-solving and inquiry-based learning activities with which students formulate and test their ideas, draw conclusions and inferences, and pool and convey their knowledge in a collaborative learning environment. Constructivism transforms the student from a passive recipient of information to an active participant in the learning process. Always guided by the teacher, students construct their knowledge actively rather than just mechanically ingesting knowledge from the teacher or the textbook.

Clearly active learning should always be the preferred model when practical. But any constructivist theory needs some major modification when operating within the context of an assembly line version of mass education. Here an online tutor is more a member of a triage team trying at least to help those students who recognize their own confusion and maintain a sufficient level of required initiative to compel them to seek help. In a limited sense the online tutor provides, in a modest way, a chance for first year students, even those that are terminally shy, to take a more active role in their own education.

Except for the most extroverted and confident student, large lectures are intimidating. Most students lapse into total passivity during class.

somewhat like a Socratic midwife rather than the acknowledged expert filling the vacant vessels of their students’ minds with unchallenged wisdom.

The often rightfully maligned Rousseau, in his longitudinal study of one imaginary child, does at times score some accurate hits in spite of his arrogance. The importance of putting ourselves in the place of the learner instead of talking at the student has always been an unshakable sign post to good teaching as well as writing a decent textbook.

We never know how to put ourselves in the place of children; we do not enter into their ideas; we lend them ours, and, always following our own reasonings, with chains of truths we heap up only follies and error in their heads.

(Rousseau 1979, p.170)
with the lectures themselves being more closely related to performance art or crowd control than active learning even when defined in the broadest sense. Tutorials are meant as a device to reinforce learning but also as a remedy which can spur students into greater activity when engaged with the tutor in smaller groups. Still, the courage to raise a question can mean risking the possibility of appearing foolish. In other words, “I must be the only one who doesn’t understand since everyone else is sitting there quietly.” The tutor can try to skilfully draw individuals out, but not without the chance of painful embarrassment. In such cases, an anonymous online tutor may have a distinct advantage over the tutor with a face, definite meeting times and a distinct personality.3

Arguably the most time consuming aspect of teaching online is the time spent communicating with students. Communication is significantly more difficult because students are contacted in written form and usually individually. Answering individual emails require more time then answering questions in a classroom because questions answered orally require less time. In an in-class course the entire class is present to hear not only their questions and the instructor’s answer but also the entire class also is available to hear the context in which the question was asked.

(Cavanaugh 2006, p.2)

However, these apparently binding constraints can in fact provide strengths and opportunities. Minor inconveniences can also be overcome. Certainly posting on a discussion board reduced the number of times answers had to be repeated. An online tutor is clearly more time efficient than an e-mail counterpart. But the differing context of classroom versus website can in these certain circumstances be turned into an advantage. The very anonymity meant that students could imbue this ghostly presence with whatever characteristics they wished using only the impressions that could be garnered from the written responses on the discussion board. A clever use of words provides the student with the proper grist to construct the tutor best

3 The particular discussion board using the standard Blackboard system failed to maintain complete anonymity since the online tutor’s name was published with each posting and alternatives, such as using a virtual nom de plume, were not possible. However, students chose not to seek me out physically but rather to maintain a personal, yet anonymous, relationship. (What is interesting is that despite the many students who used the service, none tried to make contact. They preferred that their on-line tutor retain a ghost-like presence.)
suited to him or her. It is thus easier for the tutor to create a virtual personality free from most, if not all physical distractions. The student can be allowed to create his or her own distinctly personal vision of their kindly correspondent. Through skilful responses the student will conceive of that person tapping away at the keyboard as one he or she can trust and with whom he or she is comfortable. Moreover, by checking postings with some regularity, the vigilant online tutor can insure that students receive answers and comments when they most need them than according to a pre-set schedule. In this manner the online tutor can complement the work done by the rest of the teaching staff and provide a powerful component of a first year course.

Economics uses many technical concepts, often using math and graphs to illustrate models and theories. Being able to help students by using a formula, or sketching a graph, or figure is much easier face-to-face than when communication is via email or telephone.

(Cavanaugh 2006, p.2)

Even overcoming the graphical hurdle is hardly insurmountable while equations are even more amenable to the deft use of the discussion board. Unquestionably graphical explanation would be nearly impossible from a virtual platform if such an approach were to be used for an initial or even secondary presentation of the material. But the online tutor is not a substitute for face-to-face teaching but, as just stated, a vital complement. Students raising questions in these virtual forums have already experienced lectures and probably tutorials where these simple first year models have been explained. The virtual tutor then is only referencing that which has previously been revealed. Moreover, being deliberately forced to respond without the crutch of posting diagrams is much like tightrope walking without the provision of a reassuring safety net. Being compelled to do so definitely sharpens one’s concentration. The tutor is forced to explain with exact precision, placing each step in its proper place and verbally conveying the model in as intuitive way as is conceivable. This is where a constructivist flavour of active learning can be introduced to the process. Carefully crafted words can lead the student into constructing the correct model by him or herself.

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4 Clearly graphs of various intricacies can be posted along with the answer. But this is not only very time consuming for the poor online tutor composing lengthy and comprehensive answers but one that can thwart the learning process.
True, the online tutor remains an agony aunt of sorts. When questioned, the tutor cannot respond, ‘What do you think?’ People have for decades written into these columns not wanting or expecting to be admonished to provide their own answers. So the online tutor must deliver the goods. However to prevent unthinking or lazy questioning, rules of exchange can be encouraged. The online tutor when asked the answer to a particular question can helpfully respond by in turn asking what exactly the student doesn’t understand. The pretext for such a response is that the tutor can only provide useful answers if each response can be specifically crafted to each individual student’s confusion. This encourages students to try to puzzle out what they don’t understand, which often is the first step to productive learning.

4. THE PRACTISING AGONY AUNT

My father is a bastard,  
My ma's an S.O.B.  
My grandpa's always plastered,  
My grandma pushes tea,  
My sister wears a moustache,  
My brother wears a dress,  
Goodness gracious, that's why I'm a mess.  
(Sondheim and Bernstein, West Side Story)

Teaching economics involves a fine balance especially at the first year level. There are of course a number of basic principles and fundamental models that must somehow be conveyed in such a way that students get at least something of an intuitive grasp of not only how these work, but why they are useful in understanding observable phenomena. If students are to make this knowledge their own they must be able to transcend a mere mechanical understanding of economic models.

Over the years we have found that an over-balancing towards the general and abstract might be good training for the one per cent of a class who may be seriously considering a career as academic economists, but tends to convince the bulk of any group of students that economics is just another meaningless subject that demands brute memorization in order to pass rather than repeat the unit. The way around this conundrum is to provide concrete examples which show
how various concepts and graphical models can be employed to provide practical insights.

Such methods should not be dismissed out of hand as being insufficiently rigorous unless the lecturer is confusing rigor with rigor mortis. It is in fact far easier to teach a strict model based curriculum and certainly easier to test such material as well. But to proceed this way is to cheat students of what is intrinsically interesting about the subject. Even for those more interested in proceeding with an economics based career, developing some intuitive as well as technical skills can only prove to be invaluable to the student in the future. Concrete examples are then a key to understanding. Thus if we are to demonstrate the potential usefulness of equipping any large scale first year economics course with an online tutor, demonstrating how such a virtual staff member can add value to the course becomes essential. The Appendix contains just a few varied examples of the actual interchanges made while being an online tutor for a very large first year microeconomics course. The case study starts with the actual instructions for students using the specialised service.

“... [A]nything about Microeconomic Principles. You are to ask the online tutor questions about Microeconomics, nothing more, nothing less.”

The online tutor section of the course website made it clear that only questions dealing directly with the course content were welcome.\(^5\) Incorporated here is the concept of specialisation. Administrative questions could be handled online by the faculty teaching the course (specifically the tutor-in-charge who put the nuts and bolts of the program together). Doing this relieved the online tutor from having to learn or master such details. Without such distractions, the focus could remain on responding to all enquiries in a detailed and even painstaking manner. The extended excerpts from the online discussion board contained in the Appendix illustrate these principles and are arranged according to topic.

\(^5\) Despite a clear description of the online tutor’s role, students were never completely deterred from asking administrative questions, especially at the beginning of semester. Such students were usually referred to administrative staff but questions of this sort were often answered by other students, and near the end of semester, students took on the role of admonishing the askers of such questions not to waste the online tutor’s time.
5. LESSONS LEARNED

A little learning is a dangerous thing;
Drink deep, or taste not the Pierian spring:
There shallow draughts intoxicate the brain,
And drinking largely sobers us again
(Pope 1711, Part ii:line 15)

The conclusions to be drawn from acting as an on-line tutor can be simply and clearly drawn. Large first year lectures are quite likely the most ineffective way to introduce students to any subject. It is something of a surprise that any of them persevere after such a regrettable introduction. Though in institutions where such first year classes are the norm, there is little, if any, viable alternative that remains. Taken pragmatically, the cost factor will continue to dominate at such universities and this equivalent of the educational assembly line will be unlikely to vanish. Staff then interested in rising above such constraints are condemned to find methods that will alleviate, to some degree, what is a poor learning environment. Online teaching has all too often been championed, usually by administrators, as the efficient salvation of this problem. Whether this is so or not is a matter for further investigation. However, one aspect of online teaching can reduce many of the logistical problems to such learning. An online agony aunt if in the hands of an experienced lecturer can play a key role in first year subjects.

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6 It is important to clarify that we have not entered the ongoing debate as to whether online or face-to-face teaching offers superior results. “Citing research claiming that student performance in online courses is equal or better in quality than in lecture courses, academic administrators have embraced online learning as a cost-saver equivalent, especially with the decrease in state funding”(Bennett, McCarty & Carter 2011, p.10). After more than a decade of testing, researchers are no nearer to resolving this question of superiority. Much depends on how the test is structured and more fundamentally the objective of the course itself. Those who would like to stick a toe in these roiled waters can refer to Brown & Liedhom (2002), Goffe & Sosin (2005), Harmon & Lambrinos (2007), Vogel (2009), and Bennett, McCarty & Carter (2011). This paper however only investigates whether on-line tutoring can be an effective complement to face-to-face teaching rather than a substitute for it. It is suggested as a method for improving a rather unsatisfactory teaching approach, namely the large lecture.

7 Many departments would yield to the almost automatic tendency to delegate such an unglamorous position to some ill-regarded junior member of the faculty. Such an option would be extremely misguided. Experience and years of successful teaching of the specific subject is the minimum requirement to turn an apparently sow’s ear of a position into a silk purse for students. Junior faculty are more often overburdened, still
potentially free up the time of the face to face course lecturers and tutors. In fact, when handled adeptly, such a position, through the very anonymity of the role, creates an environment where students are free to ask questions and receive answers without making prior arrangements and without risking anywhere near the same level of potential embarrassment. Looking at the position through the eyes of Adam Smith, it is yet another case when we are dealing with sufficiently large markets such that specialisation and division of labour triumphs.

As it is the power of exchanging that gives occasion to the division of labour, so the extent of this division must always be limited by the extent of that power, or, in other words, by the extent of the market. When the market is very small, no person can have any encouragement to dedicate himself entirely to one employment …

(Smith 1961, p.21)

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APPENDIX

The following excerpts are arranged according to topic. Where student names were provided by the web program employed, pseudonyms are used to maintain anonymity. Students sometimes addressed the online tutor by first name. Again, one of the requirements for success was creating a comfortable space for students to raise issues and ask questions. Standing on an unnecessary point of dignity would seem counter-productive to such an achievement. 

A. Thinking Like an Economist

11 August 2009 10:21 PM

I have my different view with the lecturer, and a question about the cost-benefit principle. Cost-Benefit principle: An individual should

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8 Spelling and grammar mistakes are untouched to provide verisimilitude rather than as some type of subtle critique. In some cases it may be clear that English is not the questioner’s native tongue.
take an action if, and only if, the extra benefit > the extra cost. In
the lecture I attended, a student questioned about the “should” in
the definition, the lecturer agreed it’s not necessary and crossed it
out. I disagree with their view. From my understanding, principles
in the economic modules are similar to rules in games. Under
economic modules, there are principles, assumptions and so on to
follow. Principles are like logical formulas, such as if A>B, then
C, otherwise D. If Bene>Cost, then “should” Action, otherwise No
Action. Therefore, “should” in CB principle definition has to be
used. Please comment.

I have a question about the wording “extra” in the definition.
“Extra” means more than usual, addition to the original, addition
to necessary amount. In other words, it’s something added on the
top of original things. There must be a base where can be topped
up.

Could you please explain what the “extra” means in the Cost-
Benefit definition? What is the “base” then? Is it because
economists only concern about extra benefits and costs? They
don’t analysis original benefits and costs. Say if an individual buy
a bike in an original price (without doing any research), this case is
excluded from the economic module? (rationality assumption?)
Sorry I am confused here. Many thanks for your time and
response.

13 August 2009 1:16 PM
Sorry for the delay in answering. I was only put on the system
today. You have asked two very interesting questions. In
economics, if a person is acting rationally then that person should
always take an action when the total benefits of that action are
larger than the full costs of that action. In other words, people are
assumed not to want to leave themselves worse off. So the answer
is that they should. However you might ask if a person will always
do that. The answer is no, because anyone is capable of making a
mistake. Again, we are talking in terms of economics and no other
subject.

Your second question gets to another key idea. A key basis for
economic thinking is what is called the marginal approach. It looks
at incremental or additional changes. Therefore if you are deciding
whether to eat an ice-cream cone you would have to consider the
additional benefits you would derive from eating that cone versus
the extra costs. Here the costs are not only the price you pay but
also implicit costs like the weight you gain, the discomfort you
might feel immediately afterward and any other consideration. So
the base is always the state that you are in when you make the
choice. You look only at the additional or incremental benefits and
costs in making your decision. Feel free to ask any follow up questions if this is not entirely clear. Your on-line tutor

14 August 2009 7:42 PM
Thanks a lot for the answers. It really helps me to understand further of the concepts. Very much appreciated your time.

B. Opportunity Cost

20 August 2009 11:52 AM
Hey, for some reason this question has got me stuck! (Possibly because im overthinking, and confusing myself):

“Sonya is employed at a stock brokerage firm where she earns $25 per hour. The office she works at is located downtown. To get to work each day, she must either ride a series of buses that takes one-and-a-half hours at a cost of $2, or take a cab that takes 30 minutes and costs $20. Assuming she goes to work, the opportunity cost:

A) of riding the bus is $2, and taking the cab is $20;
B) of riding the bus is $27, and taking the cab is $20;
C) of riding the bus is $35.50, and taking the cab is -$5;
D) of riding the bus is $39.50, and taking the cab is $32.50.

Feedback: Page 9: Opportunity cost takes into account the total value of the next best alternative forgone. Taking the bus means forgoing an hour of work at a cost of $25 in forgone wages, and a $2 bus fare. The opportunity cost of the taxi is the fare of $20.”

What confuses me, is that if opportunity cost is the TOTAL VALUE of the next best alternative forgone, then by Sonya catching a bus.. she is losing 1.5 hours of work.. if she works $25 p.h.. Wouldn’t her opportunity cost be the value of 1.5 hours of work (that is, $25+12.5)? And why is the $2 bus fare part of the value of the opportunity cost, because if she catches the bus.. she wont be FOREGOING the bus fare?

20 August 2009 3:08 PM
I think the bus fare is included in the opp. cost since by riding the bus she is foregoing the alternate uses of the $2. For example, if she didn't ride the bus the $2 could be used to purchase a chocolate bar. I don't like this question since it implies that if Sonya arrives at work an hour early she will still be able to receive her $25 an hour salary for that hour. In reality it is more likely the opportunity cost of catching the bus would be equivalent to the value she assigns to an hour of sleep. Since by choosing to travel by bus, she

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9 Feedback refers to explanations posted on the textbook website.
would have to wake up earlier to allow for additional travel time. For any rational employee, they would only consider transport options that allowed them to arrive to work on time. Any comments on that Craig?

20 August 2009 3:20 PM

Let me commiserate with you. The idea of opportunity cost is the most important idea in microeconomics and often the most difficult to get correct. I have known of individuals who claim to be economists who get muddled up when trying to actually apply the idea. The intuition is simple. Every time you make a choice you have to forgo or give something up. Opportunity cost is never 0 unless you live in a world in which you can do everything at once or where you have no choices to make.

With that long introduction let's look at the problem. The issue is what Sonya is actually giving up when she is traveling to work (her opportunity cost). That is what it means to forego something. If she takes a cab she is giving up the $20 fare. In other words she won't have that $20 to spend on something else. If she takes a bus she has to be willing to give up the $2 fare. But that is not all. It will take her an additional hour to get there. (90 minutes instead of 30 minutes). How do we value her time? Usually we think of the wage she could earn if she was working instead of sitting on a hot, crowded bus with strangers sneezing in her face. (I speak from personal experience.) The problem tells us she could be earning $25 an hour. Therefore she is not only giving up the $2 in cash by riding a bus but also implicitly giving up an additional $25 by spending an additional hour in travel time. Her total opportunity cost is therefore $2 + $25 = $27.

Notice that by taking the bus she is only foregoing an extra hour of her life in travel time. That is because her only given alternative (a cab) will still take 30 minutes. Unless there is a way in which she can get to work without any travel time (working at home for instance) her travel time will never be zero. (We are assuming that she has decided it is worthwhile to go to work so the only consideration is what she is giving up by taking alternative forms of transportation.)

What could we conclude if Sonya ends up taking the bus despite the higher opportunity cost? (This is not as strange as it might seem. We all know people who are willing to take all sorts of back roads and spend additional time doing so just to avoid paying tolls.) There are a number of possible explanations and I'm sure you could come up with some. But we might conclude that Sonya is making an error when estimating the value of her time or that she simply values it at under $18 an hour. (She has to pay $2 for the bus fare and as long as she values her time at under $18 the
opportunity cost of taking a bus is under $20. This would make it a better option than the cab.)

I hope this overly long answer helps.

Your online tutor.

20 August 2009 8:34 PM

William Vickrey: Ho ho ho, I get it, but isn't the bus ride 1.30 hours? So she is implicitly losing $2 bus fare, $25 hours work + $12.5 for 0.5 hours of work, thus total opportunity cost of $39.5?

20 August 2009 8:38 PM

William Vickrey: BTW, what about the opportunity cost of taking the cab?

According to my knowledge, Sonya's hour is worth $25, so when she is taking the cab, she is losing $12.5 of the work and $20 for the cab, so is the total of that $32.5?

20 August 2009 9:28 PM

That was my trail of thinking... Maria Edgeworth

20 August 2009 9:50 PM

If she catches the bus it takes 1.5 hours, if she catches a taxi it takes 30 minutes so the real savings is only 1 hour of work if she takes the taxi at $25 so if she catches the bus she is worse off by the cost of the $2 bus fare and the $25 which is 1 hour of work she misses out on total $27 George Akerlof

20 August 2009 9:55 PM

Maria Edgeworth: Great! Thank you :) I never saw it like that!

21 August 2009 11:12 AM

This is a standard economics approach as I mentioned. The idea is that you always have an option of working another hour. Therefore the value of your time in terms of opportunity cost is the wage you give up by not working.

As I mentioned, many people's actions indicate that this is not how people act. They appear to value their time at a much lower rate indicating that either they don't seriously think there is an option of working another hour at that rate or there are other mitigating factors influencing their decisions.

In the problem as stated, Sonya must get to work. Since she can't apparently work at home there must be some travel time. In other words, some travel time is involved in earning her salary. She only appears to have two options. The opportunity cost of taking a bus is the additional time she spends traveling which is an additional hour.
However, the question of how we should value an hour of our time is an interesting one and is often quite important in cost/benefit calculations. How do you think an hour of time should be valued?

*Your online tutor.*

21 August 2009 11:59 AM

Actually, I hate those kind of question, they are not so clearer....also make us confused William Vickrey

21 August 2009 12:10 PM

*William Vickrey:* Let me make it clearer here,

1. whatever bus or cab, she have spend time for travelling.
2. the opp cost is compare bus and cab.
3. take bus need 1.5 hrs, cost $2, (-2)
4. take cab need 0.5 hrs, cost $20, (-20)another 1 hr can earn $25 (+25). totally +5
5. compare bus and cab is +5-(-2)=7 so, the answer is 7. Is that right?

21 August 2009 12:31 PM

As long as you are willing to assume the cost of Sonya's time is $25 an hour (what she can earn by working) the rest is fairly straightforward. But you have to think very clearly or you can get confused.

She needs to get to work. She can't work from home. So there will be a minimum travel time. Remember we are not trying to figure out the opportunity cost of working but the opportunity cost of getting to work. Also remember that any time we pay for anything we are foregoing spending the money on something else.

The minimum time to get to work is 30 minutes. The quickest option is the cab. It costs $20

A bus costs $2 but you are foregoing another hour by taking the bus instead of the cab. That hour is worth $25. So the opportunity cost of taking a bus is $2 + $25 = $27.

The problem shows that although some option might appear on the surface to be cheaper (like taking a bus instead of a cab) it really isn't in terms of what you are foregoing (opportunity cost).

In your answer you are confused because opportunity cost is always positive. The assumption is you are always giving up something of value when you make a choice. Therefore using negative numbers can have no corresponding economic meaning. What you have done actually makes no sense from an economic standpoint. For instance, in step 4 if you are gaining $25 then you are not foregoing it. Opportunity cost is
what you are willing to give up. You can't calculate it if you confuse what you are giving up with what you are gaining. That would be like muddling costs and benefits together.

*Your online tutor.*

21 August 2009 4:32 PM

"The assumption is you are always giving up something of value when you make a choice". Yes, I think I am almost there....Thanks for your patient. *William Vickrey.*

22 August 2009 11:47 PM

Hi Craig, *Franco Modigliani,*

Can I use "sunk costs" to discript the 30 minus travel? The 30 minus, as a sunk cost, cannot be avoided if she needs to get to work. It should be ignored. Would it be easier to explain why the cost of 30 minus are excluded from opportunity cost in both actions (take a bus or a cab). Please comment.

Thanks

23 August 2009 4:56 PM

Using sunk cost just to describe the 30 minutes spent travelling can be a bit confusing. A sunk cost reflects any investment that can't be recovered once made. For instance, once a baker bakes a cupcake, the cost of doing so is largely a sunk cost. It is why toward the end of the day, the baker may offer it at a reduced rate since once it is stale it will have a value close to zero.

Any time spent is a sunk cost unless you own a time machine. I have been trying to figure out how to go back in time and correct some of my foolish decisions but to no avail. So if hard working Sonia travels 90 minutes to work that is also a sunk cost. That time spent will never be retrievable.

Again, the question is not whether she will go to work or not. The question is, “What is the opportunity cost of travelling to work one way versus another way?” Travelling to work has to take time. She could not be working during that thirty minutes because she does not work at home and must travel to work. So she is not foregoing anything in terms of extra time by taking a cab.

In contrast she is giving up money by taking either the cab or the bus. Why? Because she could walk to work and not make any explicit cash payment. It might take her many hours with a large opportunity cost attached but she can do so. By either taking the cab or the bus she is giving up or foregoing some cash that she didn't necessarily have to spend that way to get to work. But there is no way she can avoid spending some time travelling unless she works at home. So again, she isn't giving up the 30 minutes by taking a cab.
I hope this answer clears things up a bit more. If you don't understand one of my initial answers you should always feel free to ask again. Learning to think like an economist is initially a bit difficult. But if you make some effort to begin with (a sunk cost investment) you will find that it starts to make sense. Trying to memorize becomes more and more difficult as you take more courses in economics.

Your on line tutor

C. Supply and Demand

20 September 2009 11:13 PM
Fred Hayek: The first one is:

4. The supply curve for ice cream slopes upward and the demand curve slopes downward. The equilibrium price in the market is $3.
A) The marginal cost of producing ice creams is $3 for all sellers.
B) The reservation price of all buyers is equal to $3.
C) The reservation price of the marginal seller is $3.
D) The reservation price of sellers is greater than $3.
The answer is C, but I thought it is A. Could you please explain that to me?

The other one is:
8. The demand curve for hybrid (electric cars) will increase when:
A) the price of hybrid cars decreases
B) the price of petrol increases
C) car manufacturers identify new low cost methods to produce batteries that store electricity
D) the government subsidises the production of hybrid electric cars
The answer is B. Although I'd considered B when I was trying to figure out the right answer, I still cannot understand why answer A is wrong. Is that because people's preference or anything else?

21 September 2009 11:20 AM
Nick Kaldor: The other question of the hybrid cars. Well "A" is not correct simply because it talks about a price change, which would only "increase the quantity demanded" - this is a movement along the demand curve, but the question clearly states "when will the "demand curve increase"" - now they are
asking a shift in the demand curve, thus petrol increase would increase the demand for hybrid cars (which uses solar energy). Get it?

21 September 2009 9:50 PM

Fred Hayek: Thank you for your answer as well, that does help me a great deal.

21 October 2009 12:11 PM

Let me first try to explain question four which really depends on understanding the terms being used.

First, as always, draw a supply and demand curve with the equilibrium market price of $3. Now realize that in this ice cream market there are many buyers and sellers. Some sellers are willing to sell at $1, others at $3, and others at $4, etc. The same goes for buyers. The demand curve shows you that different buyers are willing to buy at different prices. The way in which the term reservation price is used is tricky. It means the lowest price at which a seller is willing to sell. It also means the highest price at which buyers are willing to buy.

Let's then see how this works. Suppose the price of ice cream is $2. The supply and demand model shows us that there are more people willing to buy ice cream at $2 than there are sellers willing to supply it. This then is not an equilibrium price because there is an incentive for buyers and sellers to change what they are doing. Why? At $2 there are some buyers who can't buy ice cream but would be willing to pay more than $2. (Their reservation price is higher than $2. On the other hand there are suppliers who would come into the market if the price was higher. The current price doesn't meet their reservation price. If then the price were raised to $3 this would resolve the excess demand problem. It would drive out of the market all those buyers whose reservation price was lower than $3 and bring in all those sellers with a reservation price between $2 and $3. In other word the higher price would increase the quantity supplied while decreasing the quantity demanded. At $3 everyone who wants to buy ice cream at that price can and everyone who wants to sell ice cream at that price can.

You must also remember that in this market, where buying and selling occurs at $3, are consumers who would have paid more than $3 to get their ice cream and sellers who would have been willing to sell for less than $3. What is true is that the last seller coming into the market (the marginal or additional seller) has a reservation price of $3. This is just enough to bring that seller into the market. The marginal
consumer (the last consumer coming into the market or additional consumer) is the one with a reservation price of $3. This is the highest price that this marginal consumer is willing to pay. Anything higher and that consumer will vanish.

After this lengthy explanation let's look at the possible answers. Remember that we are not looking for the right answer but the best of the four.

Answer A claims that the cost for each seller of producing ice creams (cones, cups, shoe-fools) is $3. This can't be correct since the upward sloping supply curve says that some sellers are willing to sell the ice cream for less than $3. (In your model look at that portion of the supply curve where prices under $3 still elicits a certain quantity supplied.) For A to be correct we would have to assume that these sellers are willing to sell ice cream for less than it costs them to make (for below $3). In economics land this would make them crazy. Economists don't deal with crazy actions or crazy people. So answer A seems unlikely.

Answer B claims that the reservation price of all buyers is $3. However our downward sloping demand curve tells us otherwise. There are buyers willing to pay more than $3 for ice cream yet they are in the market buying ice cream for only $3.

Answer D can't be correct since those potential sellers with a reservation price greater than $3 simply aren't in the market. Price would have to rise before they decided to sell.

As previously explained, for the last or additional seller coming into the market, $3 was just enough to get that supplier to sell. Therefore that marginal seller's reservation price was $3.

The next question tests whether you really understand the factors (other than price) that affect supply and demand. Graphically when these factors change it will be indicated by shifting either the supply or demand curve. We need to be careful here in order to reason out the cause and effect linking a factor to either the demand side of the market or the supply side.

So now let's look at the question. Draw your supply and demand curve. We are told that the demand curve for these cars increases. This means a shift upwards or to the right. As a result, cars are sold at a higher price and the quantity bought and sold will also increase.

Does Answer A describe this situation? As you see by your model it doesn't. A seems to be describing an increase in supply. If you start with the same model and for some reason (for example) the cost of making hybrid cars decreases then the supply curve will shift downwards or to the right (any
quantity of such cars will now be offered at a lower price). Notice the end result is that the price drops and the quantity supplied and the quantity demanded increase (more will be bought and sold). But we want the case where the price rises and the quantity demanded and the quantity supplied increases. So this can't be our best answer unless the rest are really ridiculous.

In fact, answer C describes the case where our supply would increase, namely it is now less costly to produce these cars (cheaper battery costs) so sellers will now be willing to sell any given quantity at a lower cost. So answers A and C are quite similar and neither one is very accurate.

D also describes a supply affect and we can cross that out for the same reason we eliminated answers A and C.

B is the only answer that describes a demand side factor. Higher petrol prices means the cost of running a petrol guzzling car increases as does the cost of running any standard car. This would drop the demand for these cars. Hybrid cars are considered as substitutes. (The cost of running these will increase as well but not by as much as standard cars.) You could buy these hybrids instead of buying a standard petrol car. Therefore the demand for these cars would increase describing the events demanded in the question.

These have been very long answers. But I am trying to go step by step as long as my fingers will last.

Hope that helps.

Your online tutor.

21 September 2009 9:46 PM

Fred Hayek: So “The demand curve for hybrid (electric cars) will increase” means the demand curve shifts to the right, I misunderstood it, I merely thought it is the movement along the curve.

For Q4, I do need to apologize for asking such a stupid question. Since I did not understand the definition of supply curve profoundly (I should always revise the lecture notes before commencing on-line quiz.), I chose the wrong answer. Mr Freedman, thank you so much for typing such a long answer!

D. Utility Theory

12 November 2009 1:09 AM

John Stuart Mill: Example 5.2 on pages 128-130 of Bernanke talks about venison sausages and beef sausages and about how Alison might maximise her utility by finding the optimal combination of the two sausage varieties. The example
demonstrates that she achieve maximum utility essentially by making the marginal utility the same for both varieties. If there's any difference between the utility per dollar she's obtaining from spending on one type of sausage, where the utility per dollar is lower, she should reduce spending and where the utility per dollar is higher, she should increase spending.

Further, if the price for the two types of sausage happens to be the same, and she has no particular preference for either type, she should just spend half of her money on one variety and half on the other.

I'm thinking of a situation where sausage types are the same price and she is so wealthy that she could afford to buy both. If she has the same preference for both, economically speaking at least, there is no way to decide between the two choices on a particular occasion. Or could we say that it doesn't matter what she chooses because either choice on particular occasion will yield the same utility per dollar?

If she chooses beef today and venison tomorrow, does this actually suggest that she has a secret preference for beef because she chose to consume that first? Or to get away from sausages, if she wants both a soccer ball and a basketball and can afford both, how should she decide which to purchase first if they cost the same and she thinks they will give her the same enjoyment.

If a consumer is very wealthy and could easily afford to buy thousands of goods, does the order they choose to acquire those goods matter? I think this is called 'revealed preference theory', but is that a discredited idea?

Thanks for any clarification!

12 November 2009 11:59 AM

If unlike the example you quote, a sausage was simply a sausage to Alison then she would be indifferent to what combination or mix of sausages she bought (if in fact the cost of all sausages were the same). She would buy whatever she randomly reached for first. She might buy beef because they were located in a more convenient place then venison or it was easier to find beef than venison.

Now even if Alison was extremely wealthy, she probably wouldn't want to buy a huge amount of sausages. There are other goods and services she could purchase and at some level of purchase she would probably gain more utility by ceasing to buy sausages and buying other goods and services instead.

No, even if Alison was extremely rich she would still face the same situation. She doesn't have to spend all her income on
goods and services. She could save some portion or she could give some of her income away. Calculating how much she would want to save or give away would involve the same sort of marginal utility calculus as the sausage example.

Lastly, you always have to specify the time period over which such decisions are made. Is it an hour, a day, a week, a year, etc? There are a number of reasons why you would buy a soccer ball today and a basketball tomorrow. The analysis is the same but marginal utility could vary day to day depending upon whether it was a period when she usually played soccer or one where she played basketball. Costs may involve the fact that she wants to do some more searching before she buys a basketball but believes she has managed to gain a great deal for the soccer ball.
Let me know if you need me to babble about this at greater depth.

*Your online tutor*

*12 November 2009 12:12 PM*

*John Stuart Mill:* Thank you Craig! That helps me to think more clearly about it, particularly the point about time periods.
RESPONDING TO STUDENT PERCEPTIONS OF EDUCATION QUALITY IN ECONOMICS AND ACCOUNTING COURSES*

Craig Ellis
Office of the Pro Vice-Chancellor (Education),
University of Western Sydney

Maike Sundmacher & Maria Estela Varua
School of Finance and Economics,
University of Western Sydney

ABSTRACT

The Course Experience Questionnaire (CEQ) is becoming increasingly important in assuring the quality of learning and teaching outcomes in the Australian University System. Universities are now under increasing pressure to improve the CEQ outcomes of their programs. The challenge is to do this in a way that delivers real benefits for students rather than simply to meet administratively set targets. Using the CEQ, this paper examines student perceptions of the quality of accounting and economics education at the University of Western Sydney (UWS) over the period 1998-2008. The connection between overall student satisfaction and good teaching is explored as is the value added by various changes made at UWS in response to student perceptions of education quality over the 11-year study period. Some conclusions are drawn and recommendations made about how CEQ data can be used to enhance the student experience in ways that impact real education outcomes.

Keywords: education quality, student feedback, course experience questionnaire.

JEL classifications: A20, A29, I23

* Correspondence: Craig Ellis, Associate Professor, Office of the Pro Vice-Chancellor (Education), Education, Business & Law, University of Western Sydney, Locked Bag 1797, Penrith, NSW, 2751, Australia; E-mail: c.ellis@uws.edu.au. Thanks to a referee for comments and suggestions.

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1. INTRODUCTION

Over the last 15- years, the Australian tertiary education sector has seen dramatic changes that have had a significant impact on the university learning experience of students. In the past, most universities have followed the traditional single campus university structure where all the teaching, research and administrative units are located in one place. However, with population growth and the expansion of the geographical area of cities, it becomes necessary to either extend the activities of an existing university to other locations, start new universities or to merge and/or convert existing higher education institutions into universities. Unlike the traditional single campus model, many Australian universities now operate across multiple, often geographically dispersed, campuses.

The proliferation of multi-campus universities has led to a growth in student numbers. Accompanying this growth in student numbers is an increasing diversity amongst the student population (McKenzie & Gow 2003). University students today display a range of prior experiences and varying levels of previous education, they express diverse needs and exhibit different levels of academic potential from each other. Hence, the challenge for Australian universities is to cater to this changing and heterogeneous population of students to provide them with an effective university learning experience.

Processes to catalogue the student experience play an important role in measuring institutional performance such as teaching effectiveness. A part of the Australian Graduate Survey (AGS), the Course Experience Questionnaire (CEQ) is an attitudinal survey of students’ perceptions of their tertiary education experiences. Measures derived from the CEQ can provide information as to whether an institution has provided a high quality learning experience to students. In addition, part of a university’s income stream comes from funds allocated by the Federal Government based on a range of indicators that includes CEQ outcomes. Therefore, the improvement of student assessment feedback has the potential of influencing university income.

In addition to learning importance associated with improved learning outcomes, improving business and commerce education (including accounting and economics) is important nationally. Department of Education, Employment and Workplace Relations (DEEWR) statistics for 2008 indicate that there were 127,111 commencing students in management and commerce (29.6% of
commencing student load in that year) and 317, 353 enrolled students in total, making management and commence the single, largest field of education (DEEWR, 2009).

The University of Western Sydney (UWS) is an example of a large metropolitan multi-campus university with a diverse student population. Approximately half of the University’s commencing students in any year are first in family to attend university. The University operates across five campuses in the Greater Western Sydney region; Parramatta, Blacktown, Campbelltown, Penrith and Bankstown. Undergraduate business and commerce degrees at UWS are simultaneously offered across four campuses and are taught by a team of lecturers and tutors. The team prepares the unit outline for the unit and a unit co-coordinator oversees the running of the unit across all campuses.

This paper examines student perceptions of the quality of accounting and economics education at UWS using the CEQ over the period 1998-2008. The analyses focus on students’ perception of good teaching and overall satisfaction with their undergraduate degree program. The connection between good teaching and overall satisfaction is explored and the various changes employed by UWS to improve teaching practice in the face of student diversity and a multi-campus environment are identified.

2. HIGHER EDUCATION IN AUSTRALIA

Twenty years following the Dawkins higher education series of reforms, the Australian higher education sector embarked on a new series of changes with the publication of the final report of the Bradley Review panel in December 2008.\(^1\) Charged with identifying strategies to strengthen the long-term national and international positioning of Australian higher education, key points among the forty-six recommendations made by the Review panel included the establishment of a national regulatory framework to ensure consistency in the quality of service provision in higher education institutions and increased reporting requirements on students’ experiences and perceptions throughout their educational journey, to identify strengths and gaps in the service delivery of individual higher education institutions (Bradley 2008).

\(^1\) Formally the ‘Review of Australian Higher Education’ but became known as the ‘Bradley Review’ after panel Chair, Emeritus Professor Denise Bradley.
The establishment in 2011 of the Tertiary Education Quality and Standards Agency (TEQSA) as an independent regulatory and quality assurance agency for the Australian higher education sector was a key response to the recommendations of the Bradley Review. Commencing January 2012, TEQSA will serve as the main Australian higher education regulatory body, registering, evaluating and, as necessary, deregistering higher education providers as well as overseeing the accreditation and re-accreditation processes of courses (DEEWR 2011).\(^2\) TEQSA’s regulatory function will be complemented by the establishment of a national register of Australian higher education providers and a new Higher Education Standards Framework.

While the new regulatory set-up provides a framework for increasing equity, consistency and transparency, which will result in higher compliance costs for higher education providers, other key recommendations in the Bradley Review will result in far more significant changes and challenges for the sector. For instance, as recommended by the Bradley Review (2008, p.174) funds will follow students from 2012, meaning that higher education providers are now able to expand their market share in line with their operational capacities. According to the Bradley Review (2008, p.22) the new funding system “... would provide incentives to a wider range of higher education providers to seek out and enrol a broader group of students and would provide them with the flexibility to respond quickly to changes in labour market and student demand”, whereby higher education providers will capture and report on changes in student demand through annual course experience and student engagement questionnaires (Bradley 2008, p.80).

Increased transparency in the reporting of individual higher education institutions’ performances, the new “funds-follow-students” policy and an increased requirement of higher education providers to demonstrate responsiveness to student needs as captured by course experience questionnaires has arguably given rise to a demand-driven, mass education environment; or, as Dollery & Murray (2006, p.93) earlier observed, the traditional role of “academics as knights” has moved to “academics as knaves”, while the perception of “students as pawns” has moved to “students as queens”. In this newly emerging

\(^2\) TEQSA’s quality assurance functions commenced July 2011.
landscape, higher education providers and individual disciplines in particular need to re-think and re-define the positioning of their institution and course offerings. Specifically, if faculties seek to maintain and/or grow student enrolments, discipline-specific research is required to determine, among other things, the typical characteristics and attitudes of enrolled students, including the underlying drivers that cause students to choose one discipline over another, as well as aspects that lead to graduates leaving university with a positive educational experience.

3. STUDENT EXPECTATIONS AND PERCEPTIONS: THE CASES OF ACCOUNTING AND ECONOMICS

The number of Australian University graduates has significantly increased from 161,556 in 1998 to 272,230 in 2009 (DEEWR 2010, Table 1). Over this time, graduate numbers from the broad field of Management and Commerce have more than doubled from 39,925 to 93,444 (DEEWR 2010, Table 3). These numbers indicate not only increasing access and interest in higher education degrees, but also highlight an increasing interest in and demand for business-related education. According to Chew (2009, p.240) the rise in business graduates could be explained by an increasingly credentials-driven labour market and a subsequent climate, in which students enrol in business degrees to comply with career requirements rather than to be educated.

The treatment of a degree as a “necessary evil” that needs to be accomplished as part of a career path is somewhat supported by the Bradley Review’s demand that universities need to show a higher degree of responsiveness and flexibility to changing student needs so that higher education fits into the student’s life and not vice versa. In this context, higher education providers need to meet student expectations, which, as Scott (2008, p.26) asserts, include at their core:

- high quality staff who are consistently accessible and highly responsive to student enquiries;
- “just in time” and “just for me” support, particularly for commencing students;
- courses that are clear, flexible and relevant in their designs; and
- high levels of administrative and support services.
Scott (2008, p.24) further highlights that students expect “personal and vocational relevance and coherence in what is studied and assessed” as well as “ease of attendance”. It is likely that the degree of success for higher education providers to meet these wide-ranging expectations has a direct impact on students’ overall satisfaction with and commitment to their course and chosen discipline.

Expectations and perceptions seem to also be key factors in students’ choice of discipline. In this context, negative stereotypes of and preconceived ideas about certain professions and subject matters may inhibit students from choosing certain disciplines as their main study area. In the broad field of business the disciplines of accounting and economics seem to be the two main areas that are affected by having a bad reputation among students. Studies including Francisco, Noland & Kelly (2003), Worthington & Higgs (2004), Jackling & Calero (2006), Hutchings & Brown (2009), and Round & Shanahan (2010) each identify common student perceptions of accounting and economics. These include perceptions that the disciplines:

- are too boring and dull;
- are too rules, numbers and procedures-based;
- are too abstract, rigorous and mathematical;
- are less vocationally and career oriented compared to other business majors;
- place too high an emphasis on traditional rote learning; and
- result in lower employment prospects and lower starting salaries compared to other business disciplines.

Another factor common to both disciplines seems to be misleading information regarding the contents of these and what it actually means to work as an accountant or economist after graduation (see for example Albrecht & Sack 2001; Francisco, Noland & Kelly 2003; Worthington & Higgs 2004). The accounting profession in particular seems to suffer from a stigmatised characterisation of the accountant as a number-crunching nerd with dysfunctional and anti-social tendencies (Jackling & Calero 2006, p.422). Understandably then, prior interest in the professions appears as a significant factor in the decision to enrol in either an accounting or economics degree (Saemann & Crooker 1999; Worthington & Higgs 2004) as genuinely interested students are more arguably better informed and therefore less likely to be perturbed by the aforementioned negative perceptions.
Students’ existing negative perceptions are exacerbated by demoralised and discouraged staff who feel they need to sacrifice research for teaching (Guest & Duhs 2002) and who, given the choice, would not opt for the same major again (Albrecht & Sack 2001), and by peers who even at graduation still display low levels of respect for the profession (Hutchings & Brown 2009). Positive (secondary school) experiences studying accounting are conversely more likely to promote continued interest in the profession and enrolling in the discipline (Jackling & Calero 2006).

Overall however, the majority of the literature supports the claim that students hold negative expectations and perceptions with respect to accounting and economics education. While students expect their courses to be of personal, vocational and career relevance, neither accounting nor economics are perceived to be fulfilling these criteria. In fact, students seem to have outdated ideas about the accounting and economics professions, which, unaddressed, are likely to lead to a further decrease in their popularity. Student expectations and perceptions need to be managed carefully, especially with respect to the relevance and career prospect of the two disciplines. Similarly, accounting and economics faculties need to implement diverse learning and teaching strategies to counter-act students’ perceptions that their majors are dominated by traditional rote learning and that content is boring, non-creative and solely numbers-based. This will hopefully not only reinvigorate the reputation of accounting and economics as study disciplines, but also result in a more engaged and satisfied student cohort.

4. THE COURSE EXPERIENCE QUESTIONNAIRE SURVEY

The Course Experience Questionnaire (CEQ) (Ramsden 1991; Wilson, Lizzio & Ramsden 1997) is a national survey administered by Graduate Careers Australia (GCA) since 1993 to graduates from Australian universities within approximately four months of course completion. The CEQ asks respondents to express their degree of agreement or disagreement on 23 items using a five point Likert scale. The 23 items are combined to produce results for five different scales:

- Good Teaching Skills (comprising 6 items on basic elements of effective teaching);
- Clear Goals and Standard Scales (comprising 4 items);
- Graduate Qualities Scale (comprising 6 items);
• Generic Skills Scale (comprising 6 items); and
• Overall Satisfaction (comprising 1 item)

For reporting, the five-point response scale measures are converted to -100, -50, 0, 50 and 100, from which a range of descriptive statistics can be computed using the idea of a mid-scale response being equated to a score of zero. Two other results are often reported from CEQ data. The first is ‘percentage agreement’, where responses of 50 (agree) and 100 (strongly agree) are taken to represent agreement with the CEQ item. The second is ‘percentage broad agreement’, where responses of 0 (undecided), 50 (agree) and 100 (strongly agree) are taken to represent student agreement with a CEQ item. Wilson, Lizzio & Ramsden (1997) comment that because of the consolidated, course wide nature of the CEQ, the data obtained from it are primarily useful in examining teaching and learning at the program level and above. At UWS, like many other Australian universities, the CEQ is one tool used to identify student perceptions of overall satisfaction, generic skills and good teaching. We begin by looking at overall satisfaction before considering good teaching specifically.

(a) UWS Students’ Perceptions - CEQ Overall Satisfaction Scale

Overall satisfaction under the CEQ is measured by response to the following single global item:

Overall, I was satisfied with the quality of the course.

Figure 1 below presents findings for accounting students’ overall satisfaction with their degree and compares the performance of UWS to all Australian universities and to its direct competitors in the Sydney metropolitan area.

Results in Figure 1 show that accounting students’ overall satisfaction rating at UWS is lower than that for other Sydney universities and for all Australian universities taken together. This is despite a more or less steady increase in overall satisfaction since 2004. Most students surveyed indicated that they found accounting to be boring and dull and that there are “too many rules to follow”. This latter quote in particular is consistent with the findings of Saemann and Crooker (1999) with respect to students’ perceptions of the nature of accounting work. From Table 1 below, it can be further seen that the overall satisfaction rating dropped by an average of 3% in the period 2001-2003, yet increased by an average of 6% in 2007-2008. The results further indicate that the mean and variance of UWS
overall satisfaction approval rating for the period 1998-2008 is significantly lower than both groups of other Sydney universities and Australian universities taken together.

Overall satisfaction in the economics/econometrics discipline is shown in Figure 2 below and illustrates that in seven of 11 years, UWS’ economics courses attained an overall satisfaction rating greater than that of other Sydney universities yet only exceeded the average overall satisfaction rate for all Australian universities in five out of 11 years.

Table 1: Accounting Overall Satisfaction Averages for 1998-2008.

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<tr>
<td>UWS</td>
<td>60%</td>
<td>57%</td>
<td>59%</td>
<td>65%</td>
</tr>
<tr>
<td>Sydney Universities</td>
<td>63%</td>
<td>64%</td>
<td>64%</td>
<td>65%</td>
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<tr>
<td>Australian Universities</td>
<td>66%</td>
<td>67%</td>
<td>65%</td>
<td>67%</td>
</tr>
<tr>
<td>p-value (F-test)</td>
<td>UWS vs. Sydney Universities</td>
<td>0.06180*</td>
<td>UWS vs. Australian Universities</td>
<td>0.00074*</td>
</tr>
<tr>
<td>p-value (t-test)</td>
<td>UWS vs. Sydney Universities</td>
<td>0.00016***</td>
<td>UWS vs. Australian Universities</td>
<td>0.07274*</td>
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Symbols *, **, *** indicate significance at 10%, 5% and 1% levels respectively.
Results presented in Table 2 below further indicate that UWS’ economics/econometrics overall satisfaction ratings variance is statistically different from other Sydney universities and all Australian universities, but the average rating for the period is not significantly different.

As per the findings for the accounting discipline, the overall satisfaction rating in economics/econometrics dropped considerably in the period 2001-2003 – down some 8% from the period 1998-2000. This coincides with the amalgamation of the then three member institutes that made up the UWS network at the time (UWS

**Table 2: Economics/Econometrics Overall Satisfaction, 1998-2008.**

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<tr>
<td>UWS</td>
<td>70%</td>
<td>62%</td>
<td>68%</td>
<td>75%</td>
</tr>
<tr>
<td>Sydney Universities</td>
<td>64%</td>
<td>65%</td>
<td>65%</td>
<td>74%</td>
</tr>
<tr>
<td>Australian Universities</td>
<td>65%</td>
<td>69%</td>
<td>68%</td>
<td>71%</td>
</tr>
<tr>
<td><strong>p-value</strong> (F-test)</td>
<td>UWS vs. Sydney Universities</td>
<td>0.00772**</td>
<td>UWS vs. Australian universities</td>
<td>0.00067***</td>
</tr>
<tr>
<td><strong>p-value</strong> (t-test)</td>
<td>UWS vs. Sydney Universities</td>
<td>0.63848</td>
<td>UWS vs. Australian Universities</td>
<td>0.28405</td>
</tr>
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</table>

Symbols *,**,*** indicate significance at 10%, 5% and 1% levels respectively.
Hawkesbury, UWS Macarthur and UWS Nepean) into a ‘single’ University of Western Sydney, extending the number of campuses across the network from one or two per member institute to five for the amalgamated University. The amalgamation also marked a period of course consolidation as the merged University sought to offer a more homogeneous set of like courses (e.g. a single accounting degree as opposed to multiple competing accounting degrees by the former member institutes). Furthermore, accounting and economics offerings at some campuses were terminated. As a result, many students were advised to transfer to a new degree program and to a different campus, sometimes at a location with comparatively lesser quality teaching and learning facilities. Another factor identified in the decline in overall satisfaction is the then increase in tutorial class sizes from an average 20 to 30 students. These changes created obvious anxiety and uncertainty in some students. The experience in the accounting and economics degree programs is indicative of other disciplines at UWS during the same period and highlights the significant impact of structural change on students’ satisfaction with their studies.

Conversely, overall satisfaction ratings increased by approximately 8% in accounting and 13% in economics/econometrics from 2001-2003 to 2007-2008. These increases may be explained in part by the increase in student numbers in both programs, representing a wider cross section of the population with different expectations and attitudes. Over the same period the University has also worked hard to improve and upgrade its teaching facilities on all campuses and to make improvements to the delivery of services to students including online course advice and online enrolment systems, enhanced commencing student orientation programs, the introduction of dedicated first-year course advisors and greater promotion of student support services.

(b) UWS Students’ Perceptions using the CEQ Good Teaching Scale

The CEQ Good Teaching Scale (GTS) is comprised of the following six questions:

1. The staff put a lot of time commenting on my work.
2. The teaching staff normally gave me helpful feedback.
3. The teaching staff of this course motivated me to do my best work.
4. My lecturers were extremely good at explaining things.
5. The teaching staff worked hard to make their subjects interesting.
6. The teaching staff made a real effort to understand difficulties I might be having with my work.
The first two questions bear directly on the perceptions of students about feedback. Questions 3 to 5 refer to students’ perception of teaching practices while question 6 refers to staffs’ empathy. The reported value of the GTS is a simple percentage measure of the positive responses from students for the six questions listed above. Notably, when the score for the degree is calculated, no stratification by subject is reported. Hence, non-compulsory units (i.e. electives) are treated the same as compulsory units (i.e. core units).

![Figure 3: Accounting Discipline Good Teaching, (1998-2008): Various Universities.](image)

The figure shows that out of the 11 years there is only one year (2006) wherein UWS exceeds the Australian university average on the good teaching scale (UWS: 39.8% vs Australian average: 39.3%). UWS similarly underperforms relative to the group of Sydney universities in most years. The $t$-test reveals a significant difference in the 11-year average good teaching score of UWS, the other Sydney based universities and all Australian universities. Despite this, the results presented in Table 3 below show that the good teaching scale for accounting has been increasing on average since 1998. However, when testing if there is a significant difference in the variances of the level of agreement on good teaching between that of UWS and all Australian universities and UWS and other Sydney universities, $F$-test results show that there is no significant difference between UWS and its counterparts.
Table 3: Accounting Good Teaching Averages for 1998-2008.

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<tr>
<td>UWS</td>
<td>30%</td>
<td>30%</td>
<td>34%</td>
<td>39%</td>
</tr>
<tr>
<td>Sydney Universities</td>
<td>29%</td>
<td>34%</td>
<td>38%</td>
<td>44%</td>
</tr>
<tr>
<td>Australian Universities</td>
<td>31%</td>
<td>34%</td>
<td>37%</td>
<td>43%</td>
</tr>
<tr>
<td>p-value (F-test)</td>
<td>UWS vs. Sydney Universities</td>
<td>0.19472</td>
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<td>0.47852</td>
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<tr>
<td>p-value (t-test)</td>
<td>UWS vs. Sydney Universities</td>
<td>0.00754*</td>
<td>UWS vs. Australian Universities</td>
<td>0.00017***</td>
</tr>
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</table>

Symbols *, **, *** indicate significance at 10%, 5% and 1% levels respectively.

Results pertaining to good teaching in the economics/econometrics discipline are reported in Figure 4 and Table 4 respectively. Relative to performance in the accounting discipline, we observe far greater variation over the 11-year observation period for economics/econometrics. Overall results on the good teaching scale are lower than those for Australian universities for all years except 1998, yet exceed the group of Sydney universities in six of the 11 years. From Table 4 it is noted that the UWS average is not statistically different from that of other Sydney based universities and but is statistically different to that of all Australian universities.

Figure 4: Economics/Econometrics Good Teaching (1998-2008): Various Universities.
The quantitative responses to the CEQ Good Teaching Scale (GTS) may highlight potential areas of good performance or concern but say little to the underlying causes. A recent Australian Learning and Teaching Council report by O’Connell et al. (2010) for instance indicates that from all disciplines in the broad field of education of Management and Commerce, accounting graduates are the least satisfied by the feedback they received. Pointing to the clear link between feedback and improved learning outcomes, the authors argued this to be particularly serious given accounting’s poor standing relative to other disciplines. With respect to pedagogy in the economics discipline, Becker & Watts (2001) and Guest & Duhs (2002) both claim that academic economists in particular continue to engage with ‘traditional’ teaching methods – large lecture and chalk’n’talk – which, whilst arguably cost-efficient, do little to facilitate student engagement with the discipline. Examining the link between poor pedagogical practice and low GTS scores in economics, Guest and Duhs cite insufficient rewards for quality teaching as a contributing factor.

Using CEQuery software package to analyse students’ open-ended responses, UWS accounting graduates who provided positive comments related to course design and teaching style believed that the use of case studies to relate theory to real life examples was the best aspect of the degree program. In the ‘needs improvement’ category suggestions for improvement included presenting the accounting units in more interesting and engaging ways – instead of relying on reading from Powerpoint presentations – and highlighted a need to employ tutors with sufficient teaching skills and experience. A perceived need for a greater focus on practical skills applicable to the workforce and training on industry-standard software programs was also noted by accounting graduates. The majority of economics graduates ‘best aspect’ comments related to staff focused on enthusiasm and teaching skills of lecturers, with many graduates appreciative of the effort of lecturers in creating interesting and relevant course content. Furthermore, most found their economics lecturers and tutors to be knowledgeable and patient in providing help and support. Despite this, some economics graduates still found the quality of lecturers to be highly variable and made complaints about the teaching style and skills of certain lecturers and tutors. This latter result shows that despite continued improvements in curriculum design and pedagogy
Responding to Student Perceptions of Education Quality

and an increased focus on recognising and rewarding quality teaching, some individual academic economists remain wedded to traditional teaching methods.

Across both the accounting and economics degree programs, assessment practice attracted few positive comments but overall received reasonable praise compared with all other degree programs in the University. Group assignments were for instance highlighted as being particularly useful in developing teamwork and communication skills and were noted as being important for developing problem solving skills. Consistent with O’Connell et al. (2010) however, almost a third of all assessment ‘needs improvement’ comments related to feedback on assignments, which according to some graduates was often unhelpful or frequently not given until late in the semester.

5. IMPLICATIONS FOR CURRICULUM DEVELOPMENT AND PEDAGOGY

Commencing in 2010, the University of Western Sydney implemented the Tracking and Improvement for Learning and Teaching (TILT) system to triangulate quantitative and qualitative data from a variety of sources – principle among which is the CEQ – with the objective of identifying key improvement priorities at the University, School, course and unit levels.3 With respect to implications arising from the CEQ, a particularly significant outcome of the TILT system is its emphasis on whole-of-course improvements. While numerous strategic initiatives are and have been undertaken at the institutional (i.e. University and School) level, the contribution of individual improvements at the course and unit level to the student experience should not be disregarded.

As discussed in the previous section, assessment standards and feedback are a key area of concern for students across all degree programs that attract negative feedback in the CEQ. As an outcome of an institutional review of assessment practice, from 2009 UWS implemented a criteria and standards-based approach to student assessment. Under this approach, assessment criteria are identified and performance standards explicitly described so that students know the

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level of performance required for each assessment task. Policy in regards to assessment feedback has also been strengthened to ensure that feedback is (among other things) constructive and timely – i.e. allows students sufficient time to learn from and incorporate the feedback provided in subsequent assessment tasks. To facilitate the timely provision of feedback, the School of Finance and Economics in 2011 is embarking on an audit of embedded workload in relation to student assessment. An outcome of the audit will be to substantially reduce student assessment and hence academic staff marking loads, allowing more time for detailed feedback to be provided. Reductions in embedded work of up to one-hour per student per teaching session are expected across the accounting and economics degree programs as curriculum changes are approved and implemented through 2012-2013.

Addressing student concerns in the CEQ about the variability in quality of academic staff, the University introduced the Foundations of University learning and Teaching (FULT) program in 2007. Taught over two semesters using a combination of online learning and face-to-face sessions, the FULT program is mandatory for all newly appointed academic staff, senior lecturer level (C) and below, with either an ongoing appointment or contract of 12-months or greater. As at September 2010, the FULT program had 42 graduates and a further 62 enrolled academic staff. Centrally administered and facilitated induction sessions for over 300 sessional staff each year are also conducted prior to the commencement of each teaching session. In the accounting discipline within the School of Finance and Economics, the University induction sessions are supplemented with an additional session specific to the needs of the discipline. A formal evaluation of the FULT program in 2010 reported changes in the way graduates thought and talked about teaching and that through continuing communities of practice, all participants were enabled to broaden their expertise and try out a greater range of possibilities for improving their own teaching and assessing practice (Thomson & Malfroy 2010).

The TILT system is also used by Schools at the individual course level to facilitate local initiatives, albeit in concert with institutional strategies and objectives. In response to specific comments in relation

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to the accounting degree, the inclusion of appropriate software packages in units and increased use of case studies are two priority areas for improvement. Other course level initiatives in adopted by the School of Finance and Economics in response to CEQ feedback on the accounting and economics degree programs include (i) mapping assessment timing, (ii) aligning assessment with course learning outcomes, and (iii) redeveloping the assessment portfolios in each course to enhance student engagement by using a mix of assessment strategies.

6. CONCLUSION
The approach of using questionnaires for large student bodies about their experiences is well documented (Wright & O’Neill 2002), however there is much debate about the use of students’ experiences and/or expectations and perceptions of quality given the argument that students should not be considered as customers since they are unlikely to be sensible judges of what they need in terms of education in order to be satisfied (Barnett 1996). Despite these arguments the Course Experience Questionnaire (CEQ) remains a frequently cited source of information for universities seeking to improve the structure and delivery of their courses. At the University of Western Sydney (UWS) the CEQ is used as part of the TILT system of identifying key improvement priorities in course and unit delivery.

Examining qualitative and quantitative CEQ scores and feedback for the accounting and economics degrees at UWS over the period 1998-2008, we find the institution typically underperforms relative to the sector and to other Sydney metropolitan universities on both Good Teaching Scale (GTS) scores and Overall Satisfaction scores in accounting. GTS and Overall Satisfaction score in economics however show UWS to often outperform both the sector and Sydney universities, yet the results are variable over time. Further analysis show that Good Teaching Scale (GTS) scores and Overall Satisfaction scores are highly correlated with each other for both degrees. Although the GST scores measure the overall teaching performance of the degree, it is not providing a true reflection of the performance of individual units or subject area. Positive comments received from accounting graduates related to course design and teaching style while the majority of economics graduates ‘best aspect’ comments related to staff focused on enthusiasm and teaching skills of lecturers. Across
both degree programs, negative comments relating to assessment and feedback featured heavily.

Responding to CEQ feedback, UWS has implemented a number of initiatives designed to improve assessment practice and the standard of learning and teaching. In so far however as the majority of these initiatives have only been recently implemented – either late in or proceeding our study period – the impacts of them on the CEQ mostly remain to been seen. Of interest will be the continued tracking of the CEQ to examine what impact and over what time frame the initiatives will have.

REFERENCES


USING OIL PRICE SHOCKS TO TEACH THE AS-AD MODEL IN A BLENDED LEARNING STRATEGY*

Harry Tse
Business School Economics Group,
University of Technology, Sydney

ABSTRACT

This paper reports a pedagogical strategy employed to teach the AS-AD model. Dolan & Stevens (2006) stress the importance of teaching macroeconomics with relevance, and in this vein the issue of the macroeconomic effect of substantial increases in oil prices was used as a focus for teaching the AS-AD model in the first semester of 2006. This strategy also had a substantial blended learning dimension which Fox & MacKeogh (2003) argue can generate deeper student learning than traditional, pure, face to face strategies and which Hughes (2007) suggests can enhance the confidence with which students approach learning tasks, improving what they take away from these experiences. The paper describes the behaviour of oil prices in the years leading up to 2006 and the factors affecting this price. It outlines the structure of the AS-AD model presented to students and how oil prices can be incorporated into this model. It then discusses details of the overall strategy used for teaching the model and finally presents some evidence that students reported better and more relevant learning experiences than did students in the three prior semesters which had not used this strategy.

Keywords: Aggregate demand, aggregate supply, macroeconomics, oil prices, blended learning.

JEL Classifications: A22, E1.

* Correspondence: Harry Tse, Associate Lecturer, Economics Group, UTS Business School, University of Technology, Sydney, P.O. Box 123 Broadway, New South Wales, 2007, Australia. Ph. 61 2 9514-7786; Fax 61 2 9514-7777; E-mail: harry.tse@uts.edu.au. Thanks to Peter Docherty, Ross Forman, David Leong and Darien Williams for extensive comments and suggestions on earlier drafts of this paper. Thanks also to the University of Technology, Sydney for financial assistance in the form of a Learning and Teaching Performance Fund Grant and to James Donald for providing research and teaching assistance. Thanks finally to Rod O’Donnell for very helpful editorial suggestions.

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1. INTRODUCTION

In two recent papers in this journal, Peter Docherty and I examined a range of Aggregate Supply-Aggregate Demand (AS-AD) models typically used to teach intermediate macroeconomics, as well as a number of criticisms of such models advanced over the years (see Docherty & Tse 2009a, 2009b). We argued in the second of those papers that while the neoclassical framework continues to be the dominant paradigm in economics, most of the criticisms of the AS-AD model can be overcome so that it can continue to be used as a device for teaching intermediate macroeconomics.

In this paper I report a pedagogical strategy we employed to teach one of the AS-AD models examined in our earlier papers. Any AS-AD model can be taught with the model itself as the centre of pedagogical attention but such an approach has the potential to be dry and abstract. Students typically respond negatively to such teaching. In contrast, Dolan & Stevens (2006) stress the importance of teaching macroeconomics with relevance, and in this vein we gave considerable attention in 2006 as to how we could teach the AS-AD model so that students understood it thoroughly but found their learning experience interesting, engaging and connected to the real world.

The prominence of rising oil prices in the media at the time provided a natural real world problem to which the AS-AD problem could be applied. Prior to the Global Financial Crisis, central banks in a number of countries were becoming increasingly concerned about the development of inflation after several years of sustained growth in aggregate demand. This concern focused particularly on the price of oil which had been rising significantly and which prompted comparisons with the oil price increases of the 1970s. One consequence of a potential new oil price shock was argued to be the possibility of global recession. Outlining how recession can be caused by high oil prices thus became the main focus of the strategy we used to teach the AS-AD model.

This strategy also had a substantial blended learning dimension which Fox & MacKeogh (2003) argue can generate deeper student learning than traditional, pure, face to face strategies. Hughes (2007) also suggests that blended learning approaches can enhance student support and thus improve the confidence with which students approach learning tasks, increasing what they take away from these tasks.

The paper begins with a consideration of oil prices in the years leading up to 2006 and the factors affecting these prices. The structure
of the AS-AD model presented to students is then outlined and an approach to incorporating oil prices into the model is explained. The overall strategy for teaching the AS-AD model using the effect of rising oil prices as a major theme is then described. Some consideration is given as to how students reacted to our approach, before some concluding remarks are made.

2. THE MACROECONOMIC IMPORTANCE OF OIL PRICES

Hamilton (1983) argues that every major recession from World War II up to the 1970s was preceded by a significant increase in the price of oil and that the balance of evidence suggests a causal link from these increases to the onset of recession. Barsky & Killian (2004) challenge the notion that oil price shocks constitute either a necessary or sufficient condition for the onset of recession but admit that a number of the most serious recessions from the 1970s were associated with large increases in the price of oil.

![Figure 1: Nominal Price of Brent Crude Oil, 1970-2005](source)

The behaviour of oil prices leading up to 2006 is shown in Figures 1 and 2. Figure 1 shows the nominal price per barrel of Brent Crude Oil in US Dollars. This figure indicates that in the early 2000s oil prices surpassed their levels of the mid 1970s and approached the levels reached during the second oil price shock of 1979-80 (cf. Reserve Bank of Australia 2005, p.6). Figure 2 shows the real price of Brent Crude, calculated as an index of the nominal price deflated by the producers’
price index and set to be 100 in 1970. This figure indicates that the real price of oil did not quite reach the heights of the first or second oil price shocks in the years leading up to 2006. It did, however, reach levels higher than at any point since those shocks.

![Figure 2: Real Price of Brent Crude Oil, 1970-2005](image)

Source: Datastream and RBA.

A number of commentators in early 2006 raised the possibility that this spike in oil prices might have negative implications for the world economy. These commentators generally pointed out some important differences in the circumstances of the mid 2000s compared with the 1970s focusing mainly on the strength of world demand emanating from the Chinese and Indian economies (see, for example, Dickman & Holloway 2004, pp.4-5; and Woodall 2005, pp.15-16). It is thus worth reflecting on the factors affecting oil prices before looking at the impact of higher oil prices on the macroeconomy. The Reserve Bank of Australia (2005) notes two important things about the supply of oil over the period from 1980 to 2005. Firstly, since about 2001, the supply of oil had been rising to reach its level in 2005 of about 82 million barrels per day, although subject to sudden but temporary “shocks” downwards. This contrasts with the experience of around 2000 when global supply in general and from OPEC in particular fell over the course of a year or so, and was clearly in contrast to the big fall in OPEC supply between 1980 and 1985. Thus the period in which the price of oil had been rising to 2006 was associated with a period in which the
supply of oil had mainly been rising. The production process which determines the supply of oil (the so-called “oil value chain”) is made up of four main dimensions: exploration, extraction, transport, and refining. The broad behaviour of oil supply can thus be decomposed into these dimensions which, in the years leading up to 2006, had been the outcome of a variety of factors worth considering in some detail.

**Manipulation of OPEC Quotas**

The more slowly oil is released from reserves to the market, other things equal, the higher will be the price of oil and the higher will be profits from oil production. Thus, it is in the interests of OPEC countries to release oil slowly enough to keep the price of oil high and maintain their profits but not so slowly as to cause such a high price that the world economy goes into recession and demand for oil drops (see *The Economist* 2005, p.5 where the Saudi Arabia oil minister points out that Saudi Arabia thrives on the economic growth of other countries). It is also in the interests of oil producers for the price of oil to be relatively stable because fluctuations in price tend to dampen demand. Thus Saudi Arabia has tended in the past to increase the supply of oil when the price has risen sharply (to dampen price increases) and vice versa (*The Economist* 2005, p.5). This is called “targeting inventories”. In 1997 after OPEC decided to increase supply, the Asian Crisis hit, demand dropped as Asian countries went into severe recession and the price of oil fell to $10 per barrel. OPEC then cut production in an attempt to lift the price, and it subsequently rose steadily.

**Lack of Investment in Oil-Producing Capacity**

As the world economy grows, it demands more oil and oil producers must invest in their ability to produce, deliver and refine oil if they are to keep up with this growing demand and maintain a stable price. This investment takes the form of oil rigs and drills to extract oil, oil tankers to ship oil around the world and oil refineries to turn crude oil into petroleum and other usable forms for cars and industry. Many oil producers, especially OPEC, had cut their spending on investment in this kind of productive capacity over the ten years or so prior to 2006, so that growth in demand was on average bigger than growth in supply (*The Economist* 2005, p.5; Dickman & Holloway 2004, p.2). As OPEC increased its supply to meet growing demand its production levels approached its capacity to supply oil.
Supply Disruptions
When the relationship between supply and demand is tightly balanced due to factors such as those discussed above, any disruption to supply caused by adverse weather conditions knocking out part of the oil value chain, by political unrest or labour disputes closing down wharves or production facilities (such as those in Venezuela or Nigeria in the years immediately prior to 2006) or by wars (the invasion of Iraq, for example), causing demand to run ahead or nearly ahead of supply and the price of oil to rise. In fact, any hint that such a disruption might happen can cause the price of oil to rise, this being called the “fear” or “risk” premium (Dickman & Holloway 2004, p.3; The Economist 2005, p.4).

Resource Nationalism
This is a less clear factor but worth noting. It involves developing or emerging countries forming companies to access and extract oil themselves rather than allowing one of the big OECD oil-based companies who compete with OPEC to do it. This potentially reduces the supply of oil available globally if these nations decide to stock pile oil rather than to sell it and keep the profits. If they sell, it doesn’t reduce the world supply of oil but it does make life tougher for “Big Oil”, the big private western oil companies that include Exxon-Mobil, Royal Dutch Shell, Chevron Texaco and BP (the four remaining companies of the so-called “seven sisters” of the 60s, 70s and 80s, the 7 biggest western oil companies who controlled world oil supplies before the formation of OPEC; See The Economist 2005, p.5ff).

Hubbert’s Peak
This is a background supply issue rather than one that had direct effects on supply over the period up to 2006. The idea is that there is a fixed supply of oil in the ground and that rising demand is using up this supply at a rate sufficient to generate an upward trend in prices. Some argue that reluctance on the part of oil producers to invest in oil-producing capacity is due to their desire to hold back the flow of oil so that it can be released at higher prices.

Impact of Supply on Recent Oil Price Increases
As pointed out above, the price of oil had been rising in the years leading up to 2006 at the same time as the supply of oil had been broadly increasing. This would seem to suggest that changes in supply were not the key factor determining the price of oil in 2006. The implication is
that demand had been more important in this respect. Figure 1 indicates how the price has generally risen since 1998. Demand factors affecting the price of oil principally reflect strong growth in world GDP over a number of years since 2001 or so, especially in China and the US. Since oil is a major factor of production, when GDP grows strongly, the demand for oil is higher and this impacts on the price, other things equal. The particularly strong demand from China reflected about 1/3 of the growth in total demand for oil in 2004 (Dickman & Holloway 2004).

This is very different from the oil price shocks of the 1970s when supply was suddenly reduced causing the price to rise. However it should also be remembered that both supply and demand factors contribute to oil price determination. Given that investment in oil producing capacity had been relatively low in 2006, the rate of growth of capacity had been lower than the rate of growth in demand. So it would not be true to say that supply considerations are irrelevant or failed to contribute to oil price movements, even if these considerations were qualitatively different from those of the 1970s.

**Future Price Movements**

According to some, the world was facing a new “price paradigm” for oil in 2006 prior to the GFC (The Economist 2005, p.7). Principally, strong demand was increasingly coming up against a limited supply of oil and prices would never fall back to $30 a barrel but were more likely to exceed $100 per barrel on a permanent basis. Central to this argument was the concept of “Hubbert’s Peak” as discussed above. However, the following arguments weigh against the idea that Hubbert’s Peak could have inaugurated a new price paradigm:

- Technology is constantly expanding the supply of oil in terms of improving access to existing supplies; in making the discovery of additional supplies more likely; and in widening the definition of “oil” to make associated products more realistic oil substitutes;
- Investment in oil infrastructure by OPEC had been increasing;
- The surge in world GDP growth may not have lasted (as the emergence of the GFC subsequently ensured was the case);
- The unusually high Chinese demand for oil was partly because of a temporary shortage of coal and was unlikely to remain as high.
Thus supply factors could well have had some impact on price over the following few years if demand had remained strong. But a consistently high price of oil was likely to have generated supply responses that either increased the proportion of reserves recovered from existing fields, providing an incentive either for more exploration and the discovery of new oil fields, or for a speeding up of the development of oil substitutes. And these would have increased the effective supply of oil, reducing oil prices in the longer term. It might also have been the case that there were demand responses to higher oil prices as people began to run more efficient cars and found ways of reducing their reliance on oil.

An examination of the potential impact of the surge in oil prices in the lead up to 2006 on the macroeconomy thus represented an excellent opportunity to engage the interest of students in real macroeconomic developments in a manner consistent with the recommendations of Dolan & Stevens (2006). It also represented an opportunity to provide students with a challenging variant on a reasonably well documented supply shock that would require and facilitate a good knowledge of the workings of the AS-AD model. The following two sections outline the structure of the basic AS-AD model dealt with in lectures and tutorials in 2006, and how oil could then be integrated into this model and used to examine the macroeconomic impact of significant increases in oil prices. The teaching strategy used to lead students to an understanding of this material is then outlined.

3. THE STICKY WAGE AS-AD MODEL

The version of the AS-AD model we focused upon in 2006 was the so-called “sticky wage” model. This version of the model is not without its problems (see Docherty & Tse 2009b for a discussion of these problems) but it dovetails quite nicely with material treated in microeconomics courses and thus taps into students’ existing knowledge, building links across degree content. The sticky wage model was originally characterised as the “downwardly rigid money wages” model and an early textbook treatment of this model may be found in Glahe (1977, pp.25-29). We provided a detailed exposition of this model in Docherty & Tse (2009a) but the structure of the model is summarised here for the convenience of readers.

Most texts distinguish between the long run aggregate supply curve, which is vertical at potential or full employment output and to which
the economy gravitates with the passage of sufficient time, and the short run aggregate supply curve which is typically characterised by a positive relation between the aggregate price level and output. Since the long run curve defines the position to which the economy eventually returns and around which it fluctuates in the short run, it functions as a benchmark against which the short run relation must be understood. It is, thus, worth discussing first in some detail before the structure of the short run aggregate supply curve is considered in relation to it. In 2006, we thus found that Glahe’s (1977) treatment although nearly 30 years old was not “dated” but provided a detailed and useful approach.

Glahe’s derivation of the long run aggregate supply curve is shown in Figure 3, where the curve appears in panel (d) and is vertical in
price-output space at the level of potential output, $Y^*$. Potential output itself is determined jointly from the labour market in panel (a) and a standard aggregate production function in panel (b) where the amount of capital is held constant. Glahe carefully derives the supply curve for labour, $N^S$, in panel (a), from the work-leisure choice facing workers given the real wage, and the labour demand curve, $N^D$, from the firm’s profit maximising choice of labour inputs. He thus provides detailed micro-foundations for the labour market equilibrium in panel (a) and hence for the level of full employment, $N^*$. Substitution of $N^*$ into the production function with constant capital gives full employment or potential output, $Y^*$, from panel (b).

In this long run benchmark framework, firms always supply $Y^*$ because the real cost of labour, the real wage, $w$, is constant at its equilibrium value, $w^*$, and prices and wages are perfectly flexible. Given equilibrium in the labour market and its associated real wage, $w^*$, the price level firms require to supply $Y^*$ is determined by the money wage. For any given level of this wage, the definition of the real wage implies an inverse relation between the real wage and the aggregate price level. A series of such relations, corresponding to various levels of the money wage, is shown in panel (c) of Figure 3. If the money wage is $W_1$, the equilibrium real wage, $w^*$, translates into a price level of $P_1$. Thus the price-output combination ($P_1, Y^*$) constitutes one point, $A$, on the long run aggregate supply curve in panel (d) when the money wage is $W_1$ in panel (c). An increase in the money wage to $W_2$ requires firms to increase the price level to $P_2$ in order to maintain the equilibrium real wage, $w^*$, and continue supplying $Y^*$. The price-output combination ($P_2, Y^*$) thus constitutes a second point, $B$, on the long run aggregate supply curve in panel (d) when the money wage is $W_2$, and so on.

When money wages or prices are not perfectly flexible, however, the aggregate supply curve will be upward sloping. This is generally perceived to be a reasonable assumption in the short run but the logic of the resulting upward sloping relation depends on whether it is prices or wages that are assumed to be inflexible or whether imperfect information forces expectations to play an important role in the behaviour of firms and workers. Mankiw (2003, p.348ff) thus identifies three prominent approaches that may be taken to short run aggregate supply: the sticky wage model; the imperfect information model; and
the sticky price model. Docherty & Tse (2009a) consider each of these approaches but I focus here on the sticky wage model.

The sticky wage model adds to the long run framework the assumption that workers resist downward revisions to money wages. If variations in demand lead firms to reduce the price level, this increases the real wage firms face, and their demand for labour falls. If we assume that the price level is initially $P_1$ in panel (d) of Figure 3, a reduction of the price level to $P_3$ in panel (d) would generate a higher real wage of $w_3$ in panel (c), given that the money wage of $W_1$ cannot be reduced. This higher real wage would cause firms to reduce their demand for labour to $N_3$ in panel (a) and to produce output of only $Y_3$ when this new level of employment is substituted into the production function in panel (b). Thus a positive relation emerges between the price level and output for prices below the current price level. For price increases above the current price level, the lower real wage implied by such higher prices would lead to excess demand for labour as before and money wages would rise. The aggregate supply curve would then continue to be vertical at $Y^*$ for prices in this range.

Glahe regards the downwardly rigid money wage AS curve with an upward sloping portion for prices below $P_1$ and a vertical portion for prices above $P_1$, as an alternative long run structure to the purely vertical curve presented in Figure 3. Development of the New Keynesian tradition, however, provided a comprehensive theory of nominal rigidities that supported viewing wages as sticky in both directions, but only in the short run. Mankiw (2003, pp.349-351) provides a treatment of aggregate supply along these lines. In terms of Figure 3, assume that the money wage is fixed at $W_1$ and is sticky in both directions. We have already explained the upward sloping portion of aggregate supply for prices below the current price $P_1$ in terms of Glahe’s analysis, and a similar argument applies for prices above this level. If the price level rises to $P_2$, for example, firms face a real wage of $w_2$ in panel (c) and demand more labour at $N_3$ in panel (a). Mankiw (2003, p.350) assumes that employment is determined by labour demand which then allows production to expand via panel (b) to $Y_2$. This approach is somewhat problematic because labour supply at a real wage of $w_2$ is smaller than labour demand so that demand is unlikely to be satisfied on first consideration. Docherty & Tse (2009a) consider this issue in some detail, but accepting Mankiw’s approach for the moment implies that the upward sloping section of the aggregate supply curve...
continues beyond \( Y^* \) so that the total short run aggregate supply function is now given by both the solid and dashed portions of the upward sloping \( AS_{SR} \) curve in panel (d).

This approach can be expressed mathematically in terms of equations (1) to (3) below. Equation (1) is simply the definition of the real wage, \( w \), in terms of a fixed money wage, \( \bar{W} \), and the aggregate price level, \( P \). Equation (2) is the labour demand function, \( N^D \), which depends negatively on the real wage. Equation (3) is an aggregate production function according to which output, \( Y \), depends positively on the amount of employment, \( N \), and the stock of capital, \( K \), which we assume to be fixed in this analysis.

\[
\begin{align*}
w &= \frac{\bar{W}}{P} \quad (1) \\
N^D &= f(w) \quad dN^D/dw < 0 \quad (2) \\
Y &= F(N, \bar{K}) \quad \partial F/\partial N > 0 \quad (3)
\end{align*}
\]

We first rearrange equation (1) to express the price level in terms of the fixed money wage divided by the real wage, and we invert equations (2) and (3) to express the real wage as a function of labour demanded, and employment as a function of output. We then substitute (3) into (2), and (2) into (1) to obtain:

\[
P = \frac{1}{f^{-1}[F^{-1}(Y)]} \cdot \bar{W}
\]

We may, however, write \( f^{-1}[F^{-1}(Y)] \) as \( g(Y) \) for simplicity, which gives:

\[
P = \frac{1}{g(Y)} \cdot \bar{W} \quad (4)
\]

Since \( g(Y) \) is decreasing in \( Y \), \( 1/g(Y) \) will be increasing in \( Y \). Equation (4) then represents the aggregate supply curve when money wages are fixed. It slopes upwards in price-output space as indicated in panel (d) of Figure 3 and its vertical location depends on the value of the fixed money wage.

This model was carefully exposited in lectures, followed up with an interactive tutorial in which students were asked to construct the model themselves from scratch, and with detailed notes subsequently posted on the course website. The following section outlines how oil prices can be integrated into this version of the \( AS-AD \) model.
4. OIL PRICES IN THE STICKY WAGE MODEL

The version of the AS-AD model outlined above does not specifically incorporate oil or oil prices into the analysis and so requires modification before the impact of oil prices can be examined. The most obvious way to do this is to incorporate oil explicitly into the production function and to include the cost of oil explicitly in the profit function. Let us, therefore, assume that the production function is given by (5) instead of (3):

\[
Y = F(N, K, O) = A \cdot N^\alpha \cdot K^\beta \cdot O^\gamma
\]

where \(O\) represents the quantity of oil used in production, and \(A, \alpha, \beta\) and \(\gamma\) are all parameters. If we designate the price of oil as \(P_o\), the representative firm’s profit function becomes:

\[
PROFIT = P \cdot Y - W \cdot N - P_K \cdot K - P_O \cdot O
\]

where profit is given by the revenue firms make from producing and selling output \((PY)\), less the costs of production which are made up of the wage bill \((WN)\), capital costs (the price of a capital good, \(P_K\), times the number of capital goods used, \(K\)) and the oil bill. The demand for labour curve in panel (a) of Figure 3 is obtained by differentiating expression (6) with respect to the amount of labour, setting the resulting expression equal to zero, and expressing this with the amount of labour on the left hand side. The resulting expression indicates that the optimal amount of labour must satisfy the condition that the real wage paid to labour must equal the marginal product of labour which is a decreasing function of the amount of labour employed. Given the production function in (5), the marginal product of labour is given by:

\[
\frac{\partial Y}{\partial N} = A \cdot N^{\alpha-1} \cdot K^\beta \cdot O^\gamma
\]

which is positively related both to the amount of oil used in the production process and to the parameter \(\gamma\). Thus a change in either of these variables will change the position of the labour demand curve in panel (a) of Figure 3, the point of equilibrium in the labour market, and the location of the vertical, long run aggregate supply curve in panel (d) of these figures. To determine the impact of an increase in the oil price, therefore, we must first determine the impact of this change on oil usage.
This is done in the same way that labour usage is determined. Differentiating equation (6) with respect to the amount of $O\), setting the resulting expression equal to zero, and rearranging, yields the following condition for the optimal usage of oil:

\[
\frac{\partial Y}{\partial O} = \frac{P_O}{P}
\]  

(8)

This can be represented in terms of Figure 4 below. Assuming the marginal product of oil declines with the quantity used, if the real price of oil is initially $p_{O1}$, the optimal amount of oil usage is $O_1$. If, however, the real price of oil rises to $p_{O2}$, optimal oil usage falls to $O_2$. This implies from the production function that overall production will fall depending on the degree of substitutability between oil and other productive inputs (cf. Barsky and Killian 2004, p.120). The higher the value of $\gamma$, the less substitutable is oil (the higher the degree of complementarity between oil and other productive inputs) and the bigger the impact of the choice to reduce oil usage on the level of output.¹

The above analysis stresses the analytical importance of the relative or real price of oil which was shown in Figure 2 when we initially described the behaviour of oil prices in the years leading up to 2006. While this relative price was briefly explained to students when we introduced this graph in the first lecture of the semester, it was clear that when we reached this more detailed analysis later in the semester, many students experienced a “penny dropping” moment and understood the concept of the real price of oil clearly for the first time. The above analysis also indicates that when the real price of oil rises, optimal oil usage falls. This in turn feeds back into equation (7) and changes the location of the marginal product of labour curve. Since the marginal

¹ There will, of course, be considerable interaction between oil and labour since each of these variables appears in the marginal product expression of the other. The real story will thus be more complicated than suggested above. It can be shown, however, that the equilibrium ratio of the money wage to the nominal price of oil will equal the optimal ratio of oil to labour usage:

\[
W/P_O = O*/N*.
\]

Thus an increase in the nominal price of oil will reduce the relative price of labour to oil and optimal oil to labour usage. Optimal oil usage will thus fall relative to labour and this will lead to a downward shift in the marginal product curve for labour as the above analysis suggests.
product of labour plays an important role in affecting the location of the vertical AS curve, changes in oil prices and consequently in optimal oil usage have implications for the long run AS curve.

These implications are shown in Figure 5. As the real price of oil rises, optimal oil usage falls and the position of the marginal product of labour curve, as outlined in equation (7), moves downwards. This is shown in panel (a) of Figure 5 in the movement of the labour demand curve from $N^{D1}$ to $N^{D2}$. This shift reduces the equilibrium real wage from $w^*$ to $w^{**}$ and potential output from $Y^*$ to $Y^{**}$ in panel (b). This in turn shifts the vertical, long run aggregate supply curve to the left from AS$_1$ to AS$_2$. Given the initial money wage of $W$, the movement of the labour demand curve also shifts the short run aggregate supply curve from AS$_{SR1}$ to AS$_{SR2}$. If aggregate demand is given by AD$_1$ in panel (d), the negative supply shock associated with an increase in the price of oil raises the price level from $P_1$ to $P_2$ and reduces output from $Y^*$ to $Y^{**}$,

The case illustrated in panel (d) of Figure 5 explains oil price shocks such as the sudden deliberate increases in oil prices by OPEC in the

---

2 The intersection of AD$_1$ and AS$_{SR2}$ which will determine the position of the economy immediately following the supply shock may occur at a lower price and higher output than $(P_2, Y^{**})$. However, since this level of $Y$ will exceed $Y^{**}$, there will be excess demand for labour and the money wage will be forced upwards, shifting the money wage curve in panel (c) upwards and the short run aggregate supply curve in panel (d) upwards as well, until AD$_1$ and AS$_{SR2}$ intersect on the new long run aggregate supply curve AS$_2$ at a price level of $P_2$ as depicted in Figure 5.
1970s. The price increases of the years leading up to 2006 in contrast, contained a substantial demand side element. Strong world growth, especially in China, led to an increase in demand for oil that, given supply conditions, led to the higher oil prices shown in Figure 1 above. An accurate representation of these increases in oil prices, therefore, should incorporate a rightward shift in the aggregate demand curve first, followed by a leftward shift of the vertical aggregate supply curve as oil prices respond to the higher world demand. This is not shown in the accompanying diagrams but it would result in a higher average price level than that shown in Figure 5 but with an identical level of output.

Figure 5: Oil Price Shock in the Sticky Wage Aggregate Supply Model
5. OUTLINE OF THE BLENDED LEARNING STRATEGY

The material described in the previous two sections tends to be challenging for intermediate macroeconomics students. But a good knowledge of this material provides them with a powerful tool to think systematically about the macroeconomy and to be more effective graduate economists. Assisting students to learn this material effectively and to engage seriously with the learning process is thus an important pedagogical challenge for economics instructors. Ramsden (1992, p.165) argues that deep student learning is facilitated when students are active in the learning process and when learning and assessment exercises carefully integrate material from various parts of a course. Fox & MacKeogh (2003) argue that deeper student learning may also be promoted using blended learning environments that combine face to face and online components. Hughes (2007) further argues that blended approaches enhance student support and thus improve the confidence with which students approach learning tasks and thus what they take away from these experiences.

At the time this strategy was deployed for Macroeconomics: Theory and Applications, a program to enhance the quality of student writing was also being implemented. This program was aimed at improving the quality of student writing by clearly articulating the characteristics of good writing, exploring these in voluntary writing workshops (which also linked the structuring of good writing to high quality economic analysis) and then providing students with the opportunity to write using their new knowledge from the workshops, to receive feedback on this writing, and to write again drawing upon this feedback. The assessment structure for the course was designed to facilitate this process with students completing a shorter, introductory paper about one third of the way through the semester, and then a longer and more analytically challenging paper towards the end of the semester. More detail about this program can be found in Docherty, Tse, Forman and McKenzie (2010). It was, however, a natural step to set these assignments on material related to oil prices and the impact of oil price increases on the macroeconomy. The course thus integrated the writing project with an attempt to teach students the AS-AD framework in a hands-on way with practical relevance.

Additional on-line support was also provided to students via the University’s Blackboard platform called UTS Online incorporating the kinds of insight suggested by Fox & MacKeogh (2003) and Hughes
This support focused on assisting students to integrate oil into the AS-AD model once the basic model outlined in Section 3 above had been expounded in lectures and followed up with an interactive small class tutorial. A detailed set of notes on the basic model was also made available online after this tutorial.

Once these classes had been conducted and we felt that the students had a good grasp of the basic model, the first of a series of three “notes” was released online which gave students some clues about where to begin with integrating oil into the model. This note dealt with both the psychology and analytics of the integration process. It acknowledged that the task was going to be a challenging one but it suggested what the students should read first in thinking about the issues. It directed them in particular to Barksy & Killian (2004) and Blanchard & Sheen (2004) who use a different version of the AS-AD model to explicitly think about the impact that changes in oil prices could have on macroeconomic systems. Students were then directed to the course’s online discussion board to ask questions about the readings or float ideas or suggestions about how oil prices might be integrated into the AS-AD model used in Macroeconomics: Theory and Applications. A number of staff monitored the discussion board so that students received responses to their postings within 24 hours. Responses mainly took the form of affirming suggestions that moved the analysis in the right direction or asking questions which probed the ideas that students were coming up with to think about oil and its impact.

Once the idea emerged in this interaction that oil was a key productive input, students were encouraged to think about the role of the other productive input that had already been included in the AS-AD model and discussed in lectures and tutorials: labour. Students were encouraged to think about labour in the production function, how this input affected profit, and how the profit maximising choice of labour use could be made within a neoclassical framework. This was in a sense revision, but it required students to explore in greater depth the structure of the model to which they had already been exposed. Once students interacting online had demonstrated a grasp of these issues, the second “note” was released which summarised this discussion using a formal model. This note finished by suggesting that oil could be included in the production function as an additional productive input and treated in a very similar way to labour. Students were then directed back to the discussion board and interaction on these issues continued online.
Eventually, a number of students worked out the analysis shown in the first part of Section 4 above, deriving expressions (7) and (8) and the main idea behind Figure 4. We then released the third “note” which formally summarised this online discussion and students were then left to think about how the impact of oil prices could affect the macroeconomy within the resulting AS-AD framework. Students were then required to write this up in a 2,500 word essay and the essay was graded. Further questions were answered online but no more formal information was made available.

Our approach can thus be summarised as having four stages. The first stage was to orient the students to the issue of oil prices by having them research and write an initial, “shorter” assignment of 1,500 words. This essentially focused on the material considered in Section 2 above and used most of the papers to which we referred in that section. Students thus developed an understanding of the forces driving the increase in oil prices leading up to 2006 quite early in the semester. The second stage was to teach the basic AS-AD model outlined in Section 3 above via the traditional lecture and tutorial format. The third stage was to foster online interaction between students themselves, as well as between students and staff, about the more analytically challenging task of integrating oil into the basic AD-AS framework. This involved both online discussion, as described above, and the gradual release of assignment “notes” summarising this online discussion. The fourth stage was to have the students use the resulting AS-AD model with oil to think about the macroeconomic implications of rising oil prices. They did this by completing a longer 2,500 word essay on this subject. The approach thus integrated traditional learning formats and online interaction with active learning experiences. It thus encompassed the recommendations of Ramsden (1992), Fox & MacKeogh (2003), Dolan & Stevens (2006) and Hughes (2007).

6. EVALUATION
Assessing the effectiveness of new teaching strategies is often a difficult task. Student grades are not determined independently of the staff who are implementing the strategies being assessed, and staff impressions of any improved interaction with students or enhanced student learning is similarly lacking in independence. Student evaluations on the other hand may be “bought” with inflated grades or may reflect teacher popularity rather than genuine learning outcomes and so such evaluations must also be interpreted with care. These are
all common objections to the standard methods of teaching evaluation. It is, however, important to reflect on the effectiveness of new teaching strategies and we can only use the measures which are available to us.

At the level of impressions, we firstly felt that students were more engaged with understanding and exploring the AS-AD model than in previous semesters. This was true both in terms of the attention students paid to the basic model and in terms of their online engagement with the integration of oil into the model. More and better questions, for example, seemed to be asked about the basic model in the tutorial dealing with this topic. We had stressed that this model would need to be developed by students themselves later in the semester and that it therefore needed to be understood thoroughly in preparation for that later work. Students also engaged actively online later in the semester in trying to integrate oil into the basic framework. These may have been the better students, but a reasonable number of them were involved in the online discussion rather than simply one or two. There was also discussion clarifying some of the issues raised which clearly involved students not at the forefront of developing the model. This discussion appeared to play an important role in helping the average student to understand the ideas being discussed online. All of this also appeared to be reflected in the higher quality of written papers as perceived by the staff who graded them.

These perceptions were corroborated by data from the standard Student Feedback Survey (SFS) collected about the course at the end of semester. Figure 6 shows the performance of Macroeconomics: Theory and Applications for the following four questions on the survey:

- My learning experiences in this subject were interesting and thought provoking;
- There were appropriate resources available to support this subject;
- Overall I am satisfied with the quality of this subject;
- This subject was relevant to me.

The first of these questions focuses particularly on student perceptions of their learning and while this refers to the course overall, the strategy described above was a major part of the course in the first semester of 2006. One would expect, therefore, to see some change in response to this question if the strategy was effective. Since additional resources were made available as part of the strategy in terms of the more active
discussion board and the assignment notes, one might expect this to show up in response to the second question above. The third question relates to the course overall but one might expect to see a change in the response to this question if the strategy had a significant impact on student learning. Responses to the final question above were included because of the objective of making the course more relevant to real world phenomena as suggested by Dolan & Stevens (2006). While the wording of the question could be interpreted by students at a much more personal level, it is not unreasonable for students to see a subject that relates to the real world as relevant, in the sense that it equips them better to work in this world after graduation.

Students responded to these questions by using a five point Likert scale with 5 being “Strongly Agree”. The performance of Macroeconomics: Theory and Applications shown in Figure 6 is measured as the margin of the score out of 5 received by the course on the four questions over and above the average score for all subjects taught in the Business Faculty for the semester in question. A positive value indicates that Macroeconomics: Theory and Applications
performed better than average, and vice versa. Measures are shown for five semesters in which the number of survey responses (with enrolments in brackets) were 239 (490), 191 (337), 127 (268), 97 (211) and 121 (194) respectively. This translates into response rates of 48.77%, 56.67%, 47.38%, 45.97% and 62.37% respectively for these semesters.

Figure 6 indicates a noticeably higher margin over benchmark in 2006 (1) for each of the four questions above than for surrounding semesters. On the first question about the quality of learning experiences, the highest margin in the three prior semesters had been about 0.23 above the average for the Business Faculty. In 2006 (1), this margin more than doubled to 0.50. Smaller improvements were observed in the “resources” question and the overall subject rating. Of particular interest is the change in student response to the “relevance” question. The margin on this question had been negative in 2004 (1) and only 0.10 in 2005 (1). In 2006 (1), however, it nearly trebled to 0.30. Since some aspects of the strategy were left in place in the following semester, it is not completely surprising that feedback in 2006 (2) did not simply revert to its longer term mean.

It should be noted that responses to the SFS were at their lowest in 2006 (1) than at any other time in the measurement period in Figure 6. It is thus possible that students who might have rated the course more poorly on each of the four questions became discouraged and failed to respond to the survey. However, given that the highest response rate in the same period was in the following semester, and that the response margins for three of the four questions remained above previous levels with some aspects of the strategy left in place, there is some evidence that the higher rating in 2006 (1) was not influenced by a “discouraged student” effect.

Open-ended student comments from the SFS identified the two-paper assignment structure, the discussion board, and the applied nature of the subject as strengths of the course. The following selection of comments gives some flavour of this positive evaluation:

[I] particularly like[d] . . . the focus on oil.

[The course] was interesting and the assignments though hard, were relevant to the current economic situation and support was provided . . .

[I liked] [t]he help provided by UTSOnline and the support provided to do the assignment.

[The course] relates to contemporary issues.
Student comments are often not particularly effusive and are best used to identify those dimensions of a course that students found most useful. The comments above indicate an evaluation consistent with feedback on the “relevance” question in Figure 6 and identify the online dimension of the blended learning strategy used in 2006 (1) as one of the course’s strengths.

It is also worth commenting on the resources required to implement the strategy described above. This required considerable effort. Developing two complementary assignment questions with appropriate readings, supporting the online discussion with constant monitoring and providing responses of sufficient detail to guide students in their thinking about developing the AS-AD model, and writing up the assignment “notes” to summarise the online discussion for the average student, were all fairly time consuming tasks that were additional to previous delivery of the course. Because we had received a substantial grant from the University’s Learning and Teaching Performance Fund allocation to support the writing initiative being implemented in the course, and because the oil price strategy was closely linked with this initiative, we were able to employ a teaching-research assistant to help with management and responses on the discussion board. This support was not available in following semesters and while we tried to maintain the impetus established in 2006 (1), we were not able to manage the same level of student-staff interaction that characterised this initial semester. This partly explains why the student responses were not as high in the following semester.

There is, therefore, some evidence that the oil price shock-focused, blended learning strategy for teaching the AS-AD model was effective. Students seemed to engage better than previous semesters with what was fairly demanding material, the quality of responses was perceived as being fairly high by staff who graded the papers, and student feedback was better than previous semesters on questions related to the strategy. The strategy did, however, require considerable staff time so that these benefits came at a non-trivial cost.

7. CONCLUSION
This paper has reported a pedagogical strategy I employed with Peter Docherty to teach the AS-AD model. Dolan & Stevens (2006) stress the importance of teaching macroeconomics with relevance, and in this vein we used the issue of the macroeconomic effect of substantial increases in oil prices as a focus for teaching the AS-AD model in the
first semester of 2006. This strategy also had a substantial blended learning dimension which Fox & MacKeogh (2003) argue can generate deeper student learning than traditional pure face to face strategies and Hughes (2007) suggests can enhance the confidence with which students approach learning tasks, improving what they take away from these experiences.

The paper considered the behavior of oil prices in the years leading up to 2006 and the factors affecting this price. It outlined the structure of the AS-AD model presented to students and how oil prices can be incorporated into this model. It then describe the overall strategy we used for teaching the model and finally presented some evidence that students reported better and more relevant learning experiences than did students in the three prior semesters which had not used this strategy.

REFERENCES


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