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TEACHING THEM A LESSON AT IPSWICH: REFLECTIONS

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Economics is a component of several programs offered at the new Ipswich campus of the University of Queensland. Class sizes are large by Ipswich standards (up to 360). The courses (with the same code) are also taught at the principal St Lucia campus. What 'new' methods were tried at Ipswich, what motivated trying these methods, were they viable, and could they be transferred to St Lucia campus where student numbers are higher (about 1000)? Experiences of one teacher with a customised course designed for new degree programs at a new campus could yield at least some insights of interest to practising teachers in other settings.

1. INTRODUCTION

This paper is a memoir composed of reflections based on experience of establishing custom-designed courses (or 'subjects') in new programs for a new campus. This is not a research paper in the usual positivist-empirical sense. There are no references, and there is no statistical analysis of data. Even so, this sort of educational experiment is not often undertaken, and perhaps my practical judgements will resonate with some readers.

2. BACKGROUND

For many years I have taught large classes at the St Lucia campus of the University of Queensland. In 1997, suffering burnout and stress from a large first-year macroeconomics course with about 900 students, I volunteered to set up the microeconomics and macroeconomics courses at the new Ipswich campus. Economics is a component of several new programs offered there. Some of my colleagues were surprised that I volunteered. They had the view, right or wrong, that I would be shunted into teaching students of lesser quality. Satellite campuses often have a reputation for being of lower quality, especially those established in economically or socially disadvantaged areas and when the existing local residents become the principal clientele. The official aim of the new campus, however, is to attract discerning domestic and overseas students by offering high-class innovative programs taught in creative, interesting and (one hopes) effective ways. The focus is on face-to-face contact in small classes. The ethos of the early administrative

planners was that big is bad. Whether this view was based on fact or fashion, the campus was initially designed to deter standard large-scale lectures. The largest room catered for only about 100, but financial realities have now caused a plan for a theatre housing around 200.

The working environment at Ipswich is pleasant. The offices and teaching areas are more spacious with higher ceilings. Heritage restoration was careful and sympathetic. Colour schemes and designs are pleasing, and, until first semester of 2002, it was always easy to find a parking space. The impression is that the architects had considerably more influence than the accountants.

I had considerable autonomy in deciding course content and method of delivery. If others had already devised superior course materials, money was available to buy them. There was no need to start anew, but, when I searched, I felt it would be harder to assemble the diverse bits and pieces I liked than it would be to do it myself.

I therefore returned to St Lucia in semester 2 of 2002 concerned (rightly or wrongly) that the quality of the teaching and/or the learning experience would be discernibly inferior to Ipswich. Even though the St Lucia system had improved while I was away, the Ipswich campus was well-funded and expressly established to offer state-of-the-art facilities in a small-class setting. As it turned out, the teaching experience on my return was unexpectedly pleasant, the teaching evaluation by students was fine and the quality of student performance was uncommonly high, which obviously raises issues about whether the large-lecture St Lucia system should be changed even if the resources were available.

Overall the experience over the last few years at Ipswich has been a tonic. The only problem at one stage was finding enough suitable teaching support staff, especially at short notice when student numbers exploded beyond predictions. The problem was that the preferred prospective tutors chose to teach at the more convenient campus. (Steps have now been taken to compensate tutors for the extra time and expense.) For three or four semesters, student numbers were ahead of those estimated when making decisions about staff allocation.

Perhaps I was an odd choice to go to Ipswich to establish these courses. While interested in improving teaching and learning, I was (and still am) a low-tech person. But the campus is high-tech, and many have the view that flexible delivery in practice requires reliance on computers. Prospective students and their parents, some colleagues, administrators and even some program marketers believe that 'flexible delivery' means distance education over the Net. Although teachers at Ipswich have the option of going electronic, this was never obligatory. However, if the courses and programs happened also to lend themselves to remote delivery, administrators would see this as a welcome bonus, especially if and when future expansion occurred.

The courses ECON 1010: Introductory Microeconomics, and ECON 1020: Introductory Macroeconomics, (with the same code) are also taught at the principal St Lucia campus. The same textbook is used, but the courses are run independently. We never had enough time to coordinate to compare outcomes between campuses. I can report that for macroeconomics the Ipswich cohort outperformed the offshoot

hospitality students at COTAH (college of tourism and hospitality) in South Brisbane. In 2000, I was lecturer/tutor at Ipswich and COTAH. Ipswich students did most common multiple choice questions (MCQs) better, even though they also received the printed materials used at Ipswich. On returning to St Lucia, the performance on common MCQs is clearly superior to the Ipswich campus, but this year's cohort appears to be unusually good according to my co-lecturer.

The courses across the campuses are essentially similar. The chapters of the textbook are the same, but different campuses go into different topics in different depth. Methods of assessment and the style of class activities differ significantly too.

Microeconomics was offered in semester one to the very first cohort. A semester for preparation was allowed prior to the launch of the new campus the following year. This luxury was appreciated. The squeakier wheel, microeconomics, which needed to be ready first, received more attention. But it turned out to be difficult to work on the macroeconomics subject while teaching the microeconomics course. Lead times meant that revisions to macroeconomics in practice could only be done somewhat frantically during first semester. The situation was worsened because teaching support staff for a time tended to arrive with a one-year lag. For the years of rapid growth, numbers of students exceeded expectations and principal teaching staff picked up extra classes. Intakes were impossible to estimate reliably and suitable staff are difficult to find at short notice. Judging from conversations, cautious Heads were not willing to commit to longer-term contracts when uncertain about student numbers and the viability of particular programs.

3. ECONOMIES OF SCALE

How important is scale? Can teaching and assessment methods initially adopted at Ipswich be scaled up from 25 to 150 to 350? Most of the changes that would be needed were already made at Ipswich when numbers grew to 75 or so. Can the system now operating at Ipswich be scaled up almost three-fold for use at St Lucia? The extra step to St Lucia levels is significant, but much of what now works at Ipswich could be preserved in a recognisable form. To prevent a possible misunderstanding, I am not asserting that the current system at St Lucia should be changed. I am simply exploring the positive question of whether Ipswich methods could in fact be transplanted.

Class sizes are now large by Ipswich standards (up to 360). Some of what worked for 25-45 students in the first year or two of the Ipswich campus had to be abandoned when numbers grew rapidly (roughly doubling every year). The hierarchy had hoped that mass lectures would become extinct, but they are back (1 hour of lectures and 2 hours of tutorials per week). Assessment options have been curtailed too.

Sometimes bigger is better and fixed costs can be spread more thinly over more students. However, layers of administration can clog information channels and mass production and standardised distribution can objectively affect the product itself or the user's subjective perception of it.

I discuss teaching and assessment methods in turn.

4. TEACHING METHODS

(a) Lectures and Printed Materials

The heavy reliance on labour-intensive small classes cannot be replicated. Large numbers are what prompt cost-cutting mass lectures in the first place. Financial costs do not capture all costs though. During the early stages at Ipswich, class sizes were small (25-60). This compared with being at St Lucia in 1997/2 with large lectures containing several rude, disruptive and (crucially) anonymous students. In 1998/1, though, students were angels again – or I had learned something from the worst experience of my career. Small classes are often said to be more pleasant to teach, but a successful performance before a large group does have some frisson.

Initially at Ipswich, there were only 2 hours of class contact per week, a mixed lecture and tutorial. The intention was that it would be mostly a tutorial and activities and problems would be done. When the activities sometimes demanded that students were prepared – and they seldom were – a mini-lecture for the first 20 or 40 minutes was required. This was tiring if you are conducting 7 two-hour sessions per week (as staff shortages required in one semester). So I added a one-hour lecture per week next time (with 2 repeats).

Of course, the early planning upon which teaching allocations and resource decisions had been based, had assumed that students would make good use of the written materials that I had prepared. One of the printed materials, the Companion, was intended to be a major substitute for lectures. It stated what concepts in the textbook were important and those you could ignore, it specified exactly what pages of the textbook were relevant, it contained condensed treatments of topics that the textbook unduly elaborated, it identified which questions in the textbook's Study Guide could be ignored etc. It seems that some students simply feel that they need lectures. I have been struck, however, by the absence of complaints about only getting one lecture hour per week. At St Lucia in 2002/2 my students received 2-hour lectures and could obtain extracts of my Companion from the Web.

Unfortunately, I neither sought nor received feedback on whether, how and when students at Ipswich actually used the Companion. Clearly some did not; too many students were for a couple of semesters surprised by the coverage of a test and did not know which chapters were assessable. As most lecturers know, some students do not read even the course outline and they ask you administrative questions you have already answered in writing.

Having printed materials has another advantage. When comparing these materials and assessment items set now with those of 2 or 3 years ago, I realise that I have raised the bar by being more specific about what I want. If my examples to illustrate a point improve and if I supply them with practice questions and written course materials that focus on the point, then the assessment questions can fairly be more specific and the responses expected can be more demanding. If students under-perform, the tendency is to give them the benefit of the doubt and refine the materials for next year. If it's not in the textbook, an extra dot point on next year's lecture slide is just not good enough.

(b) Tutorials and Printed Materials

Here are sample questions. They are in the printed materials provided to each student. The goal is to arouse intuition rather than prepare students to manipulate diagrams and equations. Discussion, persuasion and discovery are intended.

Class Activity 2:1

Please accept the following as stylised facts. Early in a romantic relationship, people dress well, look after their appearance, bathe frequently and are considerate towards each other. Later in a relationship, standards slip. They get less romantic and take things for granted.

How is this change explained? Can rational self-interest explain this change? Or is some other explanation more obviously valid?

[In the printed Companion, this is all in italics to indicate that this is practice in doing an "advanced" activity. To earn a 6 or 7, the highest grades, students needed to reach a threshold score in the advanced assignment exercises.]

Class Activity 2:6

Consider the following problem derived from novelist, Joseph Conrad.

Three members of a ship's crew left some gold in containers in the captain's safe. The captain did not require the sailors to disclose the exact amount. After a storm, the gold fell out of the containers and became mixed. Suppose there were 9 gold coins. Sailor A in fact had 4, B had 3, and C had 2, but each sailor only knows what they put in the safe. The Captain said, "I have 9 gold coins, but don't know who owns how many. Please be honest and tell me."

- How much gold might each self-interested sailor be more likely to claim to own? (a) 3 coins, (b) 7 coins, (c) 5 coins or (d) the true amount. Explain your choice.
- Was it wise for the captain to tell everyone the total number of coins?
- *Is there any way for the captain to ensure each sailor will tell the truth? (There is a simple solution.)* [Advanced]

Bright and articulate honours students in sufficient supply can do the job of conducting tutorials with activities of this type, but some coaching by the lecturer is needed. The answer (or plausible answers) cannot be extracted from the textbook, drawn on a graph or revealed by plugging numbers into a formula. (Such questions are ubiquitous in many standard economics courses.) It is difficult to get a large number of tutors together for a meeting. Either you organise repeat briefings or you put everything in writing, which can encourage unthinking compliance. At Ipswich only 5 people needed to be briefed, but even this had to be done piecemeal. There would be at least 3 times as many tutors at St Lucia, and, when I returned to teach macroeconomics, I needed to email lengthy written guides with answers, what the purpose of the question was, possible responses to false trails and so on.

As the enrolment increased over the years, student attendance at tutorials disappointingly declined, possibly due to greater sense of anonymity. Also the early cohorts could have been more enthusiastic about the resources and attention that were lavished on them.

If desired, these activities could be transplanted in bulk to another campus, but the process is not as simple as saying, "That bit worked at Ipswich and looks like fun, so let's try it!" The content, focus and style of a course can form an organic entity and frustrate attempts to insert new things in a modular way. The focus at Ipswich is on showing the relevance of economics to business and management students. It is not intended as the first step on the pathway to being a social scientist, so I was partially freed of the constraint that some colleagues might believe that first-year economics is primarily a step towards second-year economics. Traditional core courses in theory and econometrics aspire to train students as empirical researchers. Some economics courses at St Lucia and elsewhere, though, have changed to widen their relevance and appeal. Sometimes this happens to preserve enrolments, but sometimes teachers also believe that this is simply a better way to teach economics.

(c) Assessment Methods

Tests

At Ipswich, 80% or more of the assessment in both economics courses is via multiple-choice test, which is uncommonly high, and 10-20% is based on basic and advanced short-answer assignment work. Each multiple-choice test is set on a couple of modules. The following week, students get their own question papers back and the questions and answers are reviewed. Next week there is an optional re-sit (same coverage, different questions). The average score generally rises, and many students benefit considerably because their higher score counts. (Sometimes there is little change in the average; stronger students content with their high scores first time don't always re-sit, and some re-sit with minimal preparation hoping that they'll just get lucky and score more.) Students welcome this feature, but it takes big bites out of class time. Four contact sessions out of 12 are now lost through assessment, and two more are devoted to the reviews of tests just done. In 2003, we plan to re-arrange schedules to get one or two tuition sessions back. Also students are somewhat less concerned about whether they are less competent at doing MCQs than, say, short answers, if there is a second chance, and I conjecture that this explains the low level of complaints about the assessment being dominated by MCQs. One possible reform is to have short answers on final exam where turnaround times are not such an issue.

I hope that test re-sits and reviews will one day reach St Lucia. Technology is touted as a means to make assessment of large numbers easier and more flexible. I am surprised, however, that any lecturers use WebCT for assessment purposes. What ensures that the person at the terminal a) is the person enrolled and b) is entering the answers without improper assistance? In the absence of dedicated assessment centres (or the use of passwords revealed only at a test venue where IDs are authenticated), anyone can sit an exam from anywhere. At St Lucia many years ago when we experimented with tests with second attempts, we found that student cheating was widespread. College students would build up a bank of our test questions and the answers we supplied to first attempts for feedback. To build up their bank, students would even steal tests (with answers) that other students had printed out for further

study and innocently left unguarded. The assessable tests were not invigilated, and dishonest students could locate the answer by simply comparing their test with the bank. (The system was also used in statistics, but with fewer problems because numerical examples could more easily be randomly generated.)

While in my most idealistic (i.e. early) phase at Ipswich, I devised a manual system that would simulate giving students a chance to sit a test for any module at any contact session, space permitting. This involved maximum flexibility for students. I had folders containing hard copies of every test and re-sit for every student. In any designated assessment session, you could ask to sit any test. If you could wait a few extra minutes, I'd mark it (by hand). I did this in the now defunct economics course, EC102, which was customised to meet the needs (largely as I perceived them!) of Business Communications students. (I also wanted to signal to the School of Management that we economists could provide their students with a flexible and popular system. Politics played its part...) Patently, this manual system won't scale up, and 45 students pushed this arrangement to its limits. So now you attend a specified test or re-sit in your normal tutorial session.

In a small class that you are in charge of, you have greater flexibility yourself. This flexibility can be passed on to students. ('You can't do the test this week, Pat? Pop into my office on Thursday afternoon and do it then.') Contrast this with the situation where you don't know the names of your students and where similar administrative matters are of necessity delegated or bureaucratised. You can't readily coordinate 10 students to pop into your office. Furthermore, with anonymous students in large classes, I tend to go out of my way to help less generously, which is clearly not ideal. Due to efficiency and inclination, I rely more on protocols instead. (The rationalisation goes like this: 'I don't want to favour students I know over others. There are impartial rules. See the assistant coordinator.') Perhaps your benevolence extends further than mine, however.

Assignments

At Ipswich students who want to get a 6 or 7 need to perform satisfactorily in optional 10 marks of assignment questions that test their ability to use concepts of economics in unfamiliar contexts.

Activity 3:1

- Think of any two goods (or services) supplied by the private sector in a free market economy for which buyers need to queue. (0.5 marks)
.....
- *If there is a shortage of such goods, why doesn't the price rise to drive some potential buyers away and create market equilibrium?* (2 marks) ['Advanced' questions are in italics.]
.....

You needed an average of at least 4/10 for these advanced questions to be eligible for a 6 or 7. I can only expect occasional flashes of insight. Students getting

a 6 or 7 are marked out of 100 marks, but everyone else is marked out of 90 and they may choose not to even attempt the advanced exercises. Astute readers will realise that this system can be administratively awkward when filling out the final results sheet. Some students get a total mark that would appear to be worth a 6, but the composition of their tally does not allow it. We are phasing out this cumbersome and sometimes confusing system.

I also doubt that advanced exercises can be re-cycled as easily at St Lucia as they can at Ipswich, and this is a significant drawback to importing this part of the Ipswich system to St Lucia. There are no colleges at Ipswich: student accommodation was deemed not to be part of the university's 'core business'. As a result, cohorts are intertemporally isolated; good answers to questions set last year (to my great surprise) were not noticeably re-submitted the following year. Consequently, the need to churn assignment exercises at St Lucia would be greater than at Ipswich. For routine exercises, this is no undue burden, but the more challenging and engaging 'advanced' questions can be difficult to devise.

Marking rises in direct proportion to the number of students, but with more total staffing, specialisation in marking is possible. This suits the aptitudes of some tutors and their different preferences about the distribution of the workload. Assignment work at Ipswich declined by more than one-third since enrolments were below 100. Diseconomies of scale were not the trigger. The aim mostly was mainly to reduce the total marking load.

Some students also thought that they were being asked to work too hard. Students need incentives, but there is a risk of copying, so the reward cannot be so great that people pass who do not deserve to. So the 'basic' questions were only worth 10 marks, despite the relatively large amount of work needed. To encourage compliance, to get a 4 (a pass) or more you had to average at least 4/10 on your assignment work. You had to put in a reasonable effort. Many failed to appreciate the lesson in the use of incentives: they did what I wanted them to do even though they claimed (patently falsely!) that the reward was insufficient.

5. CONCLUSION

There is some potential scope for exporting some teaching and assessment methods to the larger St Lucia campus. Whether or not this is desirable is, of course, a separate question. Lecturers in statistics have transplanted their web-based system to St Lucia to enhance flexibility, but to the extent that the micro-macro courses at Ipswich were designed with interactions in small classes in mind, transferability is likely to be less.

Insofar as each lecturer, cohort, course, program and campus is unique, one can seldom be so confident of cause and effect that one can predict that what works in one set of circumstances is likely to improve outcomes in another. Rather than primarily relying on published statistical findings drawn from large and diverse samples, introspection, discussion and negotiation can be important and valid means by which teachers can draw on immediate experience. Direct and intimate knowledge of one complex system can be worth more than indirect statistical information about many. But I acknowledge that this could be a minority view.