Undergraduate Macroeconomics as Current Analysis:

A Constructionist Experiment

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Abstract

Last year 28 undergraduates, with little prior training in economics, each wrote his or her own introductory macroeconomics textbook, based on a semester's reading of the *Financial Times* and *The Economist*. Such sources are not in themselves heterodox but, by constructing their textbooks from news reports in these two publications, students were freed from the conventional assumption that the instructor's job is the provision of an ex ante model of the economy to which the world around them ought to conform.

An earlier version of this course threw students in at the deep end, expecting them to find their own structure in the multiplicity of news items; another version asked students to work, not with published news items but with primary data as made available in the US by the Department of Commerce and the Federal Reserve. These previous versions of the course were less than fully successful. The current paper draws on the most recent version of this course – in the fall of 2013 – in which the instructor learned from these shortcomings and designed a course that attained, much more closely, its main objective – that of giving students the confidence to read and interpret current news items, fitting them into their own developing patterns of knowledge, not those into models imposed on them a priori.

Introduction

The Place of the Textbook

Heterodox economists wearily explain that, although impatient with the prevailing orthodoxy, we don't seek to replace its models with any particular one of our own. Those of us teaching undergraduates don't necessarily plan to toss out Mankiw only to replace him with Marx.

This is a fundamental point that our students find hard to grasp. They may have signed up for our courses knowing them to be "alternative" and thus they may look to us for an alternative version of the revealed truth. Some of us comply, and teach valuable courses in, say, feminist economics, or ecological economics; we use readings, perhaps even texts, that reflect these approaches.

No matter how well taught, there remains the risk that students will adopt our approach as authoritative, rather than engaging with it in a reflective and analytical but, ultimately, an open frame of mind.

How to convey such a stance to undergraduates? As I prepared my course in intermediate macroeconomics last fall, I found unexpected inspiration in a 2005 speech by Ben Bernanke, of all people, to the American Economic Association. He pointed out that "[a] part of monetary policymaking for which my background left me imperfectly prepared is what central bankers call 'current analysis'… [or] getting an accurate assessment of the current situation [in order to] construct a 'story' about how the economy is evolving…. Current analysis is not taught in graduate school…. It is, nevertheless, an intellectually challenging activity – analogous … to the efforts of a detective to reconstruct a sequence of events from a range of diverse and subtle cues.[1]"

I decided to turn my intermediate macro class into one on current analysis, as best I could given the students' limited background in working with data. Instead of primary or even secondary data, our sources would be news items from *The Economist* and *The Financial Times*. These publications speak for the establishment and, as such, risk giving students the idea that there is but one set of relevant facts about the economy: those chosen for analysis by these two periodicals. Still, as sources of news (however necessarily selective), they provided raw material for the students, rather than a finished product in the form of a model. However, it was not my goal merely to ask students to read the news; they were expected, as best they could, to make sense of it for themselves. Each student was therefore required to write a textbook of his or her own.

Constructionist Learning

Overall, the course is constructionist in pedagogy, if we think of constructionism in Papert's terms: "From constructivist theories of psychology we take a view of learning as a reconstruction rather than as a transmission of knowledge. Then we extend the idea of manipulative materials to the idea that learning is most effective when part of an activity the learner experiences as constructing is a meaningful product.[2]" Heterodox economists are comfortable with the idea of learning as reconstruction; the same word appears, as it happens, in the quote from Bernanke given above. Papert's definition, though, also stresses the need

1 Bernanke, Ben S. "The Transition from Academic to Policymaker", Annual Meeting of the American Economic Association, 7 January 2005 (www.federalreserve.gov/BOARDDOCS/SPEECHES/2005/20050107/default.htm)

for the constructed product to be "meaningful". Notoriously, even dedicated students can fail to be invested in a "term paper" if it has no purpose beyond allowing them to complete the course.

Then again almost every student, in most classes, keeps notes – if only to help him or her pass the next exam. In this class, by design, the student ended the semester with a coherent set of notes – dressed up as a textbook – constantly amended during the course, and designed (the verb in significant) to respond to the student's own style and needs. The class was regularly urged to write, not for the instructor and the grade nor, even, for the student's own benefit during the course itself – in order to pass a test – but, rather, for his or her future benefit in two or three years time. The stress was, throughout, to make the material accessible to the individual student, and the very idea of using one's notes in the future to help understand articles in the press became, for many students, self-fulfilling: an anonymous survey at the end of the course reported increased levels, not just of "knowledge" but, just as important, of "interest". Thus, the constructed textbook came to acquire – at least for many students – a sense of real purpose, strengthening their engagement with the material as constructionist theory would suggest. And, in the course of this construction, students were disabused of the idea that there is a received body of economic knowledge which they have only to absorb, thus breaking down the "empty vessel" model of teaching, in which the instructor's authority conveys facts to passive student recipients.

Syllabus

In the fall semester of 2013, 28 students were enrolled in my Intermediate Macroeconomics class (Econ 247) at Luther College, a four-year undergraduate institution in Iowa, USA. Although Econ 247 is an intermediate course, the prerequisite ("Principles of Economics") is a one-semester offering in which introductory macroeconomics is often compressed into the final few weeks. As a result, even the stronger students come to Econ 247 with relatively little preparation.

Economics, at Luther College, is taught in the Department of Economics and Business. Most of the students in Econ 247 may be economics majors but, of these, the great majority also major in other disciplines such as accounting and management. Few students go on to graduate school in economics.

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2 Papert, Seymour, in Sabelli, N. (2008). "Constructionism: A New Opportunity for Elementary Science Education". DRL Division of Research on Learning in Formal and Informal Settings, 193-206. Retrieved from http://nsf.gov/awardsearch/showAward.do?AwardNumber=8751190

The offering of Econ 247 under discussion here had, as its centerpiece, the notebooks[3] the students would go on to compose. At first sight, the syllabus gave the notebook project a weight of only 40% in the overall grade. Even so, this was a very high percentage for an exercise that was, at the start of the semester, unfamiliar and apparently unstructured. To reassure students, they were guaranteed at least a B on this portion of the course if they complied with the instructor's deadlines throughout the semester. (There was, admittedly, a risk – explored below – that this guarantee would lead some students merely to comply with the deadlines and not to engage in the project more wholeheartedly.)

Although the notebook project, then, appeared to make up only 40% of the grade, in fact it was the focus of every aspect of the course. Thus, although the presence of three tests on the syllabus might have looked like familiar assessment tools to the students, they were really included, not so much for assessment purposes as to help in assembling the notebooks. They provided the necessary structure.

That the students would need help in composing their notebooks was clear, the question being rather the degree and nature of that help. An earlier, much less successful, version of this course had given the class very little guidance: not quite driving them back to raw economic data but, nevertheless, feeding them a daily diet of articles from the *Financial Times* and *The Economist* without any background whatsoever: students were expected to look up unfamiliar terms for themselves and, gradually, to find patterns in the arguments they read, confusing and apparently contradictory though these might at first appear to be. The instructor was, of course, on hand to answer questions, but this earlier iteration of the course placed too heavy a demand on students who, as mentioned earlier, had had little macroeconomic preparation in their "Principles" classes.

When Econ 247 was offered in the fall of 2013, then, the first two or three weeks were spent taking students quickly through the table of contents of a standard intermediate text (without its ever being said that this was the source; the "empty vessel" idea of textbooks as authoritative was to be discouraged from the start). The first test, then, may have looked like a standard assessment tool to the students – and been gratifyingly familiar as a result – but, from the perspective of the course as a whole, it was designed to make sure that (for example) when students came across an article discussing the relationship between changes in

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3 The name of this key document changed during the semester. Students found it too intimidating to think that they were writing a "textbook", and "workbook" seemed insufficiently focussed. "Notebook" was meant to convey a sense of purpose and design.

inflation and changes in unemployment, the concept of the Phillips Curve would be one they recognised. It was a fine line – introducing the Phillips Curve without, at this stage, going into any analytical depth whatsoever – but the purpose was, not to impart "knowledge" but, rather, merely to construct a Template (as the disguised "table of contents" came to be known).

(The second and tests will be described in due course.)

The syllabus, then, may have appeared to limit the notebooks themselves to 40% of the course but these were, in fact, its whole point and purpose as, eventually, the students came to realise. At the start, though, they were told only that they must subscribe to the *Financial Times* and to *The Economist*; must read them on a regular basis but without being told which items to read and when; and, finally, must use the evidence found in these sources to construct a notebook based on the Template.

Students' Evolving Response to the Notebook Project

Many students, initially, distinguished between Content and Process – and they wanted more Content. Content, after all, was the "knowledge" they expected to have given to them. They would have been happy to learn all about the intricacies of any given model and then to demonstrate this mastery through condescending end-of-chapter assignments ("Congratulations! You are Minister of Finance for Econland, and you want to increase equilibrium output by 800 million Clonks…."). The idea that understanding emerged from the Process of reading about, and reflecting on, current events took a great deal of getting used to.

This initial resistance was particularly marked when class time was used – as, at first, was often the case – to allow students to read, analyse and write rather than simply to sit back and listen. Many students were prepared to write their own notebooks, if for some reason that was the instructor's whim, but wanted to do so on their own time and to use class meetings to hear from an authoritative source – the instructor – just what was really going on. And yet, in spite of this resistance, much early class time was used in this way, precisely because the exercise of analysing new items productively and (even more so) going on to write about them so as to build up a coherent and articulated narrative – this was sufficiently unfamiliar to the students that it was important to devote class time to getting their feet wet, or their hands dirty, so to speak. Some took to it naturally, but others – sometimes students who flourished with conventional teaching – resisted for quite some time although, perhaps because it was one of the requirements for being guaranteed a B on the project, attendance throughout the semester was always high.

A later section of this paper will describe in more detail some of the methods used to move student projects along the path to completion but, in this section devoted to student responses, the next milestone was reached some two-thirds of the way through the semester. At that stage, for almost three weeks the instructor devoted one class period each to a conventional model or idea: the Keynesian Cross, IS-LM, the Phillips Curve, AS-AD and so on. These classes were traditionally structured as lectures, and students were motivated by the prospect of being tested on this material in the third and final exam[4]. But, by this point in the semester, the students' attitudes to this standard material had changed.

Early in the course – at the time of the Template – they were looking to the instructor as the source of "knowledge" that, most likely, they could feed back to him in exams or, in the meantime, "apply" to end-of-chapter assignments. Now, however, they were ready to take the material and use it primarily to shed light on situations they had come across in their regular reading of the *FT* and *The Economist*. Thus, it helped them to see the output gap in an AS-AD model, because they were already familiar with the concept, and knew what it meant in terms of firms', workers' and consumers' decisions; the gap was no longer just a horizontal arrow on a graph – even though the graph could now be used to help address issues which an output gap raised.

It was at this point in the semester – well before the end – that the instructor realised his experiment was going to work. Even if it was not yet obvious to the students' themselves, the fact that they were learning to master models not for their own sake, but because of the use to which they might be put, was evidence that one of the goals of the course was well on the way to being met.

Challenges

Even those students with the strongest background in traditional economics needed time to adjust to the task required of them in this course. In many cases, it was only the passage of time – and constant practice – that made it possible for students to draw on their sources for suitable raw material.

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4 This third exam, like the first, appeared to be a standard assessment tool but had as its purpose the improvement of the students' workbooks. The second test, though, was unsuccessful and had to be dropped since, at the time it was given, each student had read different articles – no problem in itself, but a challenge for any kind of reassuringly conventional exam such as these were intended to be.

The first difficulty was in identifying suitable articles. The Template – previously mentioned – was meant to help, by identifying the basic building blocks of the course but, even so, it took some time before students learned to winnow out articles dealing with individual firms and industries (particularly so, since the instructor encouraged them, from the start, to make as much time as possible to read the *FT* and *The Economist* as they could, whether the articles were on politics, society or even sport). In the early days, whole class periods would be taken up with students' reporting on articles they'd discovered, with the instructor helping them identify whether or not these were likely to be useful, and in which way.

Even when fruitful articles were identified, students had to be shown how to unpack the economic arguments they contained. Initially, most students tended to summarise the entire article whereas, they later would find, it was more productive to focus on perhaps one or two paragraphs – sometime a single sentence or even a phrase – and to explore them in detail.

This kind of close study naturally gave rise to a great many questions, and the instructor tried a variety of ways in which to answer them. Office hour visits were encouraged, questions in class solicited, and online forums set up on which questions could be posted for all to see but, overall, students probably had the impression that their own particular concerns were not being addressed[5] – there just was not enough time in class to do so, nor (partly for technical reasons) were the online forums as productive as they might have been.

For much of the first half of the semester, then, students wrestled with their sources and could hardly believe that the end product would become substantive and coherent. To maintain positive morale in the classroom, the instructor required students to share their work on Google Drive and he would publicly comment on this or that individual's work in a relentlessly positive way. Some students liked to write in a discursive and casual manner, leaving editing for later: their work was shown to the class, and encouraged. Others preferred to use bullet points, and incomplete sentences: their work too was held up as a possible model. It was important for those who were inclined to hang back, to see that there was no one right way of composing the notebook, and that they could find their own style. After all (as they were constantly reminded), the purpose of this notebook was to benefit their own future selves, in two or three years' time.

After a while, compulsory sharing of students' work became something of an issue: some were uncomfortable letting their drafts become public, because they

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5 It was largely to address accumulated questions that the instructor, as noted earlier, switched after about two thirds of the course to a conventional lecture format for about three weeks. This did indeed help clear up much of the backlog.

didn't want to be associated with an unfinished product. The instructor could urge them to accept that all writing needs a great deal of extensive revision, and that the process of seeing them polish their own rough work could be of benefit to others but, in the end, the instructor bowed to pressure and allowed students to work privately (as long as their evolving work continued to be shared with him). Even then, with their permission and at judiciously chosen times during the rest of the semester, individuals' work might be projected in front of the class so as to encourage everyone with the possibilities. In general, class management required the instructor to spend more time cajoling, prodding, complimenting and generally "feeding" the students than he was ever required to do in a conventional course; it was a demanding but rewarding experience that is likely to affect his future teaching more generally.

As students began to write, they were at first required to keep to the Template: not to alter the order of the topics, and certainly not to depart from using Google Docs. This allowed the class to develop a common shorthand[6] so that when, for example, an article was being discussed that related changes in output to changes in unemployment rates, everyone would know that this could be parked in Section 4.1. Later, when the class became more confident in the process, these constraints were relaxed, and students were allowed to add topics, to reorder or even remove them and, in a number of cases, to depart from the use of Google Docs. (The first time a notebook was shared with the class that had been developed using Pages, for example, others came to realise for the first time that it was possible to *design* a notebook so that it had some degree of coherence as a finished product, and was more than a string of loosely connected but disparate narratives.)

It was at around this time – in other words, when the process of collecting information on a regular basis had become something of a habit with students – that the instructor shifted the emphasis of the class from collection to shaping the notebooks. In the fall of 2013, for example, students found it all too easy to accumulate articles on the Fed's eventual tapering of quantitative easing: at a certain point, they had to decide which of these articles to throw out, which to keep and how to combine them into a developing narrative. Students found themselves required to add bridge passages, linking one topic to the next, and this kind of writing and editing developed new skills in those who, previously, might have been inclined to see "note-taking" as the simple compilation of one fact after another.

6 Likewise, sources were limited to the *Financial Times* and *The Economist* with the *Wall Street Journal*, for instance, being ruled out for most of the semester. This policy helped classroom discussion by making it much more likely that students would have come across the same material without its having been explicitly assigned.

Another issue whose treatment by the instructor evolved as the course went on was the need many students felt to "do research": after a couple of weeks without having been able to find any articles that mentioned the real exchange rate, they wanted to google it or, at the very least, use the search bar on the websites for the *FT* and *The Economist*. The instructor, though, was adamant for at least the first half of the semester, that their raw material must come from *current* reading of these two sources. It was explained to students – with a focus on pedagogical method that may have been new to them – that many of them already knew how to "do research", but that this course was meant to develop in them a new skill, that of reading the current news about the macroeconomy and fitting what one found into an intellectual structure. Many students balked at this, but the instructor held firm and only later relaxed the constraint, eventually allowing students to fill in gaps in their notebooks from other online sources (with attribution, naturally).

One further issue that had the potential to cause difficulty for students was the fact that this course made few daily demands on them whereas, in other courses, their instructors might have required them to read 150 pages by the next day and prepare an eight-page paper by Wednesday; there was a risk that their work in macroeconomics would, in spite of their best intentions, get deferred. After anecdotal evidence suggested that this was in fact the case, the instructor required all students to keep a log of their work – what they read, how much time they spent writing and editing – but, so as not to encourage fictional entries, did not require them to show it to him. Rather, they had to reflect on the value (or otherwise) of keeping the log, and many reported that it helped them to spot when they had gone four or five days without reading the *FT* or *The Economist* – when, previously, they had thought themselves to have skipped one or two days at most. As they were not required actually to submit the log, some students reported that keeping a record of this way helped their time management and was a tool they intended to use in future classes.

The need to submit a reflection of this kind was one of the deadlines students had to meet if, as the syllabus, had promised, they were to be guaranteed at least a B on their notebooks. The instructor was able to make these deadlines fit the developing needs of the class. Other examples included the need for an office hour visit in a given week, early on in the semester, to discuss the student's understanding of the syllabus and the notebook project, and another office visit later on, at the point of transition from collecting material to editing it; the requirement to comment on another (assigned) student's work, complimenting him or her on something positive and making at least one constructive suggestion; and a variety of other exercises that suggested themselves as the course progressed. In one feedback exercise some students were quite frank in confessing that the policy in the syllabus removed any incentive to aim at more than a B for the project but since, to be guaranteed the B, all students had to comply with these assigned exercises whose purpose was to move the class as a whole forward towards its goal, the policy was generally valuable in keeping the level of class engagement (and attendance) generally high.

Conclusion

Whether students now think differently about the process of learning is hard to assess. Anecdotal evidence this current semester (spring 2014) does suggest that some students, at least, continue to follow macroeconomic events more closely than was previously the case. Whether they are comparing what they read with their personally constructed notebooks is impossible to say.

If I can drop the impersonal references to “the instructor” and make my own impressionistic summary, I’d say that the students divided into three groups, possibly of similar size though this can only be a guess. At one end were those for whom this project was, to a greater or lesser extent, beyond them, revealing weaknesses either in writing or in analytical skills or even time management that made the whole semester an unproductive struggle. The second group may have had the ability to succeed in the project, but they decided at some point to take advantage of the guaranteed B and, from that point on, they merely went through the motions. The third group, though, produced work whose sense of design could only have come from a real engagement with the material, from gathering it to analysing it to giving it coherence and shape.

This was, as I’ve said, a demanding course to teach, since my rôle was so much closer to that of a mentor, coach (or drill sergeant) than that of a conventional instructor. The work of the last group of students, I’d like to say, made the demands worthwhile. Certainly their success showed me that these methods can succeed, and that they’re worth trying again – given tenure, and the support of a patient administration since this was, after all, my third attempt at a course of this kind.