Higher Education Academy

TRANSFORMING TEACHING
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Innovative pedagogies series:

Research-informed teaching and curriculum design on an Applied Economics module

An exercise in constructive alignment

Professor Robert Ackrill, Professor of European Economics and Policy

Nottingham Business School

Contents

Introduction

As a researcher, for many years with the different modules on which I have taught, I have looked for ways in which to bring research activities, broadly defined, into the curriculum. Whether we use the term research-informed teaching, or enquiry-based learning, the ultimate aim has been to promote students' engagement with their discipline through these activities, and support them in developing both subject knowledge and research skills that can enable lifelong learning.

Broadly, I am referring to modules other than dissertation-type modules, where the research element is already fundamental. In this case study, I describe what I do with my Final Year undergraduate module on the Economics of the European Union (EU). In this module, while the core syllabus (shown in the appendix) is typical for such a module, the design of the assessment helps make this module different. Students write a 4,000-word project, for which they must collect, present and analyse data, with reference to economic theory, EU policies, and academic research – with every single class and activity focused on this. Hence the importance of constructive alignment. Moreover, the assessment is more than another hurdle to get over on the way to getting a degree. It is the focal point for the activities that not only promote the development of analytical skills and understanding, but also to help students see, first hand, the joy of creativity in research, analysis and learning.

The assessment described below, the theory underpinning aspects of its design, and the range of skills-based activities embedded into the module, therefore make it more than simply another EU Economics module. For me, using the module to deliver wider skills and knowledge is at least as important as teaching stuff about the EU. As such, I hope it can also inspire you to see how this basic idea, of using a module to deliver multiple types of outcome, can be adopted and adapted to your own disciplines and subject areas.

Innovating in Economics

About 20 years ago, I first took over the module leadership of, and teaching on, a module on the Economics of the EU that had an exam as its only assessment. I knew I wanted to introduce an assessment which enabled the students to do something that reflected the applied and open nature of the subject matter. A challenge, initially, was to devise an assessment that could not simply be copied from textbooks and from the electronic resources that students were just starting to have access to. Eventually, my Eureka moment came in the form of setting a project that would involve the collection, presentation and analysis of data. One thing that we have in abundance in Economics is data; but these are not just numbers – they are the manifestation of economic policies which, in turn, can be understood and analysed with reference to economic theory and related academic research. So long as the data were chosen carefully, the analysis could not be copied – but instead would require the students to engage in a range of research-type activities to develop their own analyses and answers.

Thus was born the basis of a project that I have set my students ever since. I focus here on the details of the current version of the project although, as explained later, it has gone through various changes, for various reasons. I set a question that involves students in the collection of data as the central element of an assessment, the delivery of which requires them to collect appropriate data, present the data in appropriate ways, and then draw on a wide range of materials to analyse the data, using a range of economic tools.

In developing this form of assessment, a key motivation has been to develop an assessment that is more than just another coursework to be completed, and another box ticked, on the way to collecting a degree. As an active researcher, I am very aware of how the activities that make up 'research' help me to develop deep learning – many of which are equally suitable for undergraduate students. I thus wanted to bring these research activities into the module. The main point is to encourage students to learn by active participation in processes of information gathering and analysis – or 'research', rather than to treat students as passive consumers of information. Indeed, it has always struck me that the word 'active' in the phrase 'active learning' is, or should be, superfluous.

With this being an Economics project, there has been another problem to overcome. In order to undertake research, students need to understand research methods and related research skills. Yet in undergraduate Economics degrees there are frequently no research methods modules. A common structure is to have modules in Maths and Statistics in Year one (often referred to as quantitative methods), followed by econometrics modules in

Years two and three. Data presented by Parker (2014, p. 349) show that, from a sample of 40 UK universities taken in 2012-13, all of those institutions' Economics degrees had compulsory quantitative methods modules, but only 15% had compulsory research methods modules. Parker notes that there is little difference between pre-1992 and post-1992 institutions overall, although the data do not show whether there is a difference between those institutions regarding research methods modules.

As a result, qualitative Social Science research methods and related research skills are often missing from many Economics degrees. Economics students' perceptions and experiences of what constitutes 'research' are instead shaped by academic research that is heavily technical and which can often appear to be far removed from the 'real world'. With so much academic economics driven by the quantitative imperative of logical positivism, there is widely perceived to be no need to instruct students in other aspects of research. My response in my EU Economics module, without running 'formal' research methods sessions labelled as such, is to guide students in, for example, the ways of data collection, presentation and (non-econometric) analysis, the art of reading journal articles to identify methods, findings and implications, and thus to be able to make connections between what the students are doing and what academics are doing in the writing of journal articles and other research outputs.

In addition, I have tried to reflect in this module features that employers of Economics graduates seek in applicants. This has been based on the regular surveys undertaken by the Economics Network. The latest survey[1] identifies much the same issues as previous editions. Skills valued by employers include the ability to analyse economic, business and social issues; the ability to organise, interpret and present quantitative data; to frame issues; and to communicate economic ideas – all of which this module seeks to help develop in students. The survey also asks what employers see as the skills most in need of development. The top four, in order, are application of economic theory, communication skills, quantitative skills and critical thinking – again, all of which the module seeks to help develop.

Constructive alignment – linking everything to everything else

A central feature of the module is the way in which absolutely everything done relates in some way or another to the assessment – hence the vital role for carefully planned constructive alignment. That said, the assessment is more than an end in itself – its successful completion should help students develop a range of Economics-specific and transferable skills. One important benefit from designing the module as a tight package of activities is that it helps make clear to students how the many formal and informal activities undertaken throughout the module representing formative assessments, relate to the final summative assessment. That said, while I give clear guidance as to the basic structure of the project and the core information needed, there is plenty of room left for students to be creative and imaginative in their analyses, utilising materials they themselves have determined for this purpose. Also required from me, however, is support and guidance as to the various types of independent research activity students will need to undertake in delivering this project, but which they may well not have come across previously. In this section I set out the key features of the elements involved in the module, while in a later section I outline some aspects of the evolution of the module, that I had to undertake to address challenges and reach the point where the module now is.

The assessment: a 'data-based project'

Each student is assigned an EU member state, with the title of the project being 'Analyse the Impact of EU Membership on xxx'. In assigning countries to students, if I have any non-UK EU students in the cohort I make sure I do ***not*** assign them their own country. Of critical importance has been to ensure the basic design of the project does not (dis)advantage students on the basis of the country they have been assigned. Thus for example, even though Germany does so much more trade in total than the smallest EU member states, the analysis focuses on the split between intra-EU and extra-EU trade flows and what might drive that split, in different cases. Also, I try to make sure that all of the core data are available either from Eurostat or from the European Commission's Directorate General for Economic and Financial Affairs – thus, as far as possible, trying to ensure equal access to

[1] **http://www.economicsnetwork.ac.uk/projects/surveys/employers14-15**

data for all countries – regardless of economic size, political importance or whether their domestic data providers have English-language websites or not.

The basic structure of section headings, and minimum required analytical content of the project, is given to the students. This makes sure that they all cover the key economic issues at the heart of the module and thus the students can be judged against the Module Learning Outcomes (MLOs) of knowledge and understanding. But, as examples below will show, students who perform well under the other MLOs, relating to skills, qualities and attributes, will be able to demonstrate those not just in terms of delivering the core required material (which, if done well, will be more than sufficient to earn a First Class mark), but in going beyond the core in multiple possible ways. The module aims, MLOs and core syllabus are summarised in the appendix.

The project then requires students to collect data, present the data in various ways appropriate to the data-type and analysis to be undertaken (which itself requires some instruction and consideration of alternatives in seminars); and then to analyse the data in order to answer the project question. This analysis, in essence, involves three types of information – economic theory, EU policies, and academic research (including research by policy institutes, public bodies such as governments, central banks, etc.). With the academic literature, I am looking for students to use this to underpin, to reinforce and also to challenge their own analyses. What I do not accept is students who, instead of undertaking their own full analysis of data, present the findings of a journal article on a related topic. Ultimately, however relevant the research paper may be, it does not represent an analysis of the data presented. In short, academic and policy research are complements to the students' own research, not a substitute.

A key feature of the module, critical to an effective analysis, is how the four types of information – data, economic theory, EU policy and academic research – are drawn together. As well as unifying them analytically, presentation is also extremely important. In terms of tables and graphs, I require these to be embedded into the main text, not put into an appendix. They contain what is being analysed, so they *must* be there. What I also do is ask students to put economic theory, EU policy definitions, definitions of core concepts, etc. in 'textboxes'. This is a device which emerged from experience: 4,000 words are not many for students to deliver a full analysis. Thus, to provide students with the space to bring in those other elements, I exclude textboxes from the word count (as I also do tables, graphs and references).

The basic rules for the use of textboxes are very simple: include concepts, definitions, etc. that are used in the analysis – but exclude the analysis itself. Also, with one exception (made clear in classes), include in the textboxes only what you need for the analysis, and make sure all of the concepts used in the analysis are explained in textboxes. Thus this is, in essence, the same rule as citations/references. Something it took an external examiner to point out to me was that one distinguishing feature of the best and worst projects was the effective use (or not) of textboxes. Specifically, students whose analysis was the best had structured the component parts of the project very clearly and systematically, and then unified them effectively in their analysis. This external examiner has made it clear how much he likes this particular feature of the assessment.

Staff-student contact and guidance

It is the purpose of lectures, seminars, guidance to students on handouts and students' own independent studies to access, analyse and draw together all of the component parts of the module. At Nottingham Business School the standard module model, currently, is a one-hour lecture and a one-hour seminar per week. Previously the structure was weekly two-hour lectures and fortnightly one-hour seminars. This change forced me to reflect on what I did, and to develop the module to where it is now. In particular, the doubling of seminar contact time has allowed me to expand considerably the number and range of student-centred and student-led activities on the module.

Lectures

One important point to make about my module is that I do not follow any specific textbook. Instead, I have developed my module over the years and, in essence, I am telling the students a story, delivering a narrative that I have developed. This can be underpinned by reference to textbooks, but also to academic research, data, and so on – that is to say, all of the resources that students will themselves need to deliver the final project. In that sense, the entire module is a process of demonstrating how to use different resources to construct an analytical economic narrative.

As a result, I see lectures as a critically important part of the module. They enable me to provide students with a clear, shared, starting point, for the module and specific elements of module content. Indeed, I have always

believed lectures to be a very resource-efficient mode of content delivery – especially where the construction of that content is, essentially, unique to the module. Moreover, every year I always start the first lecture by emphasising that my lectures are the starting point of an intellectual journey – they are not the stand-alone be-all-and-end-all of the module, but must be understood as part of a package that includes the follow-up seminars and students' independent study.

The challenge is to make lectures engaging and relevant; but student evaluations each year always include positive comments about my lectures. In the lectures on this module, I never use PowerPoint (something else which students each year say they like) but instead use a visualiser. The phrase 'chalk and talk' always seems to be used as a disparaging judgement on lectures; yet it is clear from years of my own and others' experience that students really appreciate and benefit from, for example, being taken through the construction of a diagram, or an equation, etc. in 'real time'. Even something as simple as this requires the students to take the lecturer's lead and actively build the diagram in their notes, following the lecturer as they do it, line by line. But understanding why each line goes where it does also involves understanding the underlying theoretical concepts. On my handouts I will include incomplete diagrams, and we complete them in class in this way.

On these handouts, I also put a skeleton of my lecture. The information I put on the handout is what I put on the visualiser, and to which I then speak. These bullet points or headings signpost the students through the lectures, providing them with a clear framework for the taking of notes. A practical point is that, when I prepare the handouts, I space these fragments out, so that students can use the handout itself as a tool for effective note-taking. This also helps keep students engaged in my lectures. In short, active learning and participatory activities for students can come in many guises. I also do activities in lectures that are more obviously interactive, for example open or group-based question and answer slots as we go through certain topics. Moreover, as ideas come to mind, so my free-flowing format allows me to bring in different activities.

A final observation is that, for the last two years, I have used lecture capture technology to record and make lectures available for my students. In part because of my narrative approach to lectures, being able to use the recordings as a resource to fill in gaps, or to revisit certain bits of lectures, has proved very popular with students. When the technology was first made available, I was reluctant to do this, but two things changed my mind. First, some students who were not native English speakers commented that they found it hard always to keep up and take thorough notes in lectures. Second, a colleague informed me that research suggested this technology did not have a significant impact on attendance. Again, in the last two years I have positive feedback from students about this. That said, wider conversations make me evermore certain that lecture capture technology would not work for all styles of lecture. The more interactive the lecture, the more attendance is important. In this situation, lectures recordings as revision tools work very well.

Seminars and non-timetabled preparation activities

The change to weekly, hour-long, lectures and seminars required much reflection, which led to the current format of theory and EU policies in lectures, with everything else either in seminars, or outside of classroom time but guided (primarily) through the seminars. It was important not simply to move lecture material into the seminars, because some would then simply become mini-lectures. Instead, both material and activities required amendment. The main types of seminar activities are explored below:

Module introduction

The EU is a complex organisation, widely misunderstood. One thing I do in the first seminar is to get students to write down anything that comes to mind when they hear the phrase 'European Union'. Most start by just putting down facts ('single currency', 'agricultural policy', etc.), but I try to get them thinking about matters of opinion as well. I make it clear that there is no right or wrong answer, and that I shall not mark or even look at what they have written. Instead, I return those jottings at the end of the module, so that students can reflect on how their learning and understanding has evolved through the module. This also acts as a simple ice-breaker in the first class, as we all start to get to know each other.

Core material

With the reduction in lecture time, I am unable to cover everything I once did. For some of the key background information, I now get students to find this out for themselves, in ways that help establish key behaviours for the

module to come. I rather grandly call them 'quizzes', but they are in essence simply a series of linked questions on a particular theme (key historical events, EU decision-making structures, etc.). These require the students to spend a bit of time on the Internet, and in some cases, a bit of thinking time, in order to collate core facts that are required for any EU module, and which are required for their projects. I do this in the early sessions, partly to get students used to searching, in very simple ways, for information on the EU. In the seminars, they also form the basis of group discussion – again, getting the students used to this form of interaction.

Data collection and analysis

This is fundamental to the successful completion of the module, so again, early on, I get students to think about data. The first activity involves me giving them a few tables of trade data and then, in 'buzz groups', getting them to go through each table and look for the economic stories that they can extract and read from the data. From this, real-world stories emerge that will ultimately feed into their projects. In addition, I use this to revise basic trade theories and introduce other, new, theoretical concepts into the module. This simple activity helps to emphasise the links between standard theories of international trade, and what happens in the real world as seen through trade data. Moreover, it is another early illustration to the students of how we can use theoretical ideas to understand and analyse data.

After that, in seminars throughout the year, a range of related activities are undertaken. I provide a base level of guidance, specifying the minimum required data expected for the project, showing them where and how to collect the data. Most of the data are collected from the EU's own statistical database, Eurostat. This is not the most intuitive database to use, so in some classes I guide them through, step by step. This helps equip students with the basic skills required for data collection and the basic data expected for the project. But what they do with that knowledge, in terms of collecting data above and beyond the minimum (but still relevant to the project and to an analysis of their country), is where students can be driven by their own curiosity – picking up extra marks in the process.

In some seminars, the focus is on how to present data – when tables are more appropriate, what a table should include, if the data are to be presented pictorially then is it better to use a line graph, bar chart, pie chart, etc.? This is also underpinned by references to tables, charts, etc. from published sources, so students can get a sense of how data should be presented in order best to facilitate their reading and interpretation.

Another dimension to these activities that is extremely important, both for the project and for the students more broadly, is that students must become familiar with the basics of Microsoft Excel. Years of experience as a Placement Tutor have shown that pretty much all of our graduates will have to become familiar with Excel in their professional lives, so these activities can help students develop these skills before heading out into the job market.

As we go through the module, I ask for students to prepare data in advance of seminars, so that students can present their data to the group. We then discuss, collectively, how their analysis is coming along, I can help illustrate how one can analyse the economics behind graphs, and together we can provide detailed feedback for the students presenting their data. In so doing, this guidance can also help other students, regardless of their assigned country and the particular analytical details of their country's data.

The academic (journal) literature

In Economics, as in most of the Social Sciences, the dominant form of academic research output is the peer-refereed journal article (PRJA). In all sections of the project (albeit in some more than others), PRJAs can be drawn upon to underpin, to complement and to enhance the data analysis the students undertake. One such topic is looking at how the EU and the Single European Market have influenced foreign direct investment (FDI) flows, in particular in recent years from the old/Western and Northern European member states, to the new/Central and Eastern European members. So, prior to the relevant seminars, I assign a selection of articles to certain students, who then deliver short presentations to their seminar groups on the papers – what the researchers look at, how they go about their analysis, what the main findings are, etc. In this way, everyone in the group is exposed to the content of several articles, but they also get to experience how PRJAs can be 'read' in the broad sense of that term, to extract content for application in their projects.

But with the good students, there is more, because what sometimes happens is that students will be inspired to extend their analysis in certain ways because of what they have read in an article. Thus, in addition to analysing their data, and considering whether the findings for that country are consistent with studies that undertake cross-country analyses, students themselves undertake additional research. To give a couple of very simple examples,

when one student reads in a journal article that their country focused on stabilising its real exchange rate in the Economic and Monetary Union (EMU), to tackle issues of declining competitiveness, they went and collected data on the real exchange rate, over a long time period. This showed perfectly what the journal article had stated, and the student was able to bring this extra information into his analysis in a meaningful way. Another student read that, in their country, researchers had found a negative relationship between the unemployment rate and the long-term interest rate. Again, by collecting relevant data he was able to illustrate those findings in a simple graph.

A second benefit of getting students to present research papers to their seminar groups stems from the removal some years ago of assessed, oral presentations. They were, for many years, a part of this module, but in recent years concern at Nottingham Trent University (NTU) regarding over-assessment has led to a reduction in the total number of assessment points each student faces. For my EU Economics module, this meant going to a single (summative) assessment point – the project. An ability to give oral presentations is a key employability skill, in general but also as revealed by the biennial Economics Network Survey of Employers of Economics Graduates. Thus, not wanting to remove presentations completely from my module, these seminar activities have been one way of continuing to give students practice at presenting.

The empirics of policy applications

My aim is to ensure every student delivers at least one presentation through the module. Another activity I get students to present is related to the analysis required in one of the specific sections of the project: competition policy. In this case, students are required in a seminar to present one EU competition policy case related in some way to their country. To make this activity more generic and non-country-specific, the emphasis in the presentation (as is also the case in the project) is to present the details of the case, including its execution and final outcome – and show how this is all linked to the relevant area of EU policy, and to the underlying economic concerns that underpin competition policy. This application of ideas is then helpful to students who are assigned different countries.

Formative feedback

By this I mean what some people call 'feedforward', a somewhat clumsy but probably more accurate term. There are various ways on this module by which students receive guidance on their general performance, and on detailed specific aspects. The main way, as I point out to students every year, is that every time we discuss things in class, every time I answer a question, I am providing feedback, because I am giving information that students can carry forwards into the final project. Second, the seminar activities, described above, then provide more structured and topic-specific feedback. Third, during Term two, I invite students to submit a draft of what will become one section of their project – they get to choose which section. I limit this to 600 words, given that the 4,000-word limit for the project overall is restrictive, so I want students to get used to writing clearly but concisely. On this I provide generic feedback, but also extensive detailed individual feedback, on content, style – everything that I would look for in the final project.

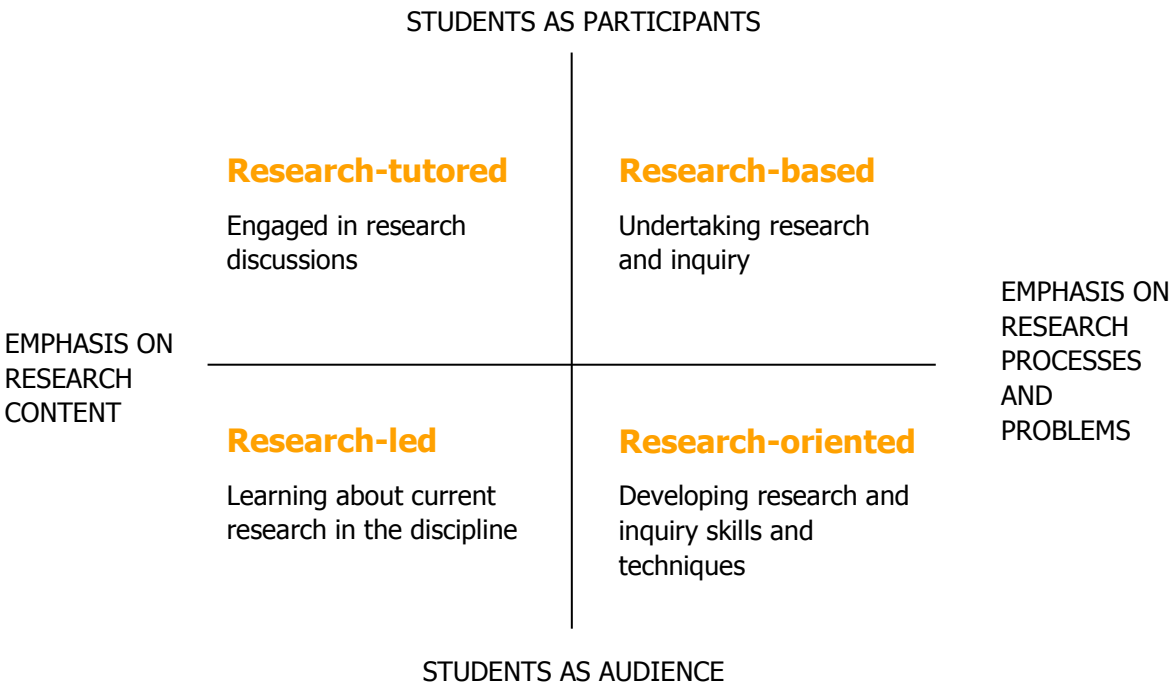
In summary, the assessment plays a central role in the module. It is the focal point on which every lecture, seminar, and non-classroom activity is focused. Constructive alignment helps students see how everything is connected, which helps promote engagement and improve attainment in the module. Equally important, however, is that the assessment is designed in such a way to enable me, through the module, to promote multiple knowledge-based and activity-based skills. These are skills which help promote students' lifelong learning, beyond the module and university.

How this practice is situated theoretically

The primary concept underpinning the module and its design is research-informed teaching. By this I mean getting students to undertake a variety of research activities, broadly defined; something that is referred to by some as enquiry-based learning. I stick to the former term, as it is consistent with a common framework for analysing the incorporation of various research-type learning activities into the curriculum.

Research-informed teaching

As made clear from the outset, a major theme throughout my teaching is the desire to bring multiple research-related, student-centred, and student-led activities into the syllabus and the classroom, to help promote deep learning in students. In describing what this involves, I shall follow the work of Jenkins and Healey (2009) to distinguish different types of research activity: research-tutored, research-led, research-oriented, and research-based. I shall not take their framework too literally, however, because in their taxonomy they identify research-led and research-oriented as involving students more as audience than as participants. Thus in linking what I do with these four categories, I shall show how I try to make all types of activity participatory.



Source: Healey and Jenkins (2009, p. 7)

FIGURE 1 RESEARCH ACTIVITIES IN THE CURRICULUM

Research-tutored

This can be understood as a broad catch-all term for many of the discussions which happen in this module, in seminars and in one-to-one meetings outside of timetabled classes. It captures conversations that have less of a structure or specific goal than the ones described under the other three categories.

Research-led

I incorporate current research in my module in several ways. In my lectures, I embed the latest academic and policy research on different topics, including my own. In order to keep up to date on a module like this, I must re-write my lectures every year. Sometimes this involves minor tweaks, sometimes (for example with the empirics of Economic and Monetary Union, or EMU) this can involve major re-writes every couple of years. This gives me plenty of opportunity to bring in new materials including the latest research. Also, in addition to utilising my own formal research outputs, because I have been researching on some of these topics for a long time I can drop in anecdotes from my own research experiences, something that the students seem to like.

Figure 1, read literally, implies these activities engage students as an audience. Efforts to help make them more student-led and participatory come in several of the seminars. As described above, some topics lend themselves well to being understood through a reading of key journal articles. With those topics, I allocate key articles to students, who then summarise and present the key questions, methods and findings to the rest of the class. By the end of the year, I will have asked everyone to present in this way. My role, primarily, it to facilitate the in-class discussion, showing how the research can link to their projects and emphasising that the information presented can be drawn upon directly in their data analysis. This simple activity, requiring students to engage with the academic literature, enables them to see what academics are researching, how they are doing it, what they are

finding, and how it relates to the real world, via their projects. It also exposes students to more journal article research than they can reasonably be expected to read individually.

Research-oriented

As described earlier, embedded into this module are multiple research methods activities. Some of these may be covered initially through instruction, but these will always be followed up by seminar activities that require the students to put the method into practice, thus helping to make such activities participatory. Examples include those identified in the previous paragraph. In addition, it can involve showing students how to navigate the Eurostat database, before asking them to collect, collate and present data. This last element is then accompanied by discussion around how best to present different types of data. This is developed further, through practice and reflection on how to draw together the different elements of the project in the data analysis. This is the particular dimension that is the focus of the main written formative feedback activity, described earlier.

Research-based

This, I believe, is where research, teaching and learning are unified. In practical terms, on my EU module this is manifest in the full integration of the assessment with not only the structure of the lectures, but with the content and multiple activities of lectures, seminars and out-of-class activities. Thus the assessment is part of the means by which students engage with and learn things – not just core 'stuff' about the EU, but about wider skills and applications as well.

How the module assessment has evolved

I hope that, by spending a bit of time on this, I can offer indirect insights into how you can adopt or adapt these practices. First, the scale of the project has changed over time, as I have moved between institutions and been subject to different assessment structures. Its original incarnation, as now, is as the single summative assessment on the module, and thus is longer – currently 4,000 words, albeit with some considerable exemptions from the word count.

I inherited the predecessor to my current module shortly after arriving at my current institution – although it was then a Level 2 module. At the time, the summative assessments consisted of two group presentations and an end-of-module closed-book exam (20/20/60 percentage weightings). From this starting point, I wanted to introduce the project that had worked so well at my previous institution. In addition, I wanted to change the nature of the assessed presentations because, depending on their chosen degree course, some students came onto my module and the first assessed presentation they delivered was their first ever presentation at university. As a result, I made the first presentation formative, the second summative, I introduced a small project, initially 1,500 words, and kept the same 20/20/60 weightings. I gave students a choice of two topics – EMU and the Common Agricultural Policy (CAP) – in different ways two very important EU policies. The exam continued to cover the entire syllabus and I always ensured there were questions relating to EMU and the CAP (albeit with a different focus than the precise project question), so as not to (dis)advantage some students.

Initially I did not change the weightings on the elements, but it quickly became clear that 1,500 words were insufficient for the project. I therefore increased the word count to 2,000 and its weighting to 30%, reducing the exam to 50%. During this period, I applied for and received Jean Monnet Module funding from the European Commission. Previously, the module had included elements of international trade theory and policy. The funding came to assist me convert the module to a fully-focused EU Economics module, although while the content changed, the nature of the assessments did not.

After a few years the opportunity arose, as part of wider changes to the curriculum, to move the module to Level 3, where most institutions' EU Economics modules are taught. With this move, I decided to remove the exam and expand the project to cover the whole syllabus. This would allow students to apply their knowledge and express themselves more freely as final year students. This would also require me to develop an assessment which promoted the development of students' higher-level analytical skills, applying core economic concepts and knowledge in an empirical setting. It was interesting to be told some years ago by a colleague that, since before my arrival, this module has always been one of the most innovative in terms of assessments, so there was wide support for this change. I kept the assessed group presentation at 20%, extended the project to 80%, but with one quarter of this dedicated to an individual presentation. This was delivered during Term two, with each student presenting a first draft of the analysis of one of the early sections of the project.

This change coincided with my application to the European Commission for a Jean Monnet Chair in European Economic Studies. This revised assessment represented a core element of my application. This bid was successful, but with the referees complimenting this part of my application. They described the learning activities on the module as an "interesting innovation in teaching methodology", with "research activities that will allow students to deepen knowledge on the working of European integration and of the international economy". This is particularly pleasing because it reinforces one of my main aims – that the project is not just an end in itself, but is also a means to helping develop multiple dimensions of students' learning processes.

This structure remained unchanged for a few years but then my university, concerned about 'over-assessment', reduced the number of summative assessment points each student should face in each year. My module was one of many that had to go to one assessment point – but this was very easy to do. I removed the group presentation and made the second, individual, presentation formative only. This remained unchanged until the current year (2014/15), when I replaced the Term two individual presentation with a written submission. Although the presentation was of material that would go into the project, a couple of years' experience demonstrated that engagement was limited, with students finding it difficult to link the presentation activity with the content required in the final report. Thus the latest change has been to get students to submit, electronically, a 600-word first draft of one section of the project – that I would then comment on and e-mail back. This change was made after full consultation with, and the approval of, the students. This has been very popular. In particular, although it is only formative, there is a clear visible and obvious link to the final project, which helps students' engagement with the activity.

As I write this, plans are being put in place to semesterise our Level 3. This will necessitate a magnitude of change never before attempted on this module. When this happens, I shall try to find a way of reporting on this subsequently, as this will be very useful also when considering how what I do can be adopted and adapted, given that so many universities already have semesters rather than old-style full-year modules. That said, I shall also look to see what colleagues in other universities do with EU Economics modules.

How others might adapt or adopt this practice

This module has been designed and implemented as a piece of empirical economic analysis. As set out above, there is a distinction between the materials delivered via lectures (typically economic theory and EU policies) and the more applied, student-centred activities undertaken via seminars. That said, everything in the module is intended to be constructively aligned. Central to the project is economic data.

Ultimately, there are several ways of looking at adoptability and adaptability. First there is more or less direct adoption, most obviously relevant to other EU Economics modules. The balance of activities can be flexed so, for example, there can be a greater core role for theoretical discussion, or quantitative activities. I do not require any econometric or quantitative economic analysis in the project. That said, every year some students estimate the Grubel Lloyd Index for intra-industry trade, estimate measures of their county's comparative advantage, or estimate a country's 'optimal' interest rate for monetary policy using the Taylor Rule. Very occasionally I have even had students run gravity models on trade and FDI data. Thus there is plenty of scope for flexing the basic model to suit the particular emphasis of different EU Economics modules. Beyond this, however, the basic model of data + theory + public policies + academic research is suitable for other modules in Economics. For example, colleagues of mine do something very similar (in core pedagogic terms) with Level 3 Business Economics and International Trade modules.

Second, there are other Social Science disciplines, for which the basic ideas and structure could be relevant. The first example that comes to mind is modules on EU politics; but equally, as with Economics, the core model could be adapted for other politics topics. These modules could subject 'economic' data to political analysis, but other data could be incorporated, such as public opinion polls, election data, etc. Moreover, there is a large body of political science research on EU decision-making, utilising new and exciting datasets. This is something that is beyond the scope of EU Economics modules, but which would be perfect for analysis on an EU Politics module.

Beyond this, it is plausible that the basic model could be adapted for different Social Science disciplines, but with the inclusion of *primary* data collection and analysis. The key difference between this module and model, and a standard dissertation-type module, is the fact that lectures and seminars run throughout the entire module. But, given this, a combination of primary data, theory, academic literature and (where appropriate), public policy, could offer a core model for many different social science disciplines.

Finally, I hope there are general lessons I can offer from my experiences that can inspire creativity in any discipline. There is the tightness of the constructive alignment across all activities. This, beneficial of itself, also can help address specific concerns such as a lack of student engagement with formative activities. Something may 'not count' in pure numerical terms, but we can still help students see that this activity does indeed 'matter', if it helps them work towards a specific and clearly-visible element of the summative assessment. The module requires theoretical understanding, but the greater emphasis is on application, drawing on a range of *types* of material to produce an effective report. This was a major reason for moving away from exams, to the project-based assessment.

An important consideration in the design of this module is alignment of the contents, activities and assessment with key skills and attributes that employers of Economics graduates value and seek in those graduates. Whether on this basis, informed by regular surveys of employers, via accreditation processes (for some disciplines), or just informal understanding, this alignment is widely applicable to other disciplines. Importantly, however, despite this I always try not to be overly instrumental in such matters. Learning – and the joy of learning – is an incredibly important 'transferable skill' to impart. I finish with one of my most-cherished comments from a student on their end of module feedback form, from a couple of years ago. They said that my module was the most challenging, but the most rewarding, they had ever taken. I like to think that it was the most rewarding precisely because I challenged them. After all, you can only sharpen the blade of a knife by using material that is harder than itself.

Conclusion

My EU Economics module has long been a test-bed of innovation for different forms of assessment. In its current form, the assessment is the central focal point, upon which everything else is focused. This assessment is a means to multiple ends. In order to produce a high quality project, students must develop or enhance a range of skills – topic-specific, discipline-specific and broader transferable skills. Moreover, at its heart is the overarching concept of research-informed teaching. The module has been developed through the application of principles of constructive alignment to create a tight package – of classes, content and activities. Student-centred learning, through the utilisation of various types of research activity, is a central means by which students are helped to engage with the module, its content, and with skills development. I find leading this module to be very rewarding, and many students each year say the same. I hope there is something in here that you can find useful to enhance your own teaching and your students learning.

References

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Appendix: Module aims, module learning outcomes and core syllabus

Module aims

1. to enable students to develop a deep understanding of the existence of the EU as a trading bloc, by analysing and critically reflecting on relevant theories of integration, empirical evidence on intra-EU trade and the policies that regulate intra-EU trade;
2. to enable students to understand and critique the place of the EU within the global economy, by examining the external trade policies of the EU and the role of Foreign Direct Investment in EU trade relations;
3. to review critically a range of EU policies and the impacts they have on EU member states. Specific policies include monetary integration and EMU, the EU budget and policies addressing agriculture, regional problems, and inclusive, smart and sustainable growth.

Module learning outcomes

Knowledge and understanding

After studying this module you should be able to:

1. analyse the importance of trade to the EU by means of theoretical and empirical arguments;
2. provide a critical analysis of the place and the role of the EU in global economy, including relations with other countries, regional groupings and through the World Trade Organisation (WTO);
3. utilise standard economic analytical tools in an examination of EU policies;
4. collect, and analyse economic data relevant to EU policies;
5. apply knowledge about the implementation of common EU policies by undertaking a critical review of the impact of EU membership on a specific member state.

Skills, qualities and attributes

After studying this module you should be able to:

1. demonstrate high-level research skills by drawing upon a range of relevant sources to produce clear ideas;
2. produce coherent and well-structured arguments;
3. demonstrate high-level ability to work in a team, as an employable transferable skill;
4. demonstrate high-level verbal communication skills by means of oral presentations, as an employable transferable skill;
5. demonstrate high-level written communication skills, as an employable transferable skill, by means of a data-based project report.

Core lecture syllabus

Part I – EU trade and related policies

- The theory of customs unions.
- Common Market Theory and the Single European Market.
- Foreign Direct Investment and the SEM.
- Regulating intra-EU trade – EU competition and industrial policies.

Part II – European Monetary Integration

- Economic and Monetary Union – background and theory.
- Monetary and fiscal policies in EMU.

Part III – Common EU Policies

- The EU budget.
- The Common Agricultural Policy.
- EU cohesion policy.
- The Europe 2020 Programme.

Contact us

+44 (0)1904 717500 enquiries@heacademy.ac.uk
Innovation Way, York Science Park, Heslington, York, YO10 5BR
Twitter: @HEAcademy www.heacademy.ac.uk

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