

More on CORE —

# Adopting CORE at Queen's University Belfast

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In many ways adopting the course material created by The CORE Project at Queen's University Belfast (QUB) was pushing on an open door. Following the financial crisis, we had identified gaps in the existing first-year economics curriculum, and programmes had been reformed to give students more 'real-world' material to go with their 'Principles' class. So when The CORE Project was launched a few years later, some of us were instinctively drawn to the idea of an entirely new standard for teaching first-year economics.

CORE's promise seemed almost too good to be true — an educational innovation with many beneficiaries and few costs:

- Students would benefit through more direct use of economics so they could understand the world around them better, and they could engage with the issues they were really concerned about, like inequality and climate change.
- Employers tell us that they want our economics graduates to possess basic skills in empirical analysis and develop the ability to argue based on theory and evidence. CORE also promised that students could acquire these skills.
- Lecturers would benefit from teaching material more in tune with what motivated many of us to become economists in the first place—teaching economics as a powerful tool to understand the world around us and to improve people's lives.

## Everyone on board

Although the benefits were clear to those of us that had been following the project for some time, we needed to get everyone on board if we were to replace our existing course material with *The Economy*, the free, open-access ebook that CORE has created for economic undergraduates. This process was greatly helped by a visit in these early stages from Alvin Birdi of the University of Bristol. Alvin is professor of Economics Education in the economics department at Bristol, is director of The Economics Network, and was also an early adopter of CORE, having used the very first beta version with his students.

He gave us a clear overview of what CORE was, and how it was different to traditional first-year courses. This gave faculty an opportunity to ask about the practicalities of delivering the course, and the more sceptical voices had a chance to raise direct and probing questions. Chris Colvin, who was then our Undergraduate programme director, had also attended the Economics Network's Developments in Economics Education conference, where he was able to meet with and learn from the successes, and challenges, of colleagues who had already been using CORE's material in their own universities.

Shortly afterwards, we had the opportunity to overhaul our first year curriculum. Led by Chris, and with approval from the economics department, the bureaucratic wheels were set in motion to adopt *The Economy* and begin teaching in the 2019-20 financial year. The practicalities of overhauling our entire first year, across many different degree programmes, were not trivial. We wanted CORE's material to be used as a full-year course that would be taken by all our economics students.

But all of our teaching to this point had been modularised, and many non-economics students who had previously taken the 'Principles' course would also have to be accommodated. The decision was made to separately teach these students the *Economy, Society and Public Policy (ESPP)* version of CORE's curriculum (<https://www.core-econ.org/espp/>). This uses the same overall structure and models, but is written with a greater focus on how economics can help understand policy problems. We believed ESPP would more directly suit the needs and interests of non-economics students.

Our single-honours economics students would also take a newly-designed course called 'Communicating Economics', which we constructed to develop our students' reasoning and communication at an early point in their university careers. Plus, we have also begun to teach our MBA students using an adaptation of the CORE material—but that is a project that deserves its own article.

My colleague Heather Dickey and myself had the responsibility of delivering this new course to 150 Economics students. We would share teaching over two

semesters. As with any new course, preparing to teach using CORE would require a big investment of time upfront. We would have to design course structure, assessment and tutorials around the specific requirements of our students and the university. Thankfully, we had plenty of help and support. At an event at QUB, I grabbed a few minutes to talk about implementing CORE with Wendy Carlin, the director of The CORE Project, who provided a wealth of information and pragmatic advice. Following this, we attended a CORE workshop at the University of Warwick on 25 and 26 June, 2019, at which we got to hear from many people who were on different stages of their CORE journey (if you register on CORE's web site, it's free, you can watch the sessions from the workshop at <https://www.core-econ.org/workshops/>). The combination of practical tips and real experience was extremely helpful.

### Designing and teaching a course

Armed with this information, we returned to Belfast to design our course in the summer of 2019. I cannot state strongly enough the quality of the many online teaching materials provided by the CORE team (you can access these by registering as a teacher, it is free, and you will find these materials at <https://www.core-econ.org/resources/>). Also material provided by the CORE Labs (<https://labs.core-econ.org/>) community helped us to prepare. CORE Labs is a network of CORE teachers-again, registration is free-who share the materials they have developed for their own use. These two sources meant that we had a ready-made cache of lecture slides, teaching guides, exercise solutions and multiple choice questions (MCQs) that had been classroom-tested. We found that the material was comprehensive but not prescriptive, and so we still had plenty of freedom to emphasise different aspects of the course.

Tutorial exercises required the most advance thought and preparation. Although we had picked up some helpful ideas from the Warwick workshop, we had still not refined how we would design these elements of the course.

We eventually decided that the most appropriate approach was to use a combination of the resources available through CORE. In preparation for tutorials each week we asked students to complete the MCQs that are part of the text of each unit. We would then select two exercises from the unit for them to prepare for class. Sometimes we augmented these set exercises with our own questions, designed to stimulate in-class discussion. From the first unit, CORE aims to develop in-depth critical thinking. So in class, we encouraged students to discuss their answers to these question in small groups before teaching assistant (TA) led a general discussion. This worked well — the students engaged well with the material and enjoyed the discussions, and our TA, Áine Doran, reported that they showed high levels of critical thinking in their approach to the tutorial exercises.

### Evaluating students ...

The first assessment that we set was a replication project using CORE's Doing Economics (DE) (<https://www.core-econ.org/doing-economics/>). This is a set of online data-based exercises which give students a chance to 'get their hands dirty' with data and empirical analysis, using Excel or R. The first part of our assignment asked students to replicate sections of the DE project on climate change, which would be graded as a pass or fail.

Comprehensive solutions and walk-throughs are provided online to students who use the DE projects, so the criterion for a pass was for students to simply be sufficiently motivated to complete the assessment. Although we were unsure how students would cope with this exercise, we were pleasantly surprised at their ability to complete the task successfully.

The second part of the assessment was to write a short essay on the relationship between the environment and economic growth, drawing on both the material covered in the early chapters of CORE and the replication exercise they had just completed.

We combined this relatively substantive piece of assessment with short MCQ exams designed to test the knowledge of the CORE material in the units that our course had covered. Some students found the format of many of the questions challenging (particularly if there was often more than one correct answer), but they learned through the MCQs in our tutorials that, to do well, they needed to have a good grasp the material.

The final assessment in 2020 will be an exam. It will be a mix of MCQs and essay questions, designed to test the depth of students' knowledge.

### ... and evaluating CORE

As we are only half-way through the academic year, it is too early to say for sure how things have gone, particularly student performance and their experience. But the feedback we have received so far has been positive. Most students seem to have taken to the format, but we have had a similar experience as other CORE adopters that we have spoken to: students who find the material most challenging are those that have previously studied A-level economics. This seems to be due to student expectations of what an economics course should be — expectations that we knew about, and attempted to manage from the start.

From my perspective, CORE has been has been very enjoyable to teach. The way the topics are introduced and motivated is particularly well-designed, and the progression from one topic to the next is coherent.

As an economic historian, it is great to see the big questions of historical economic development confronted up-front, beginning in Unit 1. Likewise, how and why

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Network event. I was impressed and delighted by the camaraderie of delegates and the ease with which we could strike up conversations and exchange of knowledge and experience. Well done for fostering such a genuinely collegiate and sharing atmosphere?.

## Early careers workshop

23 and 24 April 2020  
Swansea University

This workshop is an interactive two-day event for early careers staff focused on effective and innovative economics teaching. The workshop is endorsed by both the Royal Economic Society and Scottish Economic Society, and sessions are mapped against the UK Professional Standards Framework.

Sessions at the workshop include:

- Making large group teaching more engaging
- Using games and the media in teaching
- Voice and presence in the classroom (with a RSC-trained actor)
- Teaching interpretative sessions
- Teaching analytical sessions

As in previous years, attendees from subscribing departments will be offered reduced registration fees for this workshop. Further information and booking is available at:

[www.economicsnetwork.ac.uk/events/earlycareers](http://www.economicsnetwork.ac.uk/events/earlycareers)

## Learning and teaching awards

We have been running the Economics Network Learning and Teaching Awards since 2011. These awards are given in recognition of exemplary teaching practice that encourages understanding of and inspires interest in economics. This year we received more nominations than ever before and these were of a very high quality.

The awards were presented at the Developments in Economics Education Conference dinner at the University of Warwick. The following is a list of winners by category. Details are available at: [www.economicsnetwork.ac.uk/awards/2019](http://www.economicsnetwork.ac.uk/awards/2019)

### Outstanding Career Achievement in Economics Education

Prof Wendy Carlin, University College London

### Outstanding Contributions to Economics Education

Joint winners: Steve Proud, University of Bristol  
Dimitra Petropoulou, LSE

Joint runners-up: Ben Knight, University of Warwick  
Matthew Olczak, Aston University

### Best New Lecturer Awards

Winner: Maria Kozlovskaya, Aston University

Runner up: Tadeusz Gwiazdowski  
Commended: Ruth Badru, University of East Anglia  
Brian Varian, Swansea University

### Best paper in the *International Review of Economics Education*

Steven Cobb, Michael McPherson, David Molina, John Quintanilla, Elizabeth Rasmussen and Jeffrey Rous for their paper entitled 'Teaching economics to the masses: The effects of student help centres on academic outcomes' (Vol 27, pp.16-23).

#### Editor's note:

This summary of the DEE 2019 Conference draws on the report in the EN's *Newsletter*, no.31, December 2019. That *Newsletter* also contains:

- National Student Survey Analysis
- Employers' Survey 2019
- Employability Skills in UK Economics Degrees
- Public Understanding of economics survey (see pp.11-12 above).

The *Newsletter* can be downloaded at the EN's website: [www.economicsnetwork.ac.uk](http://www.economicsnetwork.ac.uk)

## CORE at Queen's University Belfast

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economists use models, and how different models are needed to explain different phenomena, has been explained well, using the 'hockey-stick diagram'.

CORE challenges first year undergraduate students more than a traditional course in many ways. It provides them with the motivation and tools necessary to get to grips with real-life issues. It is also a showcase of what economics can be—a powerful lens that can help us make sense of a complex and changing world.

CORE is a real innovation, and it brings to mind a particular feature of innovation from history. As Paul David has highlighted, when the electric motor was developed, motors were often simply 'bolted-on' to existing production systems. It took time before people fully took advantage of the opportunities that it offered. Then, after factories and processes were redesigned to take advantage of the flexibility of electric power, the full benefits of electrification emerged.

There have been profound innovations in economic thinking and information technology in the last 30 years. The CORE Project's approach—whether it is taught through *The Economy*, *ESPP*, or *Doing Economics* — represents the factory redesign that can allow us to take full advantage of these important innovations. This project can shape how a future generation perceives and uses economics.