

Patterns in Politics & Society: Promoting the Enrichment of Undergraduate Teaching with Quantitative Methods

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Introduction

Data collection and analysis are fundamental elements of the social sciences. However, many undergraduates in the social sciences feel that quantitative data analysis is separate from the rest of the curriculum. The MaInnes Report (2009) highlighted the lack of integration and embedding of quantitative methods (QM) teaching across the undergraduate curriculum. The use of appropriate quantitative evidence in substantive social science courses by the teachers themselves can give the students a strong message that QM is relevant to their subjects. This project on 'Patterns in Politics & Society' (PIPS) follows the lead of HEFCE and ESRC in recommending that quantitative methods should be integrated into social science teaching.

We address this problem by integrating hands-on research into a variety of social science courses at all stages of students' undergraduate work. However, bringing statistical and quantitative methods into these "substantive" social science courses is not straightforward. There is a lack of enthusiasm among most such students towards quantitative instruction in social science classes. Curriculum innovation can succeed in making students more excited about using data (Wathan, Brown, and Williamson, 2011). This RDI aims to support rapid change in curriculum and pedagogy.

A Step-Change in QM Activities

This RDI proposal offers added value to current practices in two ways.

- 1) Firstly we get students to generate and interpret their own quantitative survey data related to key topics within substantive social science modules at Levels 1-3. The data will mimic the national surveys by copying Question Bank questions and will also use secondary data.
- 2) We will also train faculty to deal with QM teaching, firstly through confidential peer observation and feedback locally, and then through disseminating good practice. Some faculty may gain from hearing about new tools that can address numeracy problems among students. Our training shows the staff existing resources (e.g. the ESDS online

teaching datasets, the Question Bank, National Centre for Research Methods cemmap website (URL www.cemmap.ac.uk/), and Ian Plewis's materials using the British Cohort Studies URL ReStore <http://cdu.mimas.ac.uk/materials/unit10/index.html>).

The University of Manchester already aims to integrate secondary data on society and politics into undergraduate course units in the Social Sciences. This project aims to widen, deepen, and disseminate best practice in the integration of quantitative data and quantitative methods into the curriculum. The University, the UK higher education system, and the economy itself have all suffered from a shortage of skilled quantitative methods (QM) users (Smith, 2004). The new Department of Social Statistics was created in 2009 to enhance the ability of the University of Manchester to deliver transferable statistical skills to its stakeholders. This department leads the bid on behalf of the School of Social Sciences. CCSR already has a strong infrastructure and reputation for delivering short courses for the UK Higher Education community.

The mechanisms of integration and dissemination of best practice involve an existing network of partners both within and outside this University. The core of the network is based both in the School of Social Sciences and in two linked national services: (i), the Economic and Social Data Service; (ii), Mimas, a data delivery and support service whose staff (including Dr. Jackie Carter and Dr. Celia Russell) have experience of quantitative methods training initiatives. Both Mimas and ESDS have pre-existing QM-oriented networks of their own. Additional teachers will be invited and encouraged to join the network. Twelve Undergraduate teachers are involved so far with explicit agreement to expand QM teaching in their substantive teaching in Sociology or Politics course units over the 3-year period.

Aims

We aim primarily to promote and facilitate the integration of secondary data on politics and society into undergraduate course units, and to support lecturers and teachers to do this. The main specific objectives are:

1. To deepen and widen the quantitative pedagogy of existing course-units. The Research Assistant and Applicants will encourage this network to use NESSTAR and other data sources and tools to enhance student learning through active data use.
2. To widen access to the kinds of teaching materials and methods used to integrate QM in substantive social and political science teaching. ReStore is used to make the resources permanently available.
3. To widen access to such materials through a series of interactive workshops, briefing papers, Webinars, a mailing list and sample materials held in a dedicated web portal.
4. To evaluate the impact of the project on students' and lecturer's use of data generated by quantitative methods.

Collaborative Bodies

Partners within the University of Manchester include the co-applicant Jackie Carter, manager of the Social Science Data and Learning & Teaching Services at Mimas. Carter plays a key role in

disseminating the teaching materials and methods via the JISC-funded Jorum, a national learning and teaching repository service which she leads (jorum.ac.uk). This would be used to promote the resources developed in PIPS. Jorum could showcase the collection of QM materials, and 'talking heads' about how the materials are used in teaching.

Dr. Carter presently holds an OU teaching fellowship in using open educational resources (oers) to support statistical literacy, and is a highlighted lead on Sage's MethodSpace website; see www.methodspace.com/. Dr Russell of Mimas has worked on an RDI project previously (Countries and Citizens <http://www.esds.ac.uk/international/elearning/limmd/>) and co-organised the successful Britain in a European Context workshop (see. ESDS Internationals Teaching Tools website, URL <http://www.esds.ac.uk/International/elearning/teaching-tools/>). The CCSR routinely liaises with the Census Dissemination Unit (<http://cdu.mimas.ac.uk/>) and we encourage the use of Census data. Andrew Russell will liaise with the Political Studies Association's teaching and learning committee.

The University of Manchester is part of the NW Doctoral Training Centre, with social statistics as one Pathway and with close collaboration of other social science partners. The NW Doctoral Training Centre is liaising with Methods@Manchester to create Methods@NW which supports the dissemination of methodological and technical best-practice. The M@NW website has used video successfully to promote sophisticated methods and innovation. Videos also appear on YouTube and we will make links with networking sites. The email lists of Methods@NW can be used to advertise the RDI project and help to create a dedicated QUG network. Prof. Chandola is Deputy Director of Methods@Manchester at present.

Justification of Resources

Olsen and Carter will jointly consult with lecturers and gathering their teaching materials that use quantitative methods, wording toward extending the materials to a wider range of teaching methods, some with student involvement. They will also ensure that an online platform is created for sharing teaching guidance and materials, in liaison with the ESRC Quantitative Methods initiative; conduct peer review of lecturers; subcontract selective video recording of good practice; attend Advisory Group meetings; provide advisory services for staff in face-to-face appointments; arrange drop-in clinics for students (some with the use of Graduate Teaching Assistants); and train lecturers and teachers through both face-to-face and web-based media. ...

Evaluation

The evaluation involves both qualitative (focus group and interview) and quantitative data. A key quantitative statistic is whether the proportion of students using quantitative methods in their final year dissertation increases after the RDI innovations.

Schedule of Work

Year 1	Year 2	Year 3
Curriculum widening including pedagogical options	Help widen the curriculum use of QM and data	Evaluate
Begin evaluation	Plan, conduct and upload videos	Continue advice
Give dissertation advice and general advice	Conduct the evaluation	Widen the pedagogy options for each successful curriculum component
Plan and deliver workshops	Continue advice	Upload to web & ReStore
Plan all advisory services	Market the project, develop Webinars, start uploads to Web	Write up project report
Undertake peer review of selected teachers	Hold workshops, do blogging	Market the findings, hold Webinars, stalls
		Write up evaluation