Enriching Social Science with Quantitative and Survey Data Using Flipping

Wendy Olsen and teams at the University of Manchester
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www.ccsr.ac.uk
www.socialsciences.manchester.ac.uk/essted

Cathie Marsh Centre for Census and Survey Research
Points to Be Covered

1. A curriculum innovation: EMBEDDING QM
   - And Quantitative Data in Curriculum

2. My own teaching innovation (FLIPPING)
   - Flipping by LECTORIALS in Economics
   - Comments and grades
   - UEQ and NSS

3. Concluding suggestions
   - Specifying learning outcomes
1. Our curriculum innovation

- A Researcher Development Initiative of ESRC

- CURRICULUM INNOVATION COMPONENT:
  - Ten course units
  - Embedding and enrichment, not substitution
  - Teamwork
  - Now + Q-STEP degrees “with quantitative methods”
  - Internships and reflective assessment
People (Sociology, Politics, Social Statistics)

- Mark Brown (Principal Investigator / senior teaching fellow)
- Jacqui Carter MIMAS and ESDS
- Jo Wathan ESDS and Census
- Steph Thomson (Research Associate)
- Ian Plewis AQMEN and RSS
- Tarani Chandola, Kingsley Purdam, Brian Heaphy, Andrew Russell
- Jen Buckley, Stefanie Doebler
Working Units

- Cathie Marsh Centre / CMIST Institute
- Five Disciplines
- Q-Step Centre
Ten Course Units

NEW COURSES/METHODS
Data and the Media (University College: Ian Plewis et al)

The Survey Method in Social Research (Mark Brown)

Engaging Social Research (BA in Social Sciences)

PARTNER COURSES: EMBEDDING QUANTS MODULES
SOCY10471 Sociology of Personal Life (Sue Heath)

SOCY20241 Sociology of Spiritual Life (Tej Purewal)

SOCY30461 Power and Protest (Gemma Edwards)

SOCY20962 Racism & Ethnicity in the UK (James Rhodes)

POLI20801 The Politics of Policy Making (Francesca Gains)

(POLI10200) Introduction to Comparative Politics (Nick Turnbull)
Methods of Embedding/Using

Building bridges between methods

This builds on scaffolding ideas

Students practice, practice... ...tacit learning

Active learning

Building up a number sense

Procepts = Process + Concept = Result  (See Briefing Paper 1 on Scaffolding

At ESSTED website)
<table>
<thead>
<tr>
<th>Lives alone or not in household (HH)</th>
<th>Lives alone</th>
<th>Others in HH</th>
<th>Total</th>
<th>Count</th>
<th>% within Lives alone or not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely dissatisfied</td>
<td>714</td>
<td>243</td>
<td>957</td>
<td>2.10%</td>
<td>4.00%</td>
</tr>
<tr>
<td>Mostly dissatisfied</td>
<td>1322</td>
<td>295</td>
<td>1617</td>
<td>3.90%</td>
<td>4.90%</td>
</tr>
<tr>
<td>Somewhat dissatisfied</td>
<td>2252</td>
<td>487</td>
<td>2739</td>
<td>6.60%</td>
<td>8.10%</td>
</tr>
<tr>
<td>Neither satisfied or dissatisfied</td>
<td>3136</td>
<td>601</td>
<td>3737</td>
<td>9.20%</td>
<td>10.00%</td>
</tr>
<tr>
<td>Somewhat satisfied</td>
<td>5845</td>
<td>1003</td>
<td>6848</td>
<td>17.20%</td>
<td>16.60%</td>
</tr>
<tr>
<td>Mostly satisfied</td>
<td>15323</td>
<td>2287</td>
<td>17610</td>
<td>45.10%</td>
<td>37.90%</td>
</tr>
<tr>
<td>Completely satisfied</td>
<td>4673</td>
<td>889</td>
<td>5562</td>
<td>13.80%</td>
<td>14.70%</td>
</tr>
</tbody>
</table>

Total Count: 33960, 6028, 39988

% within Lives alone or not: 100.00% / 100.00% / 100.00%

Coverage: United Kingdom. Weighted as a nationally representative sample.
For more information, see Persistent Identifier: http://dx.doi.org/10.5255/UKDA-SN-6614-3 or URL http://www.esds.ac.uk/findingData/snDescription.asp?sn=6614
The citation for these data is: University of Essex. Institute for Social and Economic Research and National Centre for Social Research, Understanding Society: Wave 1, 2009-2010, Data Archive [distributor], February 2012. SN: 6614.
http://dx.doi.org/10.5255/UKDA-SN-6614-3
Example – Use Excel. Make Tutorial Exercise. Simplify!

Data from Understanding Society on Solo Living and Life Satisfaction 2010
Example of a Bar Chart, Year 2

Chart LMF1.6.F: Proportion of women among staff with managerial responsibilities, 2007

1) March 2009 for the United States. 2) and 3) see notes (4) and (5) for Chart LMF1.6.A
Example of a Complex Figure

(See Briefing Paper 2 on Social Data for Dissertations
At ESSTED website)
Sexual Identity (Citizenship Survey 2007)

Acknowledgement: Figure reproduced from Peter Aspinall (2009) 'Estimating the size and composition of the lesbian, gay, and bisexual population in Britain’ Equality and Human Rights Commission Research report 37
http://www.equalityhumanrights.com/uploaded_files/research/research__37__estimatinglgbpop.pdf
To make open-access online resources, one needs careful tracking of the URL and the Harvard reference of the source.

The authorship of the slide can get lost.

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Feedback

1. Student usage of various methods such as histograms, bar charts, mean/median and t-test were assessed, and many students were willing to use these methods, and had some experience--They perhaps recall their GCSEs

2. Staff in Sociology/Politics were surveyed with the same questionnaire, and fewer of them had experience with using these simple methods.

3. Most staff wanted to use the methods.
Student Confidence is Erratic

So

Practice
Practice
Practice

Even in discursive discipline areas

And also where technical skill is needed.
Example 3: Line Chart

A man's job is to earn money; a woman's job is to look after the home and family?

Year 1 - Without Confidence Intervals

Year 2 - With Margin of Error

Year 3 - ask students to do the C.I.s

Agree
Neither
Disagree
2. My own teaching innovation (flipping)

Active Learning:
Passive Learning is Passé

+ Problem of large class of 220
Part of solution is to reduce size → 190 → 130 people
Flipping for you

Old Method
- Lecture
- SPSS Practicals
- One Tutorial
- Exam 90%
- 2 Assignments 10%

New Method
- Blackboard VLE
- Lecture seating groups of 4
- Activities in Lectorials
- Pod casts MP3, MP4
- Used the Visualiser
- Exam 80%
- Learning Journal 10%
- 2 Assts 10%
Pedagogy Principles

- **Flip** the lecture
  - TELL THEM IT IS A LECTORIAL
  - MANAGE THE STUDENTS’ EXPECTATIONS

- Use CAMTASIA or YOUTUBE VIDEOS?
- Use podcasts or MP3 or narratives on PPTs?

- Make learning outcomes more explicit for each task
- Even have learning outcomes for each *activity*
- Build-up of activities
- Reiterate key points of theory, and of empirics/interpretation

*Also add an element of reflective journal writing.*
Overview of a Flipped Lecture

- Students prepare 2 hours
- 5 min Aims (and Recap)
- 20 minutes Activity
- 10 min Discussion and Interpretation*
- 5 min Data Interpretation
- 5 min Summing-Up*
- 5 min Q&A
Results over two years

- Old average mark 62
- New average mark 72

Overall grade distributions:

**2010/2011** Course work 69%  
Exam average grade 60%.  
Overall average grade 62%.

**2011/2012**, Coursework 57%  
Exam average grade 75%  
**Overall average grade 70% overall.**  
60% of students reached 70% overall.  
**Just 5 fails out of 190 students.**
Results - feedback

- **Old approach:** students not very satisfied,
- Low attendance

- **New approach:** students not very satisfied,
- Low attendance, but the students like having lectures captured on video

- **ADVANTAGES:**
  - Stronger peer support for learning
  - More active learning
Student Moves Around on Scaffolding

- Critical Reader of Data
- Maker of Tables, Graphs
- User of Microdata
- Rethinks, questions the usual interpretation
Be very explicit about learning outcomes

- For higher **Unit Evaluation Questionnaire (UEQ)** results we are now being very explicit and clear in each Lecture whether it is a Lecture or a Lectorial.

- ‘manage expectations’ well.
- This will feed into NSS later on.
Online Support for Flipping
And Using More QD, QM

www.socialsciences.manchester.ac.uk/essted
Youtube Carries Our Videos
A Series of Workshops

Embedding Quantitative Data in Sociology

Politics Classroom with Flipping and Student Opinion Poll of Students

Examples
From classrooms in the discipline of Sociology

NESSTAR Demo and how to use More Data
Conclusions

The lessons learnt include:

- Don’t innovate too much too quickly
- Involve all your teaching-team members
- Be explicit
- Support active learning

Recognition is needed for teachers who make an effort (promotion) – this is appreciated and supported in UoM

Thank you for listening