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

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
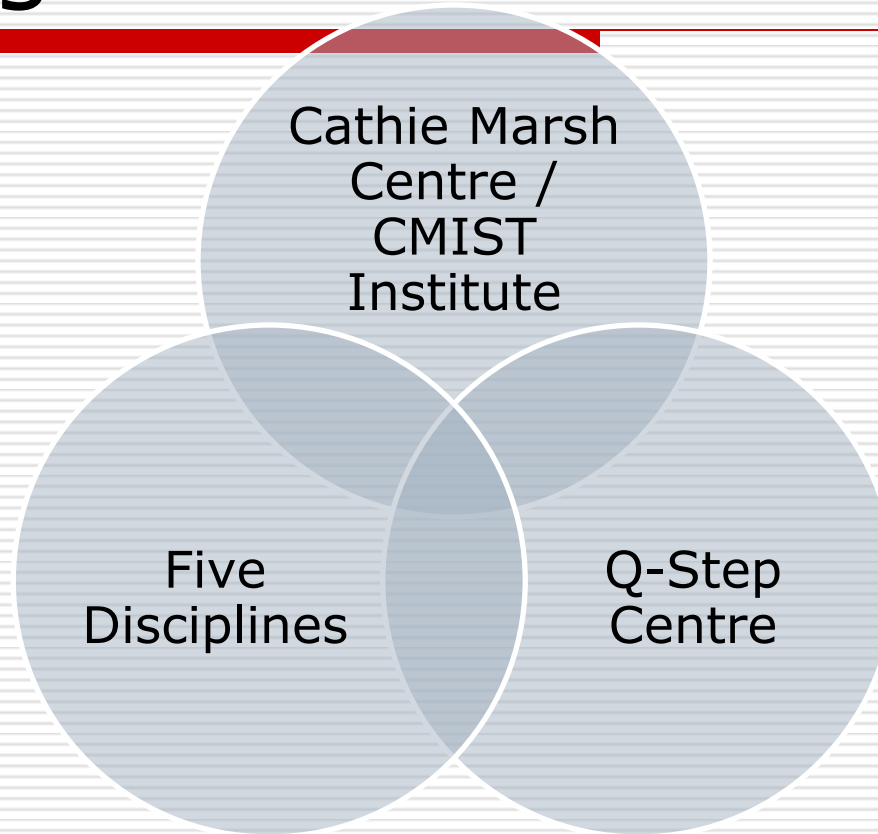
Ten Course Units

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

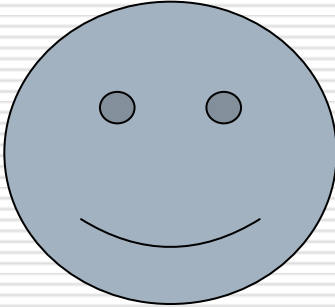(See Briefing Paper 1 on Scaffolding

At ESSTED website)

Example, Crosstabs, Year 1

Too messy!
It got collapsed
and simplified!

Excellent
Labelling
(URL! Dates!
Data source!

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]
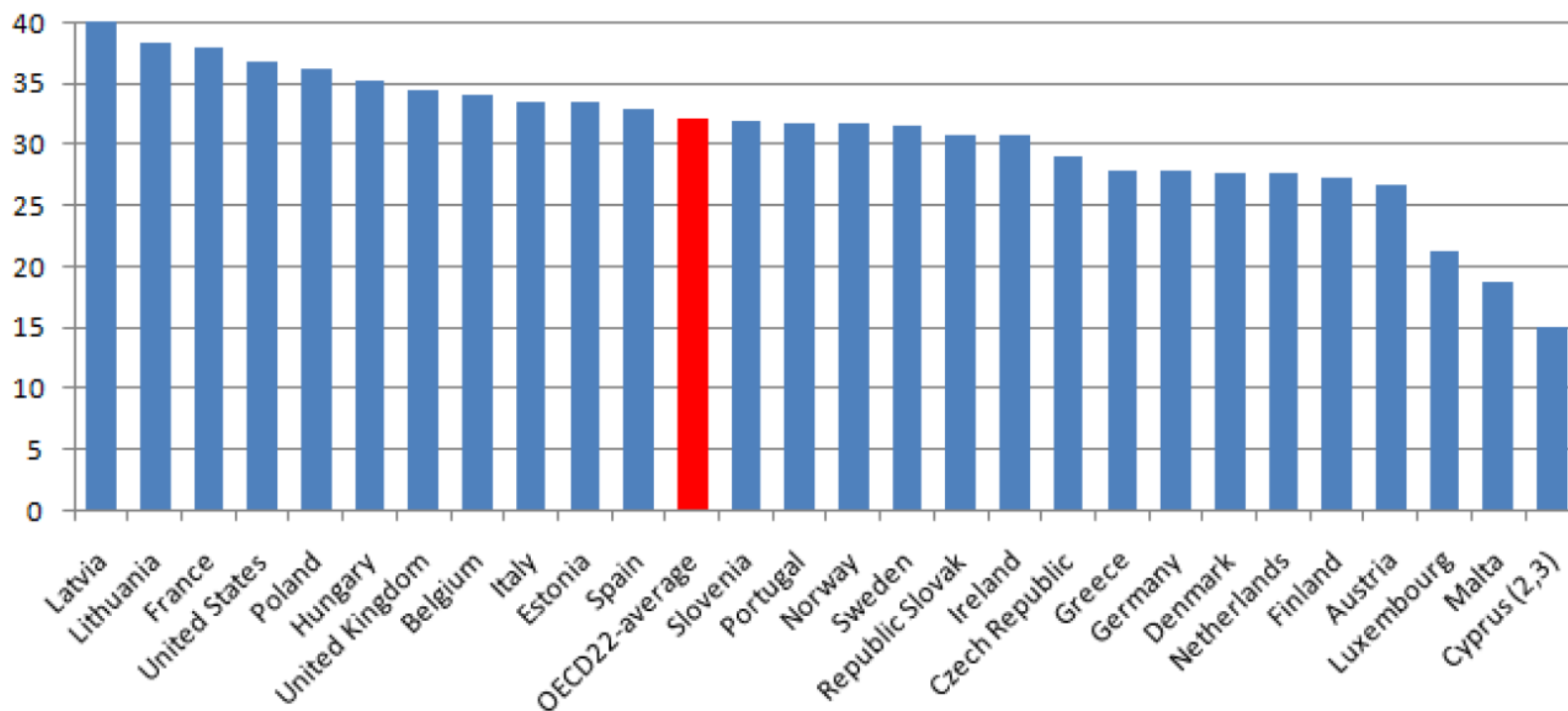
1) March 2009 for the United States. 2) and 3) see notes (4) and (5) for Chart LMF1.6.A
Source: ELFS, 2007; and Current Population Survey, March 2009, for the United States.

Example of a Complex Figure

(See Briefing Paper 2 on Social Data for Dissertations

At ESSTED website)

Sexual Identity (Citizenship Survey 2007)

Figure 9 Percentage of respondents with different levels of qualifications by sexual identity category

% of respondents with different levels of qualifications or none

Legend:
- No qualifications
- Foreign and other qualifications
- GCSE grades D-E or equivalent
- GCSE grades A-C or equivalent
- A level or equivalent
- Higher Education below degree level
- Degree or equivalent

Categories: Heterosexual or straight, Gay or lesbian, Bisexual, Other, or would you prefer not to say?
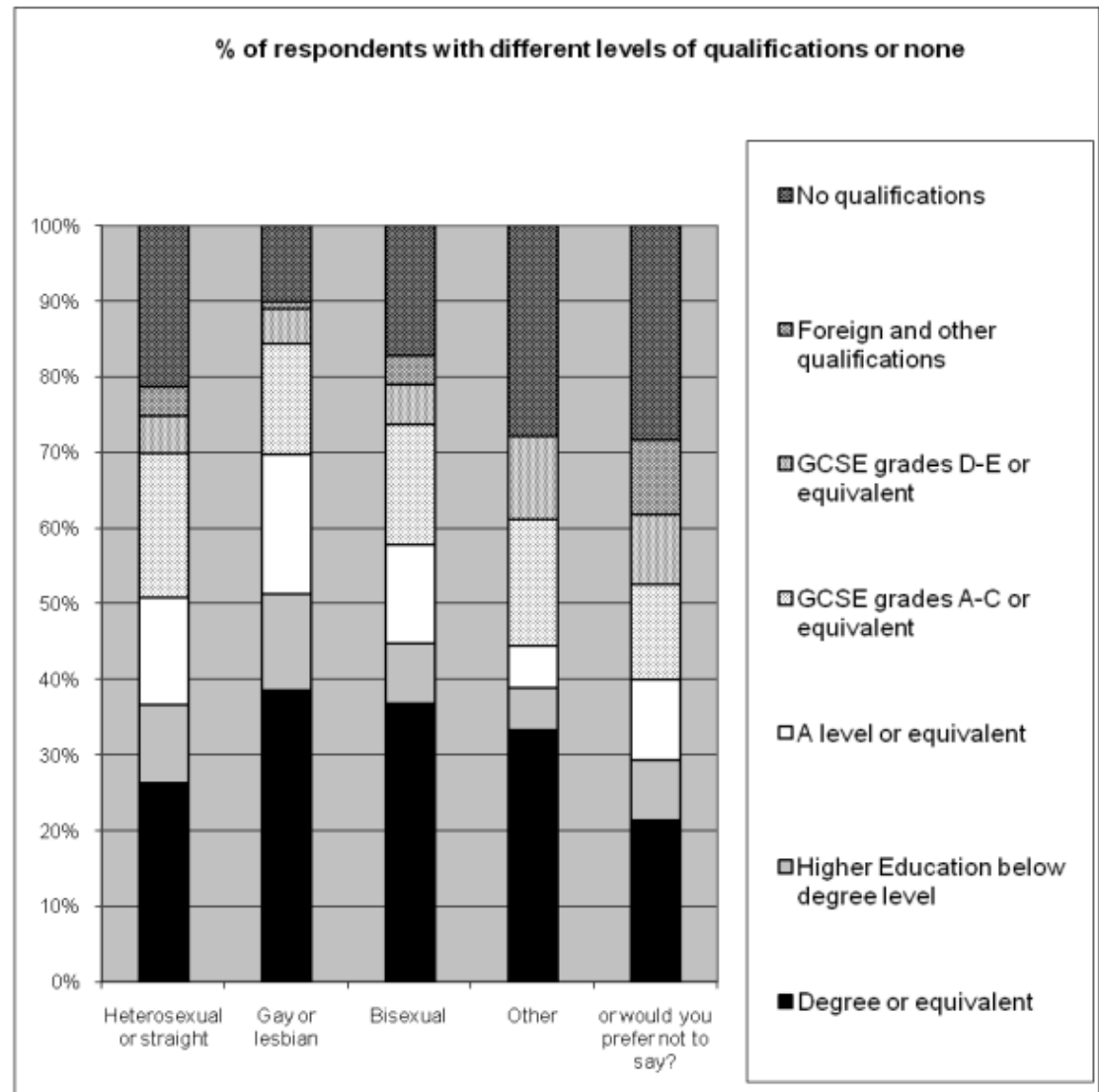
Sexual Identity - NOTICE THE REFERENCES

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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Figure 9 Percentage of respondents with different levels of qualifications by sexual identity category

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X-axis categories: Heterosexual or straight, Gay or lesbian, Bisexual, Other, or would you prefer not to say?
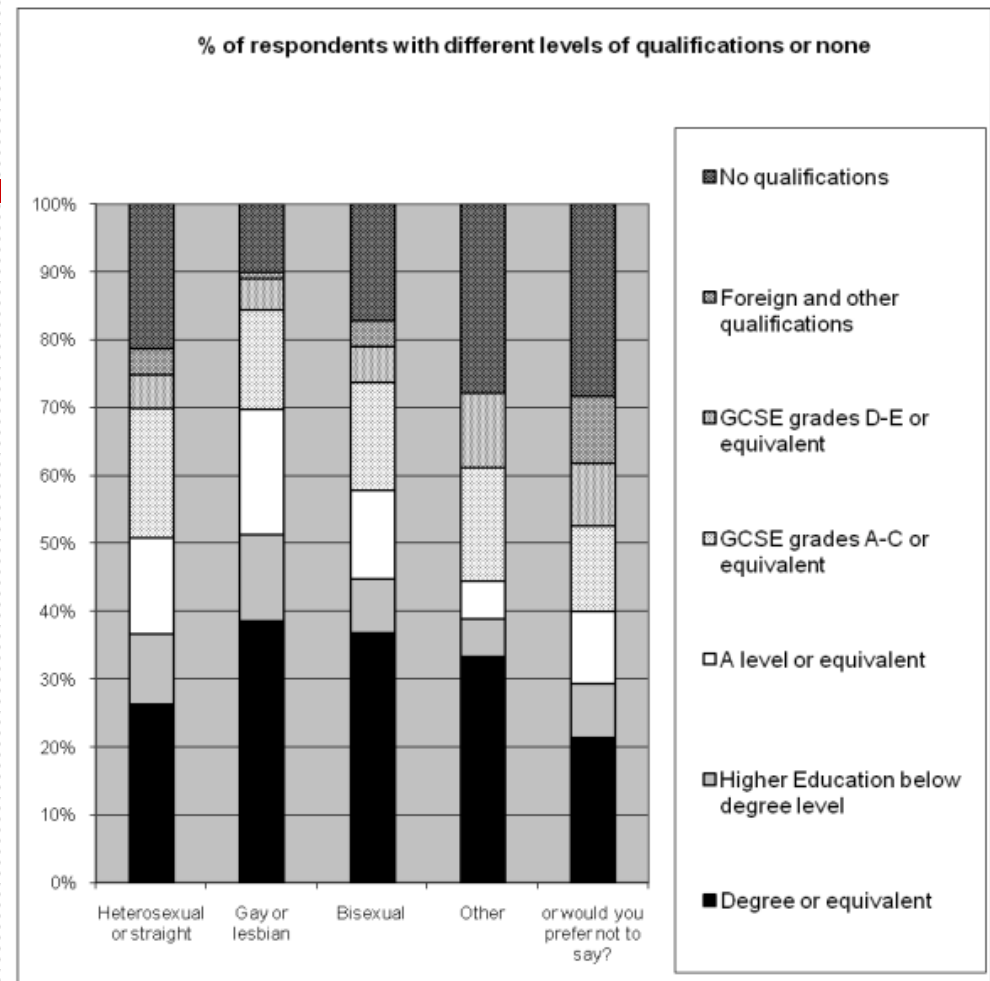
Feedback

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.

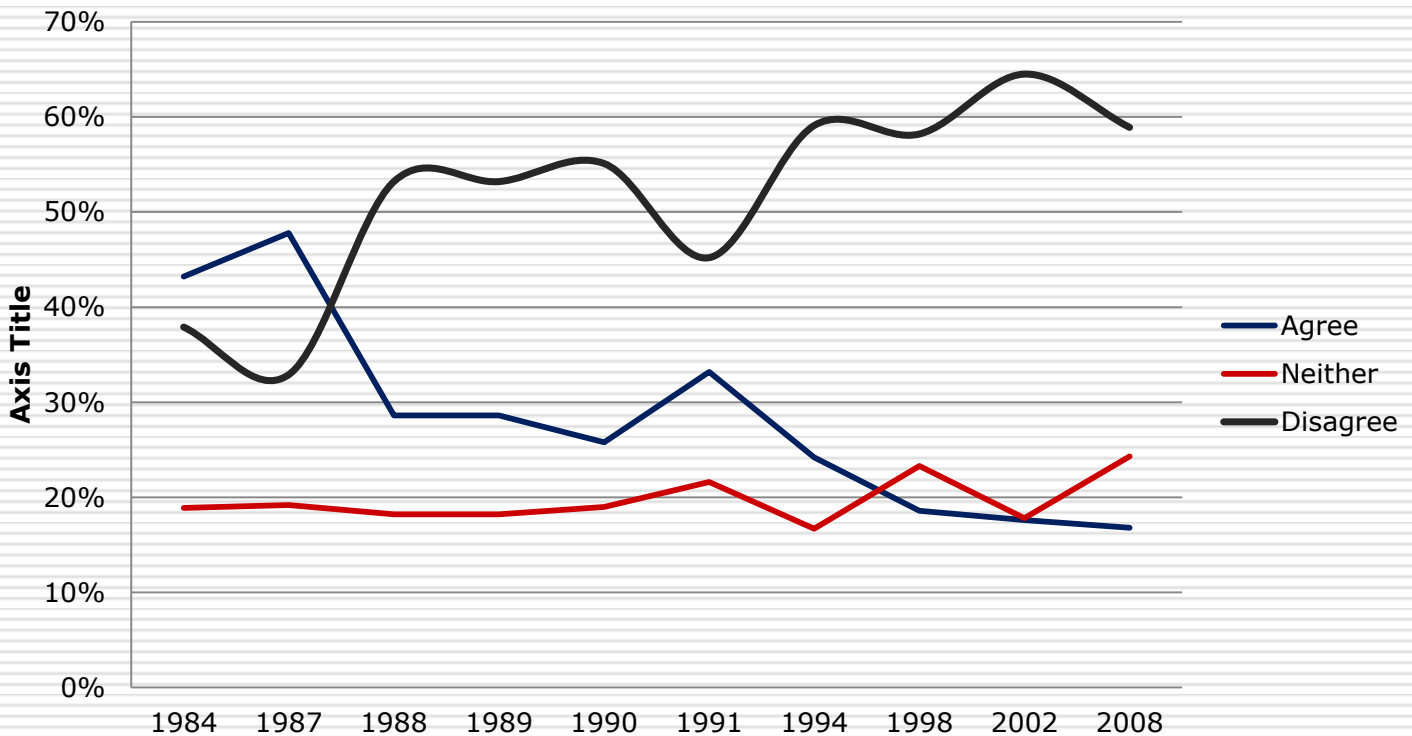# Example 3: Line Chart

Year 1-
Without
Confidence
Intervals

Year 2-
With
Margin of
Error

Year 3 –
ask
students to
do the
C.I.s

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

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.
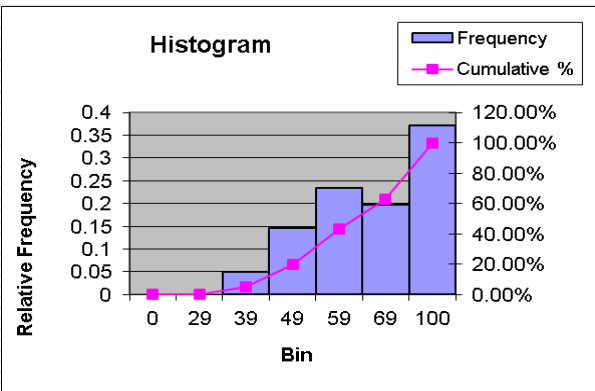
Overview of a Flipped Lecture

☐ 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*
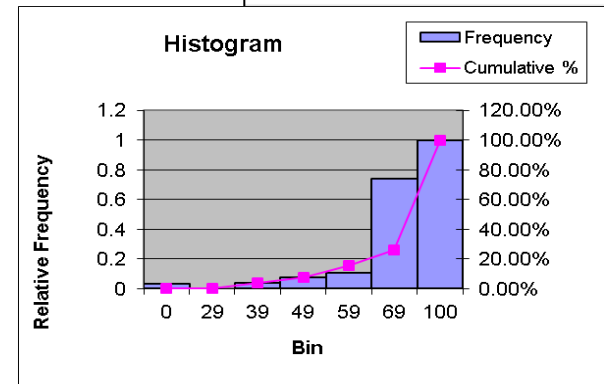
☐ 5 min Q&A

Results over two years

☐ Old average mark 62   New average mark 72

Overall grade distributions:

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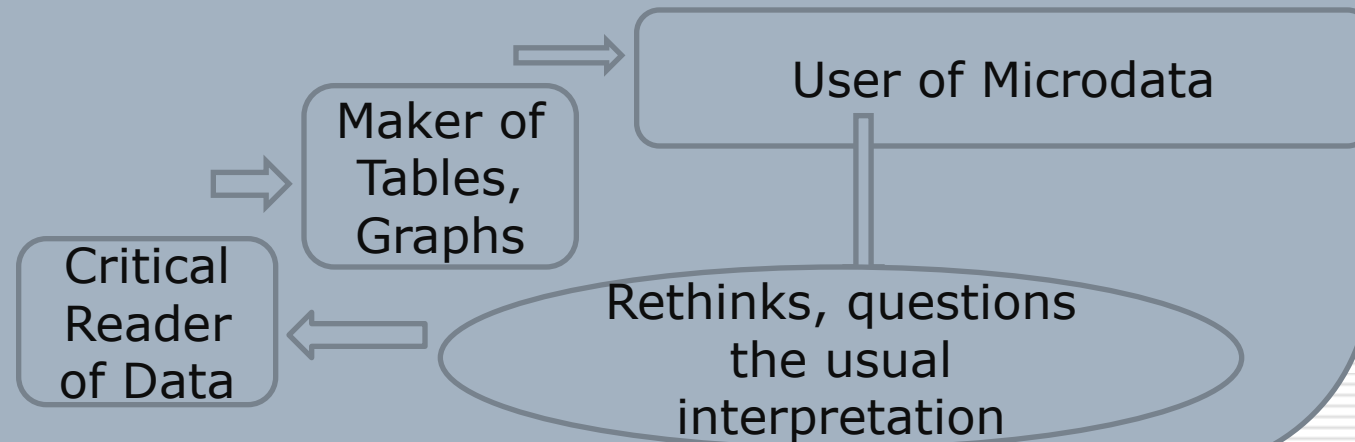Exam average grade 60%.
Overall average grade 62%.

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

User of Microdata

Maker of
Tables,
Graphs

Critical
Reader
of Data

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.
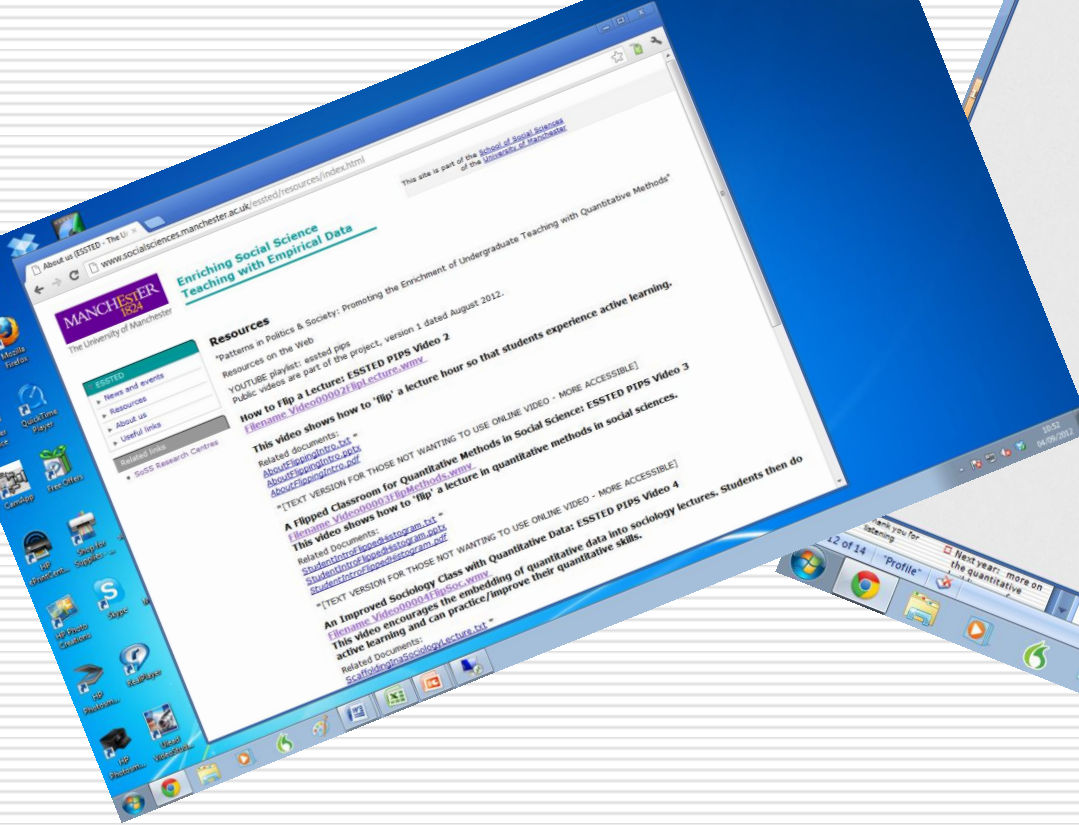
☐ This will feed into NSS later on.

Online Support for Flipping And Using More QD, QM

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ECONOMIC
& SOCIAL
RESEARCH
COUNCIL

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