

# Data on educational qualification in national and cross-national research

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*Cross-Nationally Comparative Social Survey Research*  
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## Structure of this Talk

1. Introduction
2. Social Survey Datasets
3. Analysing Social Survey Data
4. Issues Associated with Measures of Educational Qualifications
  - Example from England & Wales
  - Example of Harmonisation
5. Conclusion

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## Measuring Educational Qualifications

“the question of how to measure education and qualifications – or indeed what ‘measure’ means – raises interesting issues...Since there is no agreed standard way of categorising educational qualifications”

(Prandy, Unt & Lambert 2004)

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## Educational Qualifications:

- Educational qualifications are a key social science measure included in an extremely wide variety of substantive analyses

- Qualifications as an explanatory (X) variable:

*Qualification level is frequently used in statistical analyses as a key explanatory variable (usually with a number of other explanatory variables)*

*This is usual in areas such as sociology, social policy and economics*

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## Educational Qualifications:

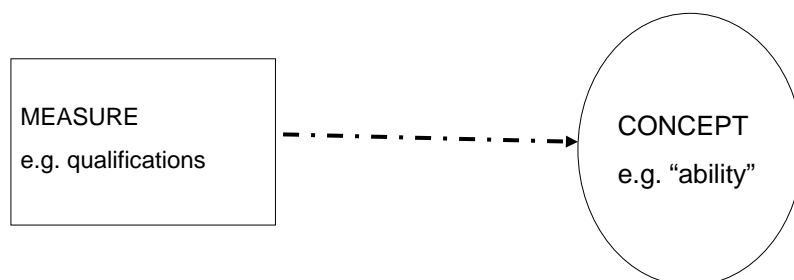
- Educational qualifications as an outcome (Y) variable:

*In more specialist studies an educational measure is itself of interest as an outcome (for example gaining a specific qualification or level of attainment)*

*This is common in educational studies and within the sociology of education*

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## Concepts and Measures



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## Survey Datasets: Educational

- **Specialist comparative educational datasets**
  - (most notably PISA – Programme for International Student Assessment)
- **National datasets**
  - Specifically education oriented
    - Norwegian Youth Survey; Scottish Young People's Survey - Hammer & Furlong 1996)
  - More general datasets on children and young people
    - Birth cohort datasets - Stockholm birth cohort of 1953 and British National Child Development Study 1958
- **Administrative**
  - Common in the Nordic countries
    - Recent example - English National Pupils Database (NPD)

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## Survey Datasets: General Surveys

- **Census Data**
  - Related products e.g. Scottish Longitudinal Study
- **Labour Market Surveys**
  - EU requirement to collect quarterly data  
(e.g. UK Labour Force Survey)

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## Survey Datasets: General Surveys

- General Household Surveys
  - Usually cross-sectional
  - UK General Household Survey (since 1971)
  - Increasing co-ordination (EU Statistics on Income and Living Conditions - EU-SILC)
  
- Household Panel Studies (repeated contacts)
  - A requirement within the EU
    - British Household Panel
    - German Socio-Economic Panel
  
  - but also other nations have datasets
    - USA Panel Study of Income Dynamics
    - Canada Survey of Labour and Income Dynamics
    - Australia Household Income and Labour Dynamics
  
- Other survey sources
  - e.g. Welsh Health Survey, 2007

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## An example

Some Examples of the 41 Categories  
 Highest Qualification (General Household Survey 2003)

highest qualification	Freq.
1. higher degree	669
2. nvq level 5	20
3. first degree	1,416
4. other degree	278
5. nvq level 4	71
6. diploma in higher education	282
7. hnc/hnd btec higher etc	551
9. teaching - secondary education	55
10. teaching - primary education	69
12. nursing etc	267
14. other higher education below degree	151
21. scotish 6th year certificate/csyes	24
28. city & guilds craft/part 2	306
29. btec/scotvec first or gen diploma e	42
30. o level, gcse grade a*-c or equival	2,460
31. nvq level 1 or equivalent	102
33. gse below grade 1, gcse below grade	693
41. dont know	79
Total	24,489

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## Analysing Social Surveys

- Grémy (1989) identifies three distinct categories of problems associated with undertaking cross-national work
  - Epistemological
  - Institutional
  - Technical
- These conceptual categories sensitised me to some of the problems of undertaking national and cross-national survey research

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## Analysing Social Surveys

- Epistemological
  - *Contextual understanding of the data collected – (e.g. understanding the school system)*
- Institutional
  - *Access to the data & access to auxiliary data (e.g. school level data)*

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# Analysing Social Surveys

- Technical
  - Design
  - Sampling (& coverage)
  - Documentation (code books)
  
  - Response Rates
  - Attrition (and non-response)
  
  - Interviewer Instructions
  - Questions (wording / social meaning)
  - Question Routing

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## Obvious Issues with Qualification Measures

### Comparisons across time

- Changes in titles and levels
  - organisation and content of the curriculum
  - structure of educational systems
- Respondents from different age cohorts (e.g. younger and older people)
- Changes in distributions over time (e.g. the explosion in university level education)

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## Obvious Issues with Qualification Measures

### Comparisons across geography

- National education systems
  - England and Eire similar but with different qualifications
  - UK and Germany quite different
- Within countries qualifications can be different
  - England and Wales, and Scotland
  - Swiss Cantons

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## School Level Qualifications in England and Wales

- General Certificate of Education GCE
- England and Wales (Not Scotland)
- Introduced in the 1950s
  - Ordinary Level (O'Level) (age 16)
  - Advanced Level (A'Level) (age 18)
- Some other related qualifications
  - AO Level - between O'Level and A'Level
  - S'Level, Scholarship level, or Special paper (more advanced)

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## School Level Qualifications in England and Wales

### Changes...

- Mid 1960s lower but overlapping Certificate of Secondary Education (CSE) introduced alongside O'Levels
- 1988 O'Level and CSE replaced by General Certificate of Secondary Education (GCSE)
- 1987 Advanced Supplementary Levels (AS Level), worth ½ and A'Level (age 17)
- 2000 A'Level split into two parts,
  - AS Advanced Subsidiary (age 17)
  - A2 examinations (age 18)
  - Satisfactory achievement in AS and A2 modules results in the award of an A' Level qualification

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## School Level Qualifications in England and Wales

### Therefore

- Analysing English and Welsh social survey data with measures of school qualifications obtained over the last 50 years can be fraught
- Problem is amplified in cross-national
- In-depth knowledge of the education system is required
- Beware this is a simple example of school-level qualifications
  - Even more complicated with post-school
  - Training & vocational qualifications

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# Harmonisation is Possible

## CASMIN Brynin Example of BHPS & GSOEP

Table 2: The CASMIN Scheme Applied to the BHPS and GSOEP with Mean Years of Education (YoE)

CASMIN Codes	BHPS scheme	BHPS (YoE)	GSOEP scheme	GSOEP (YoE)*
1a: incomplete	Up to 6 years schooling	10.05	No qualification	≤ 9
1b: elementary	No qualifications + 7-11 YoE	11.15	Hauptschule certificate	9
1c: basic vocational	NVQ 1, no GCSEs	11.47	Above + basic apprentice training	12
2a: intermediate vocational (+ intermediate general)	NVQ 2 with or without GCSEs	11.96	Realschule certificate + basic apprentice training	13
2b: intermediate general	At least GCSE grade A-C	11.69	Realschule certificate	19
2c: general: general maturity certificate	NVQ 3 with or without A-level	13.16	Abitur	13
2c: vocational: voc. maturity (+ general maturity)	At least 1 A-level	13.05	Abitur + full apprenticeship	16
3a: lower tertiary	NVQ 4/teaching	14.71	Technical college degree	17
3b: higher tertiary	Degree	17.65	University degree	19

Abbreviations: GCSE = General Certificate of Secondary Education;  
NVQ = National Vocational Qualifications

\* Not actual years of education but imputed from qualification level

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## Can e-Social science help us?

- Data discipline
- Data matching / merging
- Data access (confidential records)  
(future changes in access agreements)

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## Conclusions

- e-Social Science resources can help improve survey research
  - assist with access to disparate resources
  - help with data management (especially key variables)
  - help with data standard and best practice
  - help with replicability (and improve incremental science)

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## References

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