Relations between theory and data in research in higher education

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Structure

- Introductions;
- Theory in higher education research;
- Caveats;
- My position on the relation between theory and data;
- Method;
- Outcomes;
- Provocative conclusions;
- Ways forward.

Introductions

- Interest in theory-method relations, comes from previous work on structure and agency in teaching-learning interactions in higher education (Ashwin 2008, 2009);
- I am interested in how empirical research can be used to develop theory;
- In this paper interested in how higher education researchers set up relations between theory and method in journal articles.

Theory in Higher Education (HE) research

There have been criticisms of the **extent** of theory use (Tight 2004, 2007), and the **type** of theory used (Malcolm and Zukas 2001; Haggis 2003, 2009), in HE research.

I am interested in exploring the **way** that the relations between theory and data are constituted in empirical HE research.

Caveats

- I am examining how research is accounted for in HE journal articles rather than having access to the research process;
- My argument is about collective ways of making knowledge claims rather than about the 'failings' of individual researchers;
- My argument is focused on the development of theory through empirical research – clearly HE research can have other valuable aims;
- My argument is in the process of being developed and is intended to be provocative.

Ontology and Epistemology

- Ontology – complex social world characterised by uncertainty and emergence (Sayer 1992; 2000)
- Epistemology – no unmediated access to the world, can only access it through simplifying theories or concepts (Law 2004);
- All theories involve the simplification of complex reality and different theories simplify in different ways (Hammersley 1996, Mol and Law 2002);
- Theories of everything not possible, rather can shift between different ways of seeing the world (Strathern 2002)

(see Chapter 2 in Ashwin 2009 for further discussion)

Theory and Data

Theory and Data have multiple meanings

In this paper:

- Theory: way of seeing your research object
- Data: simplified fragments which are generated in relation to the social world

Position on the relation between theory and data 1

- Bernstein's (2000) notion of languages of description (see also Dowling 1998; Brown 2006):
  - Internal language of description: language of conceptual models;
  - External language of description: descriptions provided by empirical data.
- Both internal and external languages of description need to be explicit and related to each other in a non-circular manner.
- This is important if empirical data is to do more than simply exemplify theory.

Position on the relation between theory and data 2

- Using languages of description requires:
  - Explicit conceptualisation of the research object in terms of the internal language of description - this involves adopting a position in relation to the research object;
  - An approach to data analysis that is not simply the identification of the theory within the data – thus the data needs to have space to knock against the theory;
  - A recognition that both the conceptualisation of the research object and the analysed data are abstractions and do not provide unmediated access to the 'real world'.

Method 1

- Examined 2008 journal articles in:
  - Higher Education (non-US)
  - Higher Education Research and Evaluation(non-US)
  - Journal of Higher Education (US)
  - Research in Higher Education (US)
  - Review of Higher Education (US)
  - Studies in Higher Education(non-US)
  - Teaching in Higher Education(non-US)
- Selected those articles dealing with empirical data (220 out of 292)

Method 2

Types of research:

	Quant	Qual	Mixed	Totals
Non-US	56	72	18	146
US	54	19	1	74
Totals	110	91	19	**220**

- Examined use of theory in :
  - Conceptualisation of research object;
  - Approach to data analysis;
  - Discussion of research outcomes

Relation ‘theory’ and research object

- The majority (77%) of articles had no explicit position from which to conceptualise the research object;
- In the following slides these studies are still included but seen as using ‘implicit’ or ‘multiple’ theories;
- ‘Implicit’ theories are where the previous research on the research object is discussed without the adoption of a position – more common in the non-US articles;
- ‘Multiple’ theories are where a number of incompatible theories are brought together without the adoption of a position – more common in the US articles.

Relation ‘theory’ and data analysis

Of the 220 articles, in:

- 12% no account of data analysis was given (all non-US);
- 9% the account of data analysis was unclear (e.g. ‘thematic analysis’);
- 53% the data analysis was based on conceptualisation of research object;
- 27% the data analysis was separate from conceptualisation of research object (more common in US research)

Relation ‘theory’ and research outcomes

Of the 220 articles:

- 29% had no discussion of outcomes in terms of the initial ‘theory’;
- 53% used the initial ‘theory’ to explore meaning of the research outcomes;
- 18% used the research outcomes to support/develop/challenge the ‘theory’ (more common in US research);

Overall paths

- *Closed circles* (51%)– the conceptualisation of the research object is used to analyse and explain the data;
- *Incomplete circles (*16%) – the conceptualisation of the research object becomes 'real';
- *The analysis takes over* (16%)– the analysed data become 'real';
- *Separate conceptualisation of research object and data analysis* (14%)– the analysed data has a chance to develop theory;
- *Theory used to explain data* (3%)– no initial conceptualisation of research object.

Provocative Conclusions

This analysis suggests a lack of reflexivity in the HE research process, as researchers fail to make explicit their positions in relation to their research objects and how this relates to their use of empirical data;

This can be argued to lead to a situation in which:

- The majority of HE research involves the exemplification rather than the development of 'theory';
- Empirical data has little chance to develop the 'initial' conceptualisation of the research object;
- Researchers appear to either ignore alternative conceptualisations of their research objects or they are tempted to develop 'theories of everything'.

Ways forward

- The separation of conceptualisation of research object and the analysis of data – theory and methodology;
  - Multiple analyses of data;
  - Secondary data analysis;
- Examination of whether this is an issue with the way research is reported rather than conducted.

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