Generating theory from your research

Invited workshop presentation to the SRHE newer researchers’ network
SRHE Offices, April 23rd 2010

Linda Evans,
University of Leeds
- What do we mean by ‘theory’?
- Why bother with theory?
- Examples of my own theoretical work
- Features of theory and theory generation
- Generating theory or theoretical perspectives
• Disseminating what has worked for me

• Tiny snippets of advice

• The approaches that have worked for me

• No ‘isms’

• No grounded theory

• My seeking explanations for why or how things occur
A visit to the supermarket

- Think of the last time you visited a supermarket.
- Identify the stages involved in this.
- An example:
  - drove to supermarket
  - found parking space
  - parked car
  - locked car
  - walked to store
  - entered store
  - took out shopping list
  - identified first item on shopping list
  - located item in store
  ...etc.
What is theory?
Some common ‘misconceptions’

- anything that isn’t practice
- book learning
- speculation
- ideas
- hunches
- hypotheses

... the ‘anything goes’ interpretation of theory
What is a theory?

‘Debate about theory is rarely accompanied by any discussion about its meaning. Any superficial examination (or, indeed, detailed examination) of educational literature discloses little consensus about the meaning of theory…There is no bond between theory and the constellation of meanings it has acquired. The reader or listener, when encountering the word, is forced to guess what is signified by the word through the context in which it is applied.’

What is theory?

‘It is rarely clear what people are against when they dismiss theory. It is important to distinguish between theory, in the sense of the assumptions which lie behind practice but which often go unacknowledged, and theory, in the sense of tightly organised systems of explanation.’

What is theory?

LeCompte and Preissle (p. 118):

‘Theories are statements about how things are connected. Their purpose is to explain why things happen as they do’

‘Many researchers eschew contact with theory altogether; they treat the process of developing a theoretical framework as little more than the collection of a few corroborative empirical studies into what could pass for a literature review and proceed directly to collect data. They leave a concern for theory to “great men”, but they do so at the peril of poor work.’

‘“Theory” would seem to have the following features. It refers to a set of propositions which are stated with sufficient generality yet precision that they explain the “behaviour” of a range of phenomena and predict what would happen in future. An understanding of those propositions includes an understanding of what would refute them – or at least what would count as evidence against their being true. The range of propositions would, in that way, be the result of a lot of argument, experiment and criticism. They would be what have survived the constant attempt to refute them. But they would always be provisional. A theory or set of interconnected and explanatory propositions would be suggestive of hypotheses which need to be tested out. Hence, a theoretical position is always open to further development through reflection, testing against experience and criticism.’

What is theory?

- A universally-applicable explanation for something:
  - for why something occurs
  - for how something occurs

- One single outlier case is enough to overturn a theory

- All theory must be considered propositional knowledge.
Why bother with theory?

‘the academy judges by the theory and scholarship emerging from a particular field and discipline - can’t be helped, that’s the nature of academic discourse and its self-construction. We stand or fall by the weight others attribute to our scholarship.’

Why bother with theory?

‘We do no favors to ourselves, or our students, to steer them away from theory. I saw a hunger for theory in junior scholars in adult education, in the bright and the not-so-bright, in the classes I took, and I see it now, in the ones I teach. Many of us want to use some theory to understand how things work, and we want explanations. We also want to be good at what we do, whether that’s teaching, planning, leading, learning, and scholarship, and so we should attend to matters of improving practice and using theory.’

Why bother with theory?

- ‘The best days, when I’ve just, sort of, walked six inches off the ground ... it’s just realising something ... or discovering something that really does happen.’ (Ivan, physics tutor)

- ‘I think ... that feeling of being ‘on the edge’ of something new, of finding something new...is what satisfies me about the research...I think it’s exciting when...if you’re with a team of two or three people...you’ve almost got some kind of reinforcement that what you’re doing is new, novel... and is going to inform the debate.’ (Maggie, education tutor)
Generating theory: what it involves

‘Our task as qualitative researchers is to use ideas in order to develop interpretations that go beyond the limits of our own data and that go beyond how previous scholars have used those ideas. It is in that synthesis that new interpretations and new ideas emerge. The point is not to follow previous scholarship slavishly but to adapt and transform it in the interpretation of one’s own data.’

'When formal theory seems to offer no helpful answer, the search for theory at a more modest level can be turned into a provocative question: What would be needed by way of theory to help me better organize and present my data and to recognize relevant aspects of my fieldwork experience?'

Generating theory:
some examples

- When formal theory seemed to offer no helpful answer …

- My work on teacher morale, job satisfaction and motivation

- Herzberg’s two factor theory
  - also known as the motivation-hygiene theory

- Conducted research on engineers and accountants in Pittsburgh in the 1960s

- My own findings didn’t correlate with this theory.
Reaching the summit of Everest was satisfying

The service at the hotel is satisfactory

Creating a garden from scratch was satisfying

The work is satisfactory
Herzberg’s motivation-hygiene theory

“In summary, two essential findings were derived from this study. First, the factors involved in producing job satisfaction were separate and distinct from the factors that led to job dissatisfaction. Since separate factors needed to be considered, depending on whether job satisfaction or job dissatisfaction was involved, it followed that these two feelings were not the obverse of each other. Thus, the opposite of job satisfaction would not be job dissatisfaction, but rather no job satisfaction; similarly, the opposite of job dissatisfaction is no job dissatisfaction, not satisfaction with one’s job. The fact that job satisfaction is made up of two unipolar traits is not unique, but it remains a difficult concept to grasp.”

(Herzberg, 1968, pp.75-76)
Herzberg’s motivation-hygiene theory

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<thead>
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Their absence does not create dissatisfaction, but a state of ‘no satisfaction’

These are capable of creating dissatisfaction, but are not satisfiers – not capable of satisfying
Herzberg’s motivation-hygiene theory

Motivation Factors
- achievement
- recognition (for achievement)
- the work itself
- advancement
- responsibility

Hygiene Factors
- salary
- supervision
- interpersonal relations
- policy
- administration
Testing Herzberg’s theory

Research into teachers’ working lives

‘In the first (set of interviews) I simply enquired: What do you like about your job? What plans do you have for the future, and why? In the second, I used these questions, but also asked those who said they liked their jobs to tell me half a dozen things they enjoyed doing and to give their reasons.’
(1989, p.84)
Nias’s testing of Herzberg’s theory

- Consistent with Herzberg’s theory:
  
  She identifies as 'satisfiers' factors which may be considered to be intrinsic to the job, which are concerned with the work itself and with opportunities for personal achievement, recognition and growth.

- Inconsistent with Herzberg’s theory:
  
  ‘However, nearly a quarter of these teachers also derived satisfaction from extrinsic factors. Ten liked the hours and the holidays, two thought they did not have to work very hard, one enjoyed the physical setting provided by his new open-plan building. Twelve … enjoyed the comradeship they found in staffrooms.’ (1989, p.89).
My research

1st set of interviews:

- Teachers were asked to identify those aspects of their work which were sources of satisfaction
- Some responses identified Herzberg’s ‘intrinsic’ factors:
  - watching children progress
  - organising INSET for colleagues
  - meeting children’s learning needs
- Some responses focused on ‘extrinsic’ factors:
  - internal décor of school
  - proximity of school to home
  - long holidays
Why the discrepancy between my findings and Herzberg’s?

- The concept of job satisfaction
- The concept of satisfaction
- The ambiguity of satisfaction
The ‘ambiguity’ of (job) satisfaction

- Satisfying
- Satisfied by
- Fulfilling

- Satisfactory
- Satisfied with
- Perfectly acceptable
Testing the ambiguity issue

My research

2nd set of interviews:

- Teachers were asked to identify those aspects of their work which were sources of dissatisfaction.
- Responses were immediate.
- Responses included only ‘extrinsic’ factors:
  - leadership and management
  - pay
  - parental attitudes
  - interpersonal relations
  - perceived injustices and inequities
  - working conditions
Testing the ambiguity issue

My research

2nd set of interviews:

- Teachers were asked to identify those aspects of their work which were fulfilling.

- Responses identified ‘intrinsic’ factors:
  - watching children progress
  - organising INSET for colleagues
  - meeting children’s learning needs

- No responses focused on ‘extrinsic’ factors.
Testing the ambiguity issue

My research

2nd set of interviews:

- Teachers were asked to identify those aspects of their work which they could not categorise as fulfilling, but which were satisfactory.
- Responses took longer to formulate.
- Responses included Herzberg’s ‘extrinsic’ factors:
  - pay
  - long holidays
  - interpersonal relations
- No responses included reference to ‘intrinsic’ factors.
My interpretation of the ambiguity of job satisfaction

Job comfort
- satisfied with
- satisfactory

Job fulfilment
- satisfied by
- satisfying
My interpretation of job satisfaction: a conceptual model

Job satisfaction

Job comfort  Job fulfilment
Job fulfilment

is a state of mind encompassing all of the feelings determined by the extent of the sense of personal achievement which the individual attributes to his/her performance of those components of his/her job which s/he values

Herzberg’s motivation-hygiene theory

Motivation Factors
- achievement
- recognition (for achievement)
- the work itself
- advancement
- responsibility

Hygiene Factors
- salary
- supervision
- interpersonal relations
- policy
- administration

Their absence does not create dissatisfaction, but a state of ‘no satisfaction’

These are capable of creating dissatisfaction, but are not satisfiers – not capable of satisfying
Conflating Herzberg’s motivation-hygiene factors

Motivation Factors
- achievement
- recognition (for achievement)
- the work itself
- promotion
- responsibility

- Reinforces a sense of achievement
- Contributes to a sense of achievement, as a vehicle for achieving a sense of achievement
- Both reinforces and contributes to a sense of achievement
### Herzberg’s motivation-hygiene theory: conflated categories

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Its absence does not create dissatisfaction, but a state of ‘no satisfaction’

Capable of creating dissatisfaction, but not capable of satisfying
‘The need for achievement is perhaps the most prominent learned need from the standpoint of studying organizational behavior. The challenging nature of a difficult task cues that motive which, in turn, activates achievement-oriented behavior.’

Weaknesses of Herzberg’s theory

- Inadequate data analysis
- Poor categorisation
- Lack of conceptual clarity
- Lack of definitional precision
- Threats to construct validity
- Basis of theory is flawed
- Theory status questionable
### Comparing Herzberg and Evans

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### Evans:

<table>
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<td>A sense of achievement in relation to valued activity perceived as worthwhile</td>
<td>The extent to which one is satisfied <em>with</em>, without being satisfied or fulfilled <em>by</em>, one’s job and work context</td>
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Comparing Herzberg and Evans

- Herzberg sees job satisfaction as consisting of two, unipolar traits.
- Evans interprets job satisfaction as an umbrella term that encompasses two distinct, separate concepts:
  - Job fulfilment
  - Job comfort.
- Evans currently interprets this as an observation, not a theory.
Key components in the process of developing theory

- In-depth analysis of findings
- Comparative analysis
- Seeking generalisability
- Seeking exceptions
- Conceptual clarity and definitional precision
Theoretical models

- These may explain the ‘mechanism’ or ‘working’ of something.

- They may explain processes:
  - processual models

- They may explain conceptualisations:
  - conceptual models

- They may be presented in diagram or pictorial form.
An example of my theoretical models

Professional development

My work comprises:
- My original conceptualisation of professional development:
  - How I define it
  - Its quiddity – what it is
  - What it ‘looks like’
  - How it occurs
My conceptualisation of professional development

My model:
- is a deconstruction of professional development as I currently conceive it;
- presents what I currently consider professional development’s component parts
  - its componential structure
- conveys what I currently consider the ‘essence’ or ‘substance’ of professional development:
  - its quiddity
- is a quidditative model of professional development.
professional development

- behavioural development
  - processual change
  - procedural change
  - productive change
  - competential change

- attitudinal development
  - perceptual change
  - evaluative change
  - motivational change

- intellectual development
  - epistemological change
  - rationalistic change
  - comprehensive change
  - analytical change
My conceptual model of professional development: how did I get there?

- Formulating a stipulative definition of professional development:

My ‘umbrella’ definition:

*Professional development is the process whereby people’s professionalism, or professionality, or professional practice may be considered to be enhanced, with a degree of permanence that exceeds transitoriness.*

This definition requires an understanding of the terms:

- professionalism
- professionality
- professional practice
Explaining the dependent constructs

- I define professional practice as: *all professional- or work- or work context-related physical or mental activity.*

- ‘Professionality’ is a term introduced by Eric Hoyle (1975), who explained the distinction between status-related elements of teachers’ work - ‘those strategies and rhetorics employed by members of an occupation in seeking to improve status, salary and conditions’ - which he categorised as *professionalism*, and those elements of the job that constitute the knowledge, skills and processes that teachers use in their work, and which he categorized as *professionality*.
Professionality

Evans’s definition:

Professionality is: an ideologically-, attitudinally-, intellectually-, and epistemologically-based stance on the part of an individual, in relation to the practice of the profession to which s/he belongs, and which influences her/his professional practice.


Hoyle (2008) ‘the service component of professionalism’

‘Restricted’ and ‘Extended’ Professionality

‘restricted’ professionals
- adopt an intuitive approach to practice
- use skills derived from practical experience
- do not reflect on or analyse their practice
- are unintellectual in outlook and attitudes
- avoid change and are set in their ways

‘extended’ professionals
- adopt a rational approach to practice
- use skills developed from both theory and practice
- are reflective and analytical practitioners
- adopt intellectual approaches to the job
- experiment with and welcome new ideas
‘Restricted’ and ‘Extended’ Professionals
My umbrella definition of professional development: a re-cap

Professional development is the process whereby people’s professionalism, or professional practice may be considered to be enhanced, with a degree of permanence that exceeds transitoriness.
Professionalism is:
- the ‘plural’ of professionality;
- professionality writ large;
- the amalgamation of individuals’ professionalities.

I define professionalism as:

*professionality-influenced practice that is consistent with commonly-held consensual delineations of a specific profession and that both contributes to and reflects perceptions of the profession’s purpose and status and the specific nature, range and levels of service provided by, and expertise prevalent within, the profession, as well as the general ethical code underpinning this practice.*

Professionalism is …

- not meritoriously-laden;

- qualitatively-neutral professional practice that incorporates several specific requisite features;

- something that *is*, rather than as something that *ought* to be.
Key components of professionalism:

- What practitioners do
- How they do it
- What they know and understand
- Where and how they acquire their knowledge and understanding
- What kinds of attitudes they hold
- What codes of behaviour they adhere to
- What purpose(s) they perform
- What quality of service they provide
- The level of consistency incorporated into the above
professional development

behavioural development
- processual change
- procedural change
- productive change
- competential change

attitudinal development
- perceptual change
- evaluative change
- motivational change

intellectual development
- epistemological change
- rationalistic change
- comprehensive change
- analytical change
Key components of professional development: behavioural development

Behavioural development is:

*the process whereby people’s professional behaviour or performance are modified with the result that their professionalism, professionality or professional practice may be considered to be enhanced, with a degree of permanence that exceeds transitoriness.*
Key components of professional development: attitudinal development

Attitudinal development is:

*the process whereby people’s work-related attitudes are modified with the result that their professionalism, professionality or professional practice may be considered to be enhanced, with a degree of permanence that exceeds transitoriness.*
Key components of professional development: intellectual development

Intellectual development is:

the process whereby people’s professional-related knowledge, understanding or reflective or comprehensive capacity or competence are modified with the result that their professionalism, professionality or professional practice may be considered to be enhanced, with a degree of permanence that exceeds transitoriness.
professional development

behavioural development
- processual change
- procedural change
- productive change
- competential change

attitudinal development
- perceptual change
- evaluative change
- motivational change

intellectual development
- epistemological change
- rationalistic change
- comprehensive change
- analytical change
Professional development: 2\textsuperscript{nd} tier components

- \textit{Epistemological change} is change in relation to the bases of what people know or understand and to their knowledge structures.
- \textit{Rationalistic change} is about change relating to the extent of and the nature of the reasoning that people apply to their practice.
- \textit{Analytical change} refers to change to the degree or nature of the analyticism that people apply to their working lives.
- \textit{Comprehensive change} involves the enhancement or increase of people’s knowledge and understanding.
- \textit{Perceptual change} refers to change in relation to people’s perceptions, viewpoints, beliefs and mindsets.
- \textit{Evaluative change} is about changes to people’s professional- or practice-related values, including the minutiae of what they consider important: i.e. what they value.
- \textit{Motivational change} refers to changes to people’s motivation and levels of job satisfaction and morale.
- \textit{Processual change} is about change in relation to the processes that constitute people’s practice – how they ‘do’ or ‘go about’ things.
- \textit{Procedural change} relates to changes to procedures within practice.
- \textit{Competential change} involves the increase or enhancement of skills and competences.
- \textit{Productive change} refers to change to people’s output: to how much they achieve, produce or ‘do’.
Getting to where I currently am ... and going further

- The model has undergone repeated modification.
- It is very likely to be modified in the future.
- I am still not confident of having got the componential hierarchical alignment and relationality correct.
- The model represents – and is presented as – propositional knowledge.
Professional development: a quidditative model (Evans 2002)

Professional Development

- Functional Development
  - Procedural Change
  - Productive Change
- Attitudinal Development
  - Intellectual Change
  - Motivational Change
professional development

intellectual development
  - comprehensive change
  - rationalistic change

attitudinal development
  - perceptual change
  - evaluative change
  - motivational change

functional development
  - processual change
  - procedural change
  - productive change
professional development

- comprehensive development
  - epistemological change
  - rationalistic change

- attitudinal development
  - perceptual change
  - evaluative change
  - motivational change

- functional development
  - processual change
  - procedural change
  - productive change
A theoretical model of the micro-level professional development process

- I define what I refer to as individuals’ ‘micro-level’ professional development as:
  
  the enhancement of their professionality, resulting from their acquisition, through a consciously or unconsciously applied mental internalisation process, of professional work-related knowledge and/or understanding and/or attitudes and/or skills and/or competences that, on the grounds of what is consciously or unconsciously considered to be its/their superiority, displace(s) and replace(s) previously-held professional work-related knowledge and/or understanding and/or attitudes and/or skills and/or competences.
The professional development process in individuals: micro-level professional development

1. Recognition of work-related deficiency or imperfect situation
2. Recognition of perceived improved alternative (a better way)
3. Motivation to adopt perceived improved alternative (or better way)
4. Adoption of perceived better way
5. Evaluation and refinement of adopted alternative
6. Recognition of new practice as an improvement

Linda Evans (2007)
The professional development process in individuals (model 1)

1. Recognition of work-related deficiency or imperfect situation
2. Recognition of perceived improved alternative (a better way)
3. Motivation to adopt perceived improved alternative (or better way)
4. Adoption of perceived better way
5. Evaluation and refinement of adopted alternative
6. Recognition of new practice as an improvement

Linda Evans (2008)
The professional development process (model 2)

1. Recognition of a better way of doing things

2. Recognition of work-related deficiency or imperfect situation

3. Motivation to adopt perceived better way of doing things

4. Adoption of perceived better way

5. Evaluation and refinement of adopted alternative

6. Recognition of new practice as an improvement

Linda Evans (2010) - work in progress
The professional development process in individuals – micro-level professional development

Components:

- recognition that there’s an alternative
  - a better way
- ‘encountering’ a specific alternative
- evaluating the specific alternative
- recognising the specific alternative as a better way
  - implies recognition of the perceived relative inadequacies of previous practice/views/knowledge etc.
- adoption of the perceived better way
- evaluation of the newly adopted practice/views/attitudes etc. as better than what it/they replaced

Evans (2010) work-in-progress
Issues that I am considering

- Does the model apply to all components of professional development:
  - behavioural development
  - attitudinal development
  - intellectual development?

- May each component involve a different process?

- Is there a process that, at the lowest reductionist level, is applicable to all three elements?
  - stimulus to modify professional practice, or related attitudes, knowledge and/or understanding?
The process I often use

Analytic induction:

‘This strategy involves scanning the data for categories of phenomena and for relationships among such categories, developing working typologies and hypotheses upon an examination of initial cases, then modifying and refining them on the basis of subsequent cases … Negative instances, or phenomena that do not fit the initial function, are consciously sought to expand, adapt, or restrict the original construct. In its most extreme application, analytic induction is intended to provide universal rather than probabilistic explanation: that is, all cases are to be explained – not merely some distribution of cases.’

Goetz and LeCompte (1984)
A visit to the supermarket

A challenge:

Using the raw data provided by this workshop participant group, can you develop a model of the behavioural/activity stages involved in an individual’s visit to the supermarket?
How might you go about constructing such a model?

- Compare all data
- Identify similarities and differences
- Aligning parallel stages is usually helpful – (see separate table)
- Conflate and reduce:
  - Merge similarities
  - Find a way of merging differences
  - Use appropriate labelling
Merging and labelling differences

- This is the most difficult part of the modelling process.
- The specific difficulty is that of marrying together the actions that are different and of representing them using appropriate terminology in order to incorporate them into a list that applies to both.
- Categorisation skills are required for this.
  - Categorisation is a core skill in theorising.
- Marrying together differences into one common category involves ‘lowest common factor’ analysis.
Conflating two lists into one:
(research subjects A & B data)

lowest common factor analysis:
- Journeys to supermarket
- Ends journey
- Approaches supermarket premises
- Enters supermarket
- Obtains shopping receptacle
- Locates desired items
- Places items in shopping receptacle
- When all desired items have been procured proceeds to checkout
- Transfers items from receptacle to conveyer belt
- Procures receptacle for transporting shopping home
- Pays for shopping
Lowest common factor analysis & reduction

- Involves loss of specificity and detail
- Involves compromise
- Theory involves universal applicability.
- Universal applicability involves generalisability.
The next stage: negative case selection

Ask yourself 2 questions:

1. Is *all* of my research sample accommodated within this (emerging) theoretical explanation?
2. Can I find a real or hypothetical example of a case that does not fit within this theoretical explanation?
A visit to the supermarket:
negative case selection

- Apply negative case identification/selection to the 11 stages resulting from lowest common factor analysis.

- Are all 11 stages potentially universally applicable?

- Do any have limited applicability?
A visit to the supermarket: flaws in the reduced list of 7 stages

- Stage 6 as it is worded, incorporates an assumption that the shopper will proceed to the checkout only after s/he has procured all of the items that s/he wanted to purchase.
- This fails to accommodate cases where the shopper proceeds to the checkout even though some of the desired items were unavailable.
- How might this flaw be addressed?
- Add the word ‘available’ before ‘desired’
A visit to the supermarket: flaws in the reduced list of 7 stages

- Stage 6 would then still fail to accommodate all conceivable cases, such as that of the shopper who goes to the checkout having forgotten to procure certain, ‘desired’ items.
- The use of the word ‘desired’ is extremely problematic.
- ‘all (available) desired items’ could refer to all items in the supermarket that the shopper desires in the sense of ‘would like to have’, even though s/he could not afford to buy them all.
- It could equally refer only to those items that s/he wishes to purchase on this occasion.
- Precision is vital in the use of words to label categories.
A visit to the supermarket: flaws in the reduced list of 7 stages

- A solution to the problem of precision of expression may be to split stage 6 into two stages:
  - stage 6 – procures all available items that s/he wishes to purchase on this shopping visit
  - stage 7 – proceeds to checkout
- Still, though, the list would remain flawed.
- stages 5 and 7 respectively fail to incorporate consideration of the shopper who is unable to locate some of the ‘desired’ items, and also of the shopper who, for any of various reasons, does not pay for her/his shopping.
- Such flaws could be eliminated through revising the wording used, making it more precise.