

NCRM learning resource:

A typology for research methods teaching development

This practical resource is for teachers of social science research methods who wish to develop and deepen their teaching practice. It is written to share and stimulate the thinking, experimentation, dialogue and learning that effective pedagogy requires. This resource is not a toolkit or recipe for best practice. Instead we aim to facilitate reader reflection and conversations among methods educators, using an empirically developed typology as a starting point. The typology for research methods pedagogy is based on a four-year NCRM study examining the pedagogic practices of research methods in the social sciences, the *Pedagogy of Methodological Learning Study*¹ (2015-2018). It has also been applied and iterated through activity-based stakeholder engagement (the *Teaching Big Qual Analysis: Innovation in Method and Pedagogy* project², 2018). Methods teaching is demanding: Research methods competencies can be characterised as requiring a unique mix of technical skill, procedural knowledge and theoretical understanding (Kilburn, Nind and Wiles 2014). Yet there has been a consensus that educational research into how research methods are taught has been limited (Wagner, Garner and Kawulich 2011; Earley 2014; Kilburn, Nind and Wiles 2014). This is indicative of a lack of a pedagogical culture that might support methods teachers in their professional development. At the heart of this issue is a need for us, as methods educators, to share our pedagogy. To this end, our typology shares practice and invites dialogue.

Why a typology?

A typological approach allows us to categorise practice into types constructed through a combination of empirical analyses and theoretical knowledge (Kluge, 2000). The typology of research methods teaching is not hierarchical – the categories relate to one another without one each dominating the other. As a tool for thinking, the typology helps to reduce complexity and describe what is going on. It allows us to make pedagogy visible and in doing so, generate more shared conceptual language. We recognise that there are limits to this form. Our categories are not mutually exclusive and they cannot organise the reality of teaching for everyone. As Bowker and Star (1999, p. 55) observe, ‘Any classification system embodies a dynamic compromise’.

Stimulating reflection and dialogue

We invite you to use this resource alongside your own reflections and in pedagogic conversations with colleagues. At points, reflexive questions are posed as stimulus.

We encourage the use of the typology in dialogue with your peers and other methods educators, with a view to further development, testing and refinement. We also appreciate feedback to inform future work. If you are unfamiliar with some of the pedagogical language used in this resource, our NCRM quick start series for methods teachers includes *A Glossary for Methods Teaching* (<http://eprints.ncrm.ac.uk/4227/>) which can be read alongside this document. Additional resources are listed at the end of this document (p8).

¹ The pedagogy of methodological learning study: <http://pedagogy.ncrm.ac.uk>

² Teaching Big Qual Analysis: Innovation in Method and Pedagogy:
https://www.ncrm.ac.uk/resources/online/teaching_big_qual

A Typology for Research Methods Pedagogy

Our typology (Nind & Lewthwaite, f/c) classifies pedagogy across four categories, from the abstract to the specific. These represent a series of linked layers that represent philosophical and value-based foundations at one end, and classroom action at the other.

Category	Characteristic	Descriptors	Fluidity
Approach	How the teacher goes about their pedagogic work in a way that coheres around a theory, set of values or principles.	Unifying level	Getting closer to the action
Strategy	Goal directed planning for implementing an approach.	Goal directed level	↓
Tactics	Translation of strategies when the planning becomes procedural and specific to the context.	Procedural level	↓
Tasks	What learners (or teachers) are required to do or actually do.	Activity level	↓

Table 1: Typology Classifications

To expand a little, teachers often carefully think through their approaches and, regardless of how they name them, these approaches relate to their pedagogic aspirations or to their identity as a particular kind of teacher. Strategies similarly cohere around a purpose: They may be, for example, strategies to motivate and engage, to manage cognitive load, or to facilitate reflection. Methods teachers we interviewed and engaged in focus groups frequently had strategies concerning where to start and how to hook learners in based on an identifiable rationale. They expressed tactics for managing the realities of the various pedagogic situations. It is the set tasks, however, that are most transparent and accessible. This is evident in Dawson's (2016) book, *100 Activities for Teaching Research Methods*. The tasks (or activities) that teachers use in class may be more or less strongly framed in relation to their strategic or tactical function and even retained or dropped dependent on trial and error.

Teacher reflections on the typology

In focus groups and workshop discussions around the typology, experienced methods teachers made the following observations about the thinking it prompted:

'I can identify with the in-class, quick thought nature of **tactics**, like 'busking' or 'relying on embodied expertise ... to know how to judge a class'.

'I found it valuable to think beyond the **task**, 'the *what*, to see the *how*' and 'why we would teach these in this way, and *why* would we sequence it in that way'

'The **approaches** [are] what you have internally in your head' - important to retain these in challenging teaching contexts

'The typology prompts you to be reflective about the 'bank of ideas' built up over time.'

'It's helpful for new teachers in their intentional planning.'

(Nind & Lewthwaite, f/c)

A brief example from quantitative methods teaching helps to illustrate the typology. Chris Wild (University of Auckland), an expert panel participant and teacher of quantitative methods had

devised a strongly visual approach to teaching quants. This approach was designed to make difficult content immediately accessible for students from diverse backgrounds (see also Nind & Lewthwaite 2018a).

Approach	Chris Wild's Visual Approach to teaching statistics; valuing the power of the visual, putting it up front.	Fluidity Getting closer to the action ↓ ↓ ↓ ↓
Strategy	Use visual scaffolds for to reduce the cognitive load.	
Tactics	Do things to enable students to see what data can do more quickly.	
Task	Students work with visual metaphors and visual software	

Table 2: Examples in practice: Chris Wild

Visualising the typology

The following visualisation (fig. 1) shows a cross-case analysis from approach through to task around different ways of teaching with data. Teaching with data is characteristic of research methods teaching, and particularly of teaching big qual analysis. This Sankey's flow diagram demonstrates examples of the flow of pedagogy from approach through to task, horizontally. We have visualised the typology in this way to show the interrelation between different aspects of pedagogy and to gesture to how particular pedagogic strategies, tactics and tasks can (and do) serve multiple purposes. For example, by reading their data out loud (a task) students are engaged through a student-centred approach, the uses student data strategically; they are also given the opportunity to embody the data – engaging experiential learning approaches. This visualisation shows 'approach' first, in a left-to-right reading, but it can be generative to work from right-to-left, considering tasks first, and working from there to consider the pedagogic tactics, strategies and approaches that they manifest.

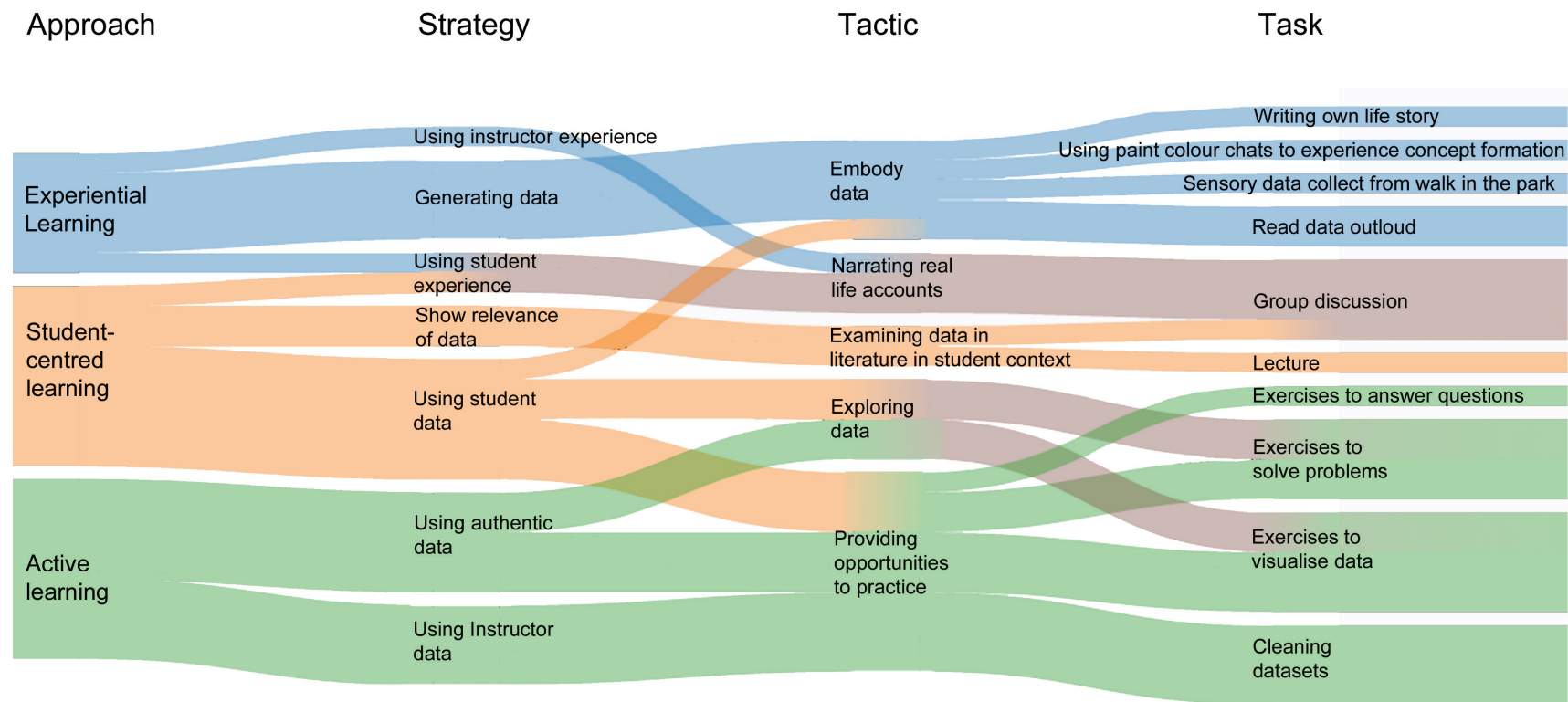


Fig. 1. Cross case analysis: teaching with data

For Big Qual Analysis, most resonance here can be seen with active learning, where choices about the selection of data (decided by an instructor, or the learner) pre-empt opportunities to practice (see also, p7).

ACTIVITY 1: Thinking about the process in action: Can you place the following statements within the approach / strategy / tactic / task categories of the typology?

1. 'When it comes to teaching theory, I've got it reduced down to four major elements' (Johnny Saldaña)
2. Teacher shows a particular film clip because it echoes what qualitative data analysts do with their own data corpus: 'I use film clips frequently in my teaching' (Johnny Saldaña)
3. 'It's a very student-orientated approach, and it's not where I am the all-wisdom dispenser of knowledge, but I am the shaper, I help sculpt, if you will, a way the students framing things, to improve them, to strengthen them.' (John Creswell)
4. 'When it comes to conceptual frameworks, I use the metaphor of the umbrella, I use anything that I can to try to make it clear.' (Johnny Saldaña)
5. 'I ask them to envision and talk about...' (Sharlene Hesse-Biber)
6. 'growing the visualisation first' (Chris Wild)
7. 'story-telling is woven into my pedagogy (Sharlene Hesse-Biber)
8. Students develop glossaries of technical terms: Making 'little glossaries of terms that would occur in the articles they (students) would read' (W. Paul Vogt)
9. Teacher alternates lecture and exercises so students apply what they learn.

Allocating an action within the typology without context may not be easy, but can be fruitful in terms understanding and testing its categories, and where boundaries sit easily or become more blurred. Number 3. clearly articulates an approach, 9. refers to a pedagogic strategy, 4. is tactical, 8. Describes a discrete task. Other statements may be more difficult to pin down.

Working with the typology

Talking about research methods pedagogy is not always easy. In our research we had found that even pedagogic leaders 'could not always fully articulate their pedagogy despite their rich teaching strategies and techniques and deeply considered pedagogic values' (Nind and Lewthwaite 2016, p. 404). This called for conversations in which the challenge of recognising and articulating implicit knowledge could be realised. Using 'methods that teach' (Nind and Lewthwaite 2018b), lines of enquiry were designed to make implicit thinking explicit, naming it to help make it open to scrutiny and facilitate development. These discussions focussed on understanding teaching practice predominantly at the approach and strategy level where articulation was found to be most challenging. Consider the questions below and experiment with the matrix (Table 3) on page 7, relating it to your own teaching. To kick-start your thinking you might want to refer to 'Three Approaches to Methods Teaching' Quick Start Guide <http://eprints.ncrm.ac.uk/4021/>, or the approaches discussed in the 'Developing pedagogy for Big Qual' working paper: <http://eprints.ncrm.ac.uk/4247/>

Naming your Approach:

1. Have you been influenced by any particular learning theory or personal theory?
2. What are your teaching values?
What are your beliefs about how students should or could learn?
3. Are there other working (disciplinary or methodological) approaches that influence how you think about or do methods teaching?
4. Is teaching through data essential for Big Qual?
Do you place value on students doing things with data, practicing data cleaning and manipulation for example? (active learning)

Is learning the method using data in the context of a real research problem important to you? (experiential learning)

Real-world data might be indicative of experiential learning, teacher's data suggests an instructor-led approach; student data may indicate a more student-centred learning approach. Which has most value your context?

5. What approaches does teaching Big Qual analysis require?

Seeing your Strategies:

1. What teaching strategies do you regularly deploy that are necessary for this particular method (or this particular context)?
2. Have you developed particular strategies for:
 - a. *Grouping learners (by discipline or methodological background)?*
 - b. *Sequencing or delivering content (dependent on difficulty, theory/process/technique)?*
 - c. *Managing learning environments (lab/seminar)?*
 - d. *Managing limited time?*
 - e. *Developing or delivering resources?*
 - f. *Illustrating the method with examples, metaphors and other research?*
3. What strategies are needed to make teaching secondary data analysis meaningful?

Identifying Tactics:

1. What do you do in class to include students and keep them engaged if they are flagging?
2. How do you get feedback and spur thinking in the moment?
3. How do you facilitate peer-learning in class when everyone has different levels of experience?
4. What knowledge do you express off-the-cuff when teaching Big Qual?
When do you improvise in class? Consider moments when you 'think aloud' or draw on your own research.

Identifying Tasks:

Unless you are very new to teaching, it is likely that you already get your students to complete a variety of tasks related to learning particular methods. List the tasks you use or would want to use, and consider how they relate and map back to particular strategies and approaches.

1. Which tasks are essential to teaching secondary data analysis and why?
2. Do these tasks serve more than one purpose?

Approach	Strategy	Tactic	Task
<i>Active Learning</i> Valuing learning by doing and application of knowledge	Alternate lecture and exercises so students apply what they hear and learn by doing. Work through the statistical knowledge and the software simultaneously.	Teachers use learning glitches to reinforce key concepts Teachers often choose their own data for exercises so they can be respond to queries.	Students work hands-on with the archive, software and/or data to gain 'flying time'. e.g. browsing the archive, managing access to the archive, select datasets,
<i>Holistic Approach</i> Representing big qual analysis as a whole method.	Emphasising interrelation across methods. Use of worked examples to demonstrate whole of Big Qual research process. Use of expert talk about method in practice.	Teachers use back-and-forth during step by step teaching, to emphasis connections across methodological steps. Teachers emphasise 'behind-the-scenes' realities of big qual research.	Students read research papers and worked examples. Active listening to podcasts and expert presentations.
<i>Collaborative learning</i> <i>Teachers and learners embark upon co-discovery in big qual</i>	Use opportunities for in-class reflection and dialogue to co-construct knowledge with learners, around activities that are meaningful for learners.	Teachers encourage group dialogue and facilitate discussion, drawing on group expertise.	Teachers and students participate in pair-work, small group and whole group Q&A. Students bring own questions to archival search and working with data.

Table 3: Worksheet with Examples from methods teaching.

Further examples of pedagogical approaches for Big Qual are available in the working paper "Developing Pedagogy for 'Big Qual'" <http://eprints.ncrm.ac.uk/4247/>

Closure and transition

- Which aspects of the typology are most evident to you, the easiest to know and discuss?
- Have you found coherence across the layers of your teaching thinking and practice?
- At which of these layers have you tended to innovate/ make changes?

Additional Resources

Lewthwaite, S., Jamieson, L., Weller, S., Edwards, R. and Nind, M. (2019) Teaching how to analyse large volumes of secondary qualitative data. National Centre for Research Methods online learning resource. Available at https://www.ncrm.ac.uk/resources/online/teaching_big_qual/

Lewthwaite, S. & Nind, M. (2018) *The NCRM quick start guide: A glossary for methods teaching*. Manual. NCRM, Southampton. <http://eprints.ncrm.ac.uk/4227/>

Lewthwaite, S., Weller, S., Jamieson, Lynn and Edwards, Rosalind and Nind, Melanie (2019) *Developing pedagogy for 'Big Qual' methods: teaching how to analyse large volumes of secondary qualitative data*. NCRM Working Paper Series. NCRM EPrints. <http://eprints.ncrm.ac.uk/4247/>

Lewthwaite, S. & Nind, M. (2018) *The NCRM quick start guide: Three approaches to methods teaching*. Manual. NCRM, Southampton. <http://eprints.ncrm.ac.uk/4021/>

Nind, M. & Lewthwaite, S. (forthcoming) A conceptual-empirical typology of social science research methods pedagogy.

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Kluge, S. (2000) Empirically grounded construction of types and typologies in qualitative social research, *Forum Qualitative Social Research*, 1 (1), Art. 14, Available at: <http://nbn-resolving.de/urn:nbn:de:0114-fqs0001145> (accessed 23.07.17).

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Wagner, C., M. Garner, and B. Kawulich. 2011. "The state of the art of teaching research methods in the social sciences: towards a pedagogical culture". *Studies in Higher Education* 36 (1): 75–88.

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