Let’s talk about pedagogy

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The NCRM Pedagogy of Methodological Learning project investigates the distinctive pedagogic demands of teaching advanced and innovative research methods. This involves pursuit and development of the emergent pedagogic cultures identified by recent scholarship.

Reviews of the literature\(^1\)\(^2\) paint a picture of a haphazard and under-developed discourse around the pedagogy of methodological learning in which teachers of methods cannot inform their practice by calling upon a substantial body of literature characterised by systematic debate, investigation and evaluation of teaching and learning. As a result, there is reliance on peers, trial-and-error and methodological know-how rather than pedagogic knowledge informed by theory or research. However, findings from a more recent thematic review\(^2\) suggest that there is an emerging pedagogical dialogue regarding teaching for active, experiential and reflexive forms of learning of research methods.

NCRM researchers have been seeking to enrich the dialogue around research methods pedagogy. Interviews and focus groups with specialist methodologists and teachers of methodology identified some of the key pedagogical challenges involved with building capacity in social science research methods. Evidence and collective wisdom pertaining to the teaching of advanced research methods in short course form identified distinct pedagogic challenges – from diverse learner groups and the practicalities of teaching with data, to the challenge of structuring and sequencing course content within an intensive period. This work has led to the creation of new materials aiming to support and stimulate pedagogic practice, including an NCRM Report\(^4\) and the first in our series of NCRM Quick Start Guides\(^5\).

It has also informed the development of our current project The Pedagogy of Methodological Learning\(^6\).

Questions remain: How can we stimulate wider dialogue on the nature of pedagogy for research methods? How can we ensure that methodological skills are enhanced and expanded through finely tuned learning experiences rather than the ‘more-of-the-same’ approach frequently characterised by Training and Capacity Building discourses? These point, once again, to the need to build the pedagogical culture around research methods. The obvious vehicle for this is pedagogic research. To this end our three-year study deploys complementary research components; (i) employing an expert panel method for dialogue with international experts and leading methods teachers; (ii) using a mixed-media diary method with methods learners for documenting their engagement with methods courses, texts, online materials, mentors and other learning experiences over an extended 30 month period; and (iii) conducting case studies of innovation in pedagogy and method for exploring what might be possible.

Our aim is to work in dialogue with research methods teachers/learners and the capacity-building community to enable robust responses to the pedagogical challenges of this field. If you would like to take part in one of the research components then please make contact.

References

6. The Pedagogy of Methodological Learning http://pedagogy.ncrm.ac.uk
A probability-based web panel for the UK?

Patrick Sturgis, NCRM, University of Southampton

As interviewing costs continue to rise while response rates decline throughout the world, pressure is mounting for large-scale population surveys to be implemented in more cost-effective ways.

Chief among the list of mooted possibilities for achieving significant cost efficiencies is administration of surveys on the web. Web surveys offer huge potential for collecting information about populations at low cost, with rapid turnaround speeds, and with the ability to harness all the ICT functionality and flexibility of the internet. Thus, in addition to reducing the cost-burden of high quality population inference, the web offers the potential not only to reduce costs but to transform the ways in which social surveys are undertaken and, as a consequence, the sorts of questions that it is possible for researchers and policymakers to address.

There has been huge growth in recent years in the number of ‘opt-in’ web panels that are widely used for market research and opinion polling. Opt-in panels do not use probability sampling methods but recruit panel members using banners, pop-ups, advertising, recruitment websites, and so on. Commonly, quota sampling and weighting are used to match the recruited sample to known population totals for key demographic categories.

Although there is no agreed-upon statistical theory to underpin claims that these opt-in samples are representative of the general population, they have been shown to accurately predict election outcomes and TV popularity contests. Model-based calibration adjustments and sample-matching methods appear to show promise for enabling opt-in panels to closely mirror population totals on a range of social and economic outcomes. However, serious doubts remain about the suitability of opt-in panels for use in academic research and official statistics.

Surveys using probability sampling methods have, to date, made limited use of web data collection. Web data collection is particularly problematic for cross-sectional surveys because a cost-effective way of selecting, contacting and persuading people to go online to complete questionnaires has yet to be adequately developed in the UK. The dependency on the Postcode Address File (PAF) for selecting a probability sample of the general population in the UK means that it is necessary to use either postal or in-person visits in order to make initial contact. Postal contact at sampled PAF addresses produces low response rates and, therefore, increases the risk of self-selection bias.

There is more opportunity for using web administration in longitudinal surveys because names and email addresses have been collected at an earlier wave of data collection. Most key longitudinal studies in the UK are currently testing and using the web in mixed mode designs, for example Understanding Society, the UK Birth Cohorts and the Longitudinal Study of Young People in England. However, the scope for exploiting the full technological capabilities of the web on existing longitudinal studies is constrained by the requirement to replicate face-to-face modes, in order to maintain data comparability over time.

The potential cost-saving and speed of turnaround advantages of online panels have motivated a number of countries (the Netherlands, France, Norway, Sweden, the USA and Germany) to set up web panels based on probability designs. Some of these studies have been able to achieve good population coverage and response rates.

In these designs, conventional sampling frames and methods are used to select a probability sample of the general population. Substantial effort and resource is then invested in recruiting panel members using traditional modes of contact. Offline households are included in the panel either by providing them with free internet access, or by allowing participation using a different mode, typically self-completion by paper questionnaire. The high costs of the initial recruitment effort are then offset by multiple data collections using web rather than more expensive traditional modes.

Such a web-based probability panel has the potential to be a hugely valuable resource for social scientists in the UK. It would provide a vehicle for developing and testing new methods and procedures that could be applied to surveys more generally, both in the UK and internationally, as well as serving as a key resource for undertaking high quality substantive research.

The ESRC has commissioned a team from the Centre for Longitudinal Studies (CLS) at the UCL Institute of Education (UCL IoE) and TNS-BMRB to undertake a scoping study of potential designs and costs for a probability-based web panel in the UK. The findings of the study will inform the ESRC’s decision on whether to make the large scale investment needed to establish and maintain such a panel. The team has recently been hosting a consultative workshop of stakeholders and interested parties to gauge the potential interest in a web-based probability panel from the user community in the UK, to elaborate possible research opportunities such a panel may provide or stimulate, and to gain concrete input into the development of the potential design options.

For more information on the wider consultation and how you might contribute, go to www.cls.ioe.ac.uk/ukwebpanel
Researching ‘near miss’ cycling situations

Rachel Aldred, University of Westminster

The Near Miss Project is the first project to collect data allowing us to calculate the rate at which UK cyclists experience non-injury incidents such as near misses. Why do near misses matter?

There are two reasons why near misses matter. Firstly, near misses can indicate systemic problems which may prove catastrophic in the future (which is why many industries, including air travel, record and analyse them). Secondly, near misses can have a major impact on journey experiences, particularly for vulnerable road users such as cyclists and pedestrians.

As the research project progresses I’ve become convinced that near misses (used as shorthand for a range of non-injury incidents) are a key missing link helping to explain what is sometimes referred to as ‘fear of cycling’.

Why do people think cycling is so scary, when the absolute risk of dying or being seriously injured is low, even in a country such as the UK where cycling is riskier than it should be? Is it the fault of the media, for focusing on deaths and injuries? Is it the image of cyclists as sporty risk-takers? Or could it perhaps also be experiencing, seeing, or hearing about near misses?

How frequent are near misses, and what kind of an effect do they have?

When starting the Near Miss Project, there was relatively little near miss data. While we can calculate reported death and injury rates for people cycling in the UK per km or per hour, and there are some self-report injury studies that allow a rate calculation, we lack the same for near misses. I was inspired by a study by Mary Sissons Joshi and colleagues in the 1990s that collected this data for Oxford, with startlingly high rates.

But would we find the same in a national study? Could we also gather and analyse more in-depth, qualitative data about feelings and experiences? And could we use the study to crowd-source ideas about preventing near misses?

Within the scope of a small study, we could not cover all modes, so we just focused on cyclists. This allowed us to aim for national coverage.

An online survey was chosen for data collection due to the participant group and the research budget. We had a target of 1,000 people completing a ‘One Day Diary’ online recording all cycle trips and incidents that day; in the end we received nearly 1,700 completed diaries of which the vast majority were from the UK.

The survey itself could be quite onerous if people experienced a number of incidents, so people only had to give details of the first 10 incidents if they had more. Even so, it wasn’t a quick and easy survey, so I was relieved that around 60% of people who initially registered for the study were able to complete it on their pre-selected diary day.

Two papers from the study are currently in the peer review process, which will disseminate some of our key findings. One is that we have confirmed near misses are extremely common; even ‘very scary’ incidents are on average a weekly experience for regular commuting cyclists in the UK. This for me has confirmed the strong policy relevance of studying this area, both in academic projects and in professional practice.

Thinking about the impact of the survey instrument has been interesting from a methodological point of view. Many of our respondents commented that they take incidents for granted, as they have had to do so to continue cycling. There were some interesting reflections on the impact of recording these kinds of experiences.

A few others were keen to stress they also felt cycling had strong intrinsic benefits, which for them still outweighed near miss experiences.

Some of the respondents expressed doubt about whether one could separate out incidents in this way, and recorded experiences that did not fit this category – for example, feeling constantly stressed cycling in busy traffic. As I analysed the data and removed a minority of experiences coded as ‘non-incidents’, I was concerned that the focus on ‘incidents’ itself limited what we could learn. But still, I hope that the project has been valuable in increasing our understanding – and ability to change – what may be a key barrier to cycling: albeit one that often slips under the radar.

Cyclists taking part in this study thought most incidents might be preventable – only a few percent were judged to be definitely not preventable (whether through infrastructure, enforcement, or behaviour change). Given the substantial emotional impacts of some of these near misses, for me this speaks of the need to take them seriously: they are not negligible, nor ‘accidents’, but a broader symptom of wider problems experienced by UK cyclists, which policy can help prevent.

The Near Miss Project is supported by Creative Exchange and Blaze.cc
http://www.nearmiss.bike/
Does birth weight mediate the effect of socioeconomic disadvantage on childhood growth?

Melissa J Palmer and Richard J Silverwood, London School of Hygiene and Tropical Medicine

Children from more deprived backgrounds are more likely to be overweight and shorter in stature. Average birth weight also differs by socioeconomic status. Could birth weight thus play a mediatory role in the relationship between social disadvantage and childhood growth? We recently reviewed the evidence for this in the literature.

The existence of social inequalities in health is well established; poor health disproportionately burdens those of lower socioeconomic status. There is evidence to suggest that the early years of development play a critical role in the creation of socioeconomic health inequalities which are maintained into adulthood. As a result, researchers have highlighted the need for a greater focus on this critical period in infancy and childhood.

Studies conducted in Britain provide convincing evidence that such inequalities in health are reflected in the social patterning of childhood growth - specifically in obesity and height. The rate of childhood overweight and obesity is higher among children whose parents are of lower socioeconomic status, as indicated by measures of area-level deprivation, household income, parental occupation and educational level. Furthermore, children from more deprived backgrounds are generally shorter in stature compared with their less deprived counterparts.

Stature in childhood is often considered as a marker of development, and obesity in childhood is a well-established risk factor for obesity in adulthood and cardiovascular disease, cancer, and diabetes. The increasing prevalence of obesity is recognised as a major public health issue, and since the turn of the Millennium increases in the prevalence of childhood obesity in Britain have been especially pronounced among poorer communities. Whilst a reduction in socioeconomic inequality itself would be one obvious solution to reducing the resultant differences in growth, a better understanding of the mediatory pathways through which the effects of deprivation act might give rise to alternative, possibly more achievable, interventions.

Lower birth weight has been found to be associated with lower socioeconomic status, while greater weight at birth is predictive of increased height and BMI in childhood. Therefore, it is conceivable that birth weight might play a mediatory role in the associations observed between deprivation and childhood growth – accounting for birth weight may potentially weaken the association with height, while strengthening the association with overweight/obesity.

While many studies concerned with the association between socioeconomic status and childhood growth make adjustment for birth weight, few allow for an explicit examination of the extent of mediation. We identified only one British study which did so. In this study, the strength of the association between deprivation and obesity increased markedly once adjustment was made for the effect of birthweight, consistent with our hypothesis of a mediatory role.

Future research should not only seek to examine the associations that exist between deprivation and childhood growth, but also elucidate the mediatory pathways through which inequalities are translated into physical health.

References

Using internet video calls in qualitative longitudinal interviews

Susie Weller, NCRM, University of Southampton

The way we communicate in our professional and personal lives has changed in recent years; digital technologies are now a feature of everyday interaction. Such technologies are also starting to form part of the social scientist’s toolkit.

Physical co-present interviews where researcher and participant meet in person remain accepted practice in qualitative research. Do we need to be in the same physical location as participants to interview them? Are online video calls a viable alternative? If so, what are the potentials and pitfalls?

These questions have been explored in an NCRM-funded Methodological Innovation Project ‘The potential of video telephony in qualitative longitudinal research’. The project extended a 12-year long Your Space study of young people growing from childhood into adulthood. In the context of this qualitative longitudinal study, our project assessed the implications of shifting from the previous practice of interviewing the young people in their homes to talking to them via Skype, FaceTime or phone. We were interested in whether internet video calls might be useful for catching up with participants between home visits or whether they could be a substitute for the conventional in-depth interview.

The technicalities and practicalities of online video calls, such as sustaining a good quality audio and/or video connection, are important. However, the aim in this project was to go beyond an empiricist approach. Drawing on Erving Goffman’s work on the minutiae of interaction in everyday life, we explored the implications of mediated communication on interaction in the interview encounter.

The project also took a participatory approach asking participants for feedback on their experiences. The long-standing Your Space participants said they were happy to be interviewed remotely, although they felt they would have been less likely to participate online had they not already had a research relationship with the researcher.

Many valued the flexibility that remote modes afforded, enabling them to fit an interview into their busy lives without being tied to meeting in a specific place. For those with particularly transient lives it was the only means by which they could continue to take part.

A strong and sustained internet connection was essential to the flow of conversation for rapport and for avoiding misunderstandings. Poor quality audio made the task of both the researcher and participant difficult, with the researcher needing to pay close and careful attention in listening to responses.

Remote interviews were often experienced as less daunting by the Your Space participants. What one of them referred to as the ‘pressure of presence’ meant that online interviews were experienced as informal encounters akin to a chat with a friend, in contrast to the formality of a researcher visiting their home. Many felt more relaxed in their own, separate space; a finding that chimes with Goffman’s suggestion that physical co-presence runs the risk of exposure or embarrassment.

In online video interviews, the ‘props’ of a face-to-face research encounter are invisible. For example, recording equipment is not obvious. On the one hand, this helped towards putting participants at ease. On the other hand, there is the potential for participants to lose sight of the conversation’s purpose and a danger of over-disclosure. This risk is all the more likely in longitudinal work.

The Your Space participants felt they were just as likely to divulge the detail of their lives online. That said, remote modes were not really appropriate for the disclosure of any distressing stories. Audio-only discussions or those where the video was patchy meant that the researcher had little opportunity to demonstrate care and concern in a meaningful fashion. Comparing the interviews conducted with participants online with those that had been conducted in participants’ homes, we found that the interview modes revealed differences in the nature of interaction. Interviewing online, the researcher was more likely to interject with small comments indicating sympathy in an attempt to compensate for the lack of non-verbal expression, with a tendency to disrupt the flow of conversation.

Visible, rather than physical, co-presence was more significant in determining the nature of the interaction. The observation of gestures, facial expressions and body language are important. Goffman refers to them as more revealing than what is actually said. If good quality video connections allow researcher and participant to observe and respond to non-verbal gestures then the interview can be as rich and detailed as a face-to-face interaction. Indeed, it may even be more conducive to disclosure as the experience lacks that pressure of presence.

Nonetheless, the spatial context of participants’ lives is partially lost through remote interviewing. Many had moved home since the last interview, and some resided in neighbourhoods that had undergone significant change. We found that remote interviewing did not allow for a sensory experience of the participants’ home and neighbourhood. Instead, a researcher’s perceptions are shaped by the reach and position of a participant’s webcam. This has implications not only for the researcher’s understandings of context but also rapport. For example, in speaking about their lives many of the research participants assumed that the interviewer had up-to-date familiarity with their locality.

Likewise, remote interviews lacked impromptu ‘props’. In physical co-present interviews participants could present objects, often spontaneously, to help narrate their lives. For example, mobile phones featured as a part of stories about friendships, whilst examples of schoolwork said much about self-confidence. Such ‘props’ helped sustain focus, and acted as aide memories, or tangible signifiers of life events. Whilst it was possible to observe such items online, they were rarely offered and the researcher could not interact with them.

Studying the minutiae of interaction across the different interview modes has been very revealing. Internet video calls can be technically challenging but if the audio and video quality are good and the researcher and participant are comfortable with the mode then they offer a degree of flexibility and informality that physical co-present interviews can lack.

Medical spending around the developed world

Eric French and Elaine Kelly, Institute for Fiscal Studies

There are significant differences in how health services are financed and provided across the developed world. Yet for almost all countries, the past few decades have been marked by a rise in the share of health care spending as a percentage of GDP. This trend only looks set to continue, as medical technology improves and the population ages.

Existing cross-country work has tended to focus on levels of spending, often identifying the US as the outlier. Yet relatively little is known about how the money is spent or how patterns of spending vary across countries. Documenting and understanding these differences has the potential to help explain variation in patient outcomes and aggregate spending levels, and inform policy makers about possible methods of improving the efficiency and cost effectiveness of their own health care systems.

The 'Medical spending across the world' project measures patterns of individual level spending across countries, from the patient upwards, using medical records made available by governments and insurers. In particular, we examine who receives health care, and when they receive it. This is not the first project to attempt to address these questions, but is the first in several dimensions.

Previous cross-country projects used only cross sectional data. Our project exploits datasets that track the same people over many years, which will allow us to better understand medical spending from a lifetime perspective. Furthermore, we now have much better measures of medical spending, as much previous work was based mostly on survey data, whereas our project includes high quality administrative data on total spending from all sources.

Work from the project will be published as an issue of Fiscal Studies in early 2016 and will bring together research from the UK, USA, the Netherlands, Denmark, Germany, France, Canada, Taiwan, and Japan.

In March 2015 researchers from the different countries gathered for a conference was held at the Institute for Fiscal Studies in London. Key conclusions from the conference were:

• The concentration of medical spending varies substantially across countries. For example, in the United States, 50% of all medical spending goes to the top 10% of all spenders. In Denmark, the Netherlands, and Taiwan the corresponding number is close to 80%, and in France and Japan it is 60%. In England the share going to the top spenders is lower, at closer to 40%, although the measure of medical spending for England is limited to inpatient (hospital) medical care. Interestingly, many commentators cite the high level of concentration of medical spending in the US as a problem with the delivery of medical care in the US. However, as it turns out, medical spending is less concentrated in the US than in many other countries.

• Medical spending is highly persistent in all countries. High medical spending in one year strongly predicts medical spending in the following year. For most countries, the probability of being in the top spending quintile in a given year conditional on being in the top spending quintile in the previous year is approximately 50%.

• There is no clear relationship between how health care is provided and the correlation between medical spending and income. In most countries, including the US and England, total medical spending is negatively correlated with income. Taiwan is the only country in our project where medical spending is positively correlated with income. This is perhaps surprising as health care in the United States is mostly privately provided, whereas Taiwan has nationalized health care.

The next step for the project is to standardize measures of individual medical spending, so as to provide the most accurate comparisons across countries. In the Fiscal Studies edition we will use these standardized measures to establish a series of common facts about medical spending across the project countries, exploring areas in which countries in differ, and identifying features that most countries share. Once this is done, we will attempt to exploit cross country comparisons to better understand who benefits from medical care, how delivery of medical care varies across countries, and what patterns of medical care delivery are most effective.
Back in 2004, soon after the inception of the NCRM, a need was identified to be able to classify research methods in order to support the priorities of the NCRM and other ESRC initiatives. The initial driver for this was to classify items in the training and events database, but the range of potential applications grew, including: classifying research projects, funding schemes and papers, identifying areas of need for training and research, defining current trends and prioritising research methods. The original typology was hierarchically structured, with 7 main categories following the stages of a research project, each divided into subcategories which were further refined using descriptors. Since 2004, the main categories and subcategories of the typology have been applied to the structure of NCRM’s online resources and used to shape and inform research and training needs assessments.

A decade later, in 2014, a reassessment of the typology was undertaken to consider whether there were new methods to add, old terminology to remove and to look at how well it was working in practice for users. Some weaknesses were identified, particularly in relation to problems experienced by users when trying to label their article or training event using the typology. It was felt that the categories and subcategories didn’t allow enough detail, categories were being interpreted differently by different users, and the purpose of labelling was not apparent to all users. As a result, labelling had become very inconsistent, resulting in less precise search results for those trying to find a document or training course. While NCRM research staff had expertise in research methods and a good overview of the vast range of methods and materials, we had limited understanding as to how users interface with uploading and searches and the various complexities of university repositories and search engines.

The NCRM were joined on a part-time basis by Dorothy Byatt, a University of Southampton librarian with wide ranging expertise in information management, funded by a successful small bid to the EPSRC “IT as a Utility” initiative. A key issue was that in the context of new possibilities for tagging online materials and allowing completely free keyword choices, perhaps a typology, or at least a hierarchical typology was no longer needed at all? A second was that whatever system we chose, it had to be meaningful in multiple contexts and online platforms and be clearly explained to a growing number of users.

After a review of available options and similar types of applications, it was decided to broadly retain the existing hierarchical typology, but to effectively create an extra level of heading, allowing more precise and fine-grain detail. This enables scholars to identify their area more readily by expanding the list of options from 107 in 2004 to nearly 400 in 2014. In solving one problem however, another was created: how can this significant structure be presented and understood? Input from three areas of expertise: IT, academic methodologists and information management, together tackled the problem of creating a friendly interface for those uploading items and events, including expanding lists and instructions tailored to the particular system being used.

The revised typology has now been implemented in all of NCRM’s online databases and we will continue to study its presentation, as well as how it is used and searched, an iterative process which will continue across the life of the NCRM.

To download the report please go to http://eprints.ncrm.ac.uk/3721/

References
MethodsNews Spring 2015

Latest research methods podcasts

NCRM podcast series features a wide range of research methods related topics discussed by experts from NCRM affiliated projects and events.

The following podcasts are the latest in the NCRM podcast series:

- Surveying UK population’s political attitudes – British Election Study, by Jane Green (24 March 2015)
- Predicting and understanding the 2015 General Election, by John Curtice (4 March 2015)
- To probe or not to probe, by Jouni Kuha (21 January 2015)
- The Collaborative Online Social Media Observatory (COSMOS): Beginnings, Emerging Findings and Possible Futures, by Matthew Williams and Pete Burnap (19 November 2014)
- Face 2 Face: Tracing the real and the mediated in children’s cultural worlds, by Liam Berriman (22 October 2014)
- Using social media in research, by Jamie Bartlett (17 September 2014)
- Telling the untellable: researching emotionally sensitive and challenging topics, by Denise Turner (11 August 2014)

These podcasts are available in http://www.ncrm.ac.uk/resources/podcasts/ and also on iTunes in http://apple.co/19YVBWh

NCRM was established in 2004 as part of the Economic and Social Research Council’s (ESRC) strategy to improve the standards of research methods across the UK social science community. NCRM acts as a strategic focal point for developments in research, training and capacity building related to research methods, both at the national level and cutting across social science disciplines.

For more information about the NCRM and its activities please see our website http://www.ncrm.ac.uk

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The ESRC National Centre for Research Methods (NCRM) is a network of research groups, each conducting research and training in an area of social science research methods.

NCRM brings together researchers from across the UK with a wide range of research methods expertise, at the frontiers of developments in research methodology.

NCRM disseminates innovations and developments in research methods through training courses and events and through other direct engagement with researchers, but also by cooperating with other organisations and initiatives with an interest in social science research methods.