Sparking ‘aha’ moments: A resource for teaching research methods

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Introduction

Rachel Shanks, Melanie Nind, Jo Edson Ferrie and Yenn Lee

This publication is a product of the ESRC National Centre for Research Methods (NCRM) Pedagogy Network. The aims of the network are to:

- develop a coordinated picture of researchers interested in researching and developing research methods teaching and learning in the UK and internationally
- connect those researchers with each other and NCRM
- support and amplify 'close-to-practice' research (small-scale local research based on problems in practice, applying critical thinking and use of evidence in developing practice)
- build the pedagogic culture in research methods education and training by enhancing awareness of and connections to each other's work.

The NCRM Pedagogy Network is an example of the growing awakening of the need to build the pedagogic culture around how research methods teaching and learning has distinct challenges and signature pedagogies. In celebration of this, the editors of this work, network members Melanie Nind, Rachel Shanks, Yenn Lee and Jo Edson Ferrie, came together to develop a free-to-download resource as a celebration of the way in which NCRM has succeeded in getting us talking about research methods pedagogy. We worked with an advisory group from the network

(Nicole Brown, Jackie Carter, Jo Rose and Christina Silver) from the beginning of this process. We wrote to members of our network and to nominated members of their networks, saying:

As a methods teacher or someone who has been engaged in research or scholarship in this arena, we want to know one teaching tactic or task that you would you want to share with other methods teachers (and learners) and why.

What is it that you do that enables social science research methods learners to 'get it' – to cross a conceptual threshold or have a lightbulb moment?

Why do you do it this way and how does it help?

We explained that the co-created output of these curated contributions would become a resource for other methods teachers in the social sciences and beyond. This is in addition to other outputs from the NCRM Pedagogy Network such as a major Handbook and other outputs available from NCRM Resources for trainers.

We pointed potential contributors to the NCRM review paper created by Sarah Baker and Rosalind Edwards that has in part inspired this project: how_many_interviews.pdf. That much downloaded and cited resource was produced in response to the key question 'how many interviews are enough?' and authors' contributions showed the range of positions on this as they made their thinking on this less tacit and more shared. We also chose to have one key question which was: **How do you spark those 'aha' lightbulb moments in research methods learning?**

We are deeply indebted to all the contributors who engaged so enthusiastically with the task we set them. We explained that we did not want this to be an arduous task, rather we wanted this to be a celebration of their research methods teaching. The people who shared reflections from their classroom demonstrate a passion for teaching research methods that is infectious. Having had the privilege of editors' preview, there are ideas and activities here that we have already incorporated into our own teaching.

As well as exposition-based teaching about research methods, there are contributions that show how this teaching is done through active and experiential learning with students taking part in data collection, data analysis or being a research participant. This resource shows how research methods are brought alive by methods teachers in order to engage students and help them come to their own 'aha' moments when they understand what was eluding them and can

see how to proceed with their own research project. In this way it is as much a useful read for methods learners as it is for methods teachers.

Four thematic clusters emerged from the contributions, and we have organised the collection accordingly. We begin with *Supporting learners' understanding through metaphors*. We explicitly stated in our initial communication with potential contributors that we aimed 'to gather some metaphors that help communicate a concept as well as activities and processes'. There are two cooking metaphors in this section with cookbooks and cooking techniques as well as a perpetual stew. We have research methods as pine and oak trees, a social research toolbox and a political party metaphor too.

The first paper from Cristian Dogaru beautifully sets the scene for research methods teaching and the papers that follow. Cristian's paper sets out how he aims to create the 'aha' moment for learners needing to understand that methodology is not a long list of methods or techniques but the theoretical rationale for each choice and their sequence and fit. He likens methodology to a cookbook and methods with culinary techniques such as chopping, boiling and blending.

In the second paper, Kirstie Ken English shares their metaphor relating social research to a toolbox with a plan, the raw data as components to bring together, methods as tools to apply, and interpretation as the final product. Kirstie takes us through teaching all the stages of the research process from literature review to dissemination. They also address learners' anxiety and emotions, which is somewhat a recurring theme across the contributions.

The third contribution is by Rossana Perez del Aguila sharing a novel approach to explain the concept of 'paradigm', introducing interpretivism and positivism through right and left-wing political ideologies. This allows students to come to a better understanding of their own and others' paradigm positions through critical reflection on the two traditional paradigms.

Fourth, we have Jo Edson Ferrie and Thees F. Spreckelsen and a nature metaphor to engage students in methods learning. Here the oak tree is a metaphor for qualitative methods, and the pine tree represents quantitative methods. Read the paper to find out how the metaphors develop to support learners.

The fifth paper brings us back round to cooking where we began. Here Yenn Lee shares the 'perpetual stew' of research writing. Yenn shows how research writing can be presented to

learners as a continuous process with its own cycle of writing, feedback, revision, and further feedback until it is ready to be submitted (eaten) and how every piece of writing is the basis for the next writing.

In the second section, *Supporting learners to 'get it' using active, experiential or immersive learning,* we have grouped together contributions that provide exercises that the contributing methods teachers use with learners, and we stay with food to begin with.

The sixth paper sees Jo Rose explain how using a 'world café' or a carousel of group activities gives learners the opportunity to reflect on participation in different group-based data generation methods. As well as an explanation of the usefulness of this approach, she provides examples of the group methods she uses - creative collage, active listening and group interview.

The seventh contribution comes from Alasdair Jones and Melanie Nind who bring together two examples of workshops on thematic analysis. In Alasdair's workshop, students begin experiencing thematic analysis by using real interview data, while in Melanie's workshop, students use (pictures of) shoes to begin coding, grouping and theming. Having these two workshops side by side shows how differently research methods can be taught while the learning objective is the same.

Next, we have the eighth paper on enacting methodologically grounded qualitative coding via critical use of manual, digital and GenAI tools by Christina Silver. The use of GenAI tools is an area of research methods teaching which is likely to greatly increase. Christina details how learners are given a series of comparative coding exercises to explore the use of different tools while engaging in critical reflection on qualitative coding, where it sits within analytic methods and the role of different tools and processes within it.

From GenAI we turn to ethnography with the ninth contribution by Heather May Morgan focused on bringing ethnography alive in the classroom. Teaching ethnography to mainly applied health sciences postgraduates, Heather 'performs' ethnographic observation while teaching the class. After embodying an ethnographic researcher, she uses further tactics to spark understanding of the nature of ethnography including a joke article and asking the students to consider taken for granted activities such as getting the bus or discussing the weather as an ethnographer might do.

The final paper in Section 2 and our tenth is by Jo Rose about teaching theory-informed research. Jo explains how students are introduced to different theories and then how, working in small groups, students critically evaluate the theory with a set of questions. This exercise supports students in not only their understanding of criticality but also how each of the theories has differing strengths and purposes.

In Section 3, *Lightbulb moments through creative exploration*, we have a set of contributions that use creative exercises to support students to learn about research methods. If creative activities are not usually your way of teaching, then these contributions may give you the confidence to try something new in your methods teaching.

In Paper 11 from Melanie Nind, we find out about a creative way in which she engages doctoral students in thinking about participatory and emancipatory research. Students work in small groups with sticky notes to complete a diamond 9 ranking of methods of data generation for their participatory potential. This draws students into discussing what it is that makes research inclusive.

In our twelfth contribution, Micol Pizzolati shares a creative way to support students with research questions. Students are asked to make a collage around the theme of 'The story of animals and me' and then spend time discussing what happened to them as they made their collage. Micol provides photographs of some of the collages and discusses what the students' work inspired in terms of a set of questions, showing how using creative practices can open up new ways to think through research ideas.

In the next and thirteenth paper, Nicole Brown, shares an example of learning visual data analysis methods by giving students photographs to analyse and then discussing 'What does this all mean?' She eases them towards the realisation that analysing visual data is within their grasp.

The next contribution, number fourteen, sees Yenn Lee discussing a playful way to teach literature review. This could have also been in the metaphor section but works well here too as a creative way to teach students about how writing and structuring a literature review is like weaving with threads. She shares an exercise in which students work together to 'weave' a disparate collection of movies in a way that makes sense.

The final part of the resource is Section 4 *Learning relationally with peers and others.* This section shares practices that illustrate the power of bringing learners together so that they can create ‘aha’ moments or spark lightbulbs together with each other.

In our fifteenth contribution Rosalind Edwards shares her structured interview topic guide exercise. She even provides us with a picture of many different lightbulbs from the front cover of the qualitative research methods Masters module guide. Rosalind details how students give, and work with, suggestions for an interview guide on the topic of ‘Feelings about Housework’, something that everyone can understand but that can also generate different ideas and highlight different understandings of an everyday activity.

The sixteenth paper turns to getting students engaged with quantitative methods through inquiry-based learning and group assessment. This contribution by Jessica Mancuso is an important one as it is the only one that deals solely with quantitative methods. Jessica details how getting students to work together in a group project helps to support them through their feeling that they are not a ‘methods’ person or a ‘stats’ person. However, students may also be apprehensive about group work so there are two levels of anxiety to deal with. Jessica shows how these anxieties are overcome and together the students support one another to work as a group and to learn how to query a quantitative dataset.

Next (seventeenth!), Rebecca Johnson and addresses sparking integrative thinking across methodological boundaries necessary for learning mixed methods. Rebecca describes a two-day intensive workshop in which she supports postgraduate health science students to develop confidence and creativity for their future mixed methods research. This is done by connecting enquiry and design with the technical foundations of mixed methods, anchoring decisions in the ‘why’ of their enquiry and linking theory and purpose through exercises that promote active learning, peer collaboration and reflection.

Last, but not least, is the final paper, number 18, ‘Emotion: A barrier or a tool in learning methods?’ by Jo Edson Ferrie. Several of the other contributions cover emotions but here emotions are front and centre of the piece. Jo shares how they are acknowledged and worked through with students. She argues that we need to spend more time on emotions and talk about emotions in our research methods teaching. As well as understanding the why, what and how of research methods, students need to learn how to work with, and through their emotions,

particularly when their data relates to humans. This may feel like a provocation or as something out of place or disruptive when discussing research methods teaching, but as Jo states at the end of the piece ‘Learning methods after all, is still learning, and the best learning is disruptive.’

The final contribution offers concluding remarks, drawing together the threads that run between the contributions. This section, by one of the editors, Rachel Shanks, brings together the contributions in a different order and with different themes to the ones in the sections that follow, for example, drawing attention to the contributions that deal with GenAI.

Just as we asked contributors to pass on our request for contributions to others, we also ask you to share this resource. The contributors have sought to pass on what they have learnt from teaching research methods, sharing one thing they do that really helps methods learners to ‘get it’ and we hope that we have co-produced something of real value in promoting the pedagogic culture in research methods education.

Section 1: Supporting learners' understanding through metaphors

1. Distinguishing Between methods, design, and methodology

Cristian Dogaru, University of Suffolk

One of the most persistent challenges in teaching research methods, particularly to students who are new to the social sciences, is helping them to distinguish between 'methods', and 'methodology'. At first glance the distinction seems semantic or even pedantic. Yet the difference is fundamental to developing a deeper understanding of research design and to making sense of why research is structured the way it is. The 'aha' moment often comes when learners grasp that methodology is not simply a long list of techniques, but the theoretical rationale for choosing and sequencing them.

One of the reasons, in my experience, for the confusion and even reluctance to engage with the distinction between methods and methodology lies in the lasting influence of what might be called the 'metaphysical paradigm' approach to social sciences research. In the social sciences, it has been common to link research training closely to concepts drawn from the philosophy of science—ontology, epistemology, and paradigms of inquiry. This tradition has a long history and an intellectual legitimacy of its own, but as a pedagogical strategy for introducing newcomers to research it often obscures more than it illuminates. While questions of knowledge and reality are important and certainly have a place in advanced reflection, they are not always the best entry point for students who are simply trying to make sense of how research is actually designed and conducted. I therefore reassure students that their difficulty with these abstract concepts is to be expected, and I encourage them not to become discouraged by it. Instead, I emphasise more pragmatic ways of understanding research practice—an orientation that resonates with the broader move in contemporary social science towards pragmatic and mixed-methods paradigms. My analogy of cooking, which I outline below, is one such way of providing a concrete and accessible entry point.

An analogy from the kitchen

In my teaching, I have found that a cooking analogy resonates strongly with students and provides a memorable entry point into the discussion. My analogy goes like this: imagine a cook in a kitchen. There are knives, pots, pans, and timers, together with processes such as chopping, boiling, sautéing, blending, measuring, or baking. A good cook needs to be both knowledgeable and proficient in these. In this analogy, these are the *methods*—the tools and the techniques for using them. They are what you do in order to prepare the food.

Methodology, by contrast, is the cookbook—but not just any cookbook. It is a cookbook that explains the reasons behind each process, why some steps are essential and why others, such as kneading in scone-making, are deliberately avoided. It contains the rationale and the logic behind the cooking process: why certain tools are used, in what order, under which conditions, and for what overall purpose. A recipe for scones and a recipe for bread both involve flour, water, and baking, but the underlying logic is entirely different. Bread requires yeast, proving, and extended kneading to produce gluten structure; scones avoid yeast, demand minimal handling, and rely on quick baking to achieve lightness. The key lies not in the list of ingredients or the physical actions alone, but in the structured, theory-based rationale that explains why the actions are sequenced in a particular way and what outcome they are designed to achieve.

And in between these two sits *research design*. If methods are the tools and actions, and methodology is the cookbook that also explains the reasons behind each process, then design is the recipe itself: the concrete sequence of steps and processes that bring methods together into a coherent whole. A recipe can tell you to knead bread dough or avoid kneading scone dough, but without the methodological rationale you may not know why these differences matter. In research terms, design refers to the structure through which methods are assembled and ordered—experimental, ethnographic, or action research designs are all recipes of this kind—while methodology provides the justification for why that design is appropriate for answering a particular question

Watching the lightbulb moment

When I present this analogy in class, I often notice a visible shift in students' expressions. The distinction suddenly clicks, methodology is not another word for methods, nor is it an obscure

philosophical concept, but the guiding framework that shapes the use of the research tools. Design is the architecture that brings methods together. This clarity lays a foundation that can be built upon in more advanced discussions of epistemology, ontology, and paradigmatic positions. Students are less likely to confuse the philosophical orientation of a study with the specific data collection and analysis techniques employed, and the analogy often helps to ease their anxiety about these philosophical concepts. I usually tell them: *First, get methods, design, and methodology right—this gives you control of the entire research process. Once you become a more experienced researcher, confident in both methodology and the substantive knowledge of your topic, you can then begin to engage with the higher, more abstract levels of philosophical debate*.

Why this analogy works

The power of the cooking analogy lies in its familiarity. Everyone has some experience of food preparation, whether cooking themselves or observing others. Unlike abstract discussions of positivism or interpretivism, cooking examples are concrete, sensory, and accessible. They allow students to transfer prior knowledge from an everyday domain to a new and more abstract one. Cognitive psychology refers to this as 'analogical reasoning': learning is made possible by mapping similarities between a familiar source domain and a less familiar target domain.

In teaching practice, analogies are particularly effective in creating lightbulb moments because they reduce cognitive load. Instead of introducing students to new terms and abstract distinctions simultaneously, the analogy offers an already-known framework onto which new ideas can be mapped. Bread and scones, knives and pans, recipes and cookbooks—these are concepts students can immediately visualise. Once the analogy is internalised, the same structure can be applied back to research: surveys and interviews (methods) are guided by methodological choices such as whether the research seeks causal explanation, interpretive understanding, or participatory action, and these are assembled through a design appropriate to the question.

From analogy to application

The analogy is not intended to stand alone but to spark a conversation that moves students from recognition to application. After introducing it, I often ask students to generate their own

examples from cooking, sports, or other familiar domains. For instance, students can compare it to training in athletics: methods are the drills, exercises, and equipment, while methodology is the training plan, and design is the weekly routine that combines drills into a path toward peak performance. Another possible comparison is music: the methods are scales, practice routines, and instruments; the design is the programme of pieces selected for a concert; and the methodology is the score and style guiding interpretation. These extensions deepen understanding and encourage active engagement.

In classroom discussion, I then link the analogy back to specific examples in research. Consider a mixed-methods study on youth unemployment. The researcher might use surveys, interviews, and administrative data analysis—these are the methods. The design lies in how these methods are combined: surveys to capture breadth, interviews to provide depth, and administrative data to offer longitudinal perspective. The methodology explains why this particular combination makes sense, and why triangulation strengthens the findings. Students begin to see that methodology is not redundant, but rather the intellectual architecture of the study.

Building from first principles

Alongside this analogy, I often give students a simple definition of research to help them see the bigger picture: *research is a systematic, organised, and logical activity that uses information from and about the world in order to describe, understand, and explain phenomena.* It is self-correcting and generative. From this perspective, research has three essential components: the research question, the data, and theory. The research question determines what type of data is needed, and theory—both substantive and methodological—guides how that data is generated and interpreted. By returning to these three elements, students can situate methods, design, and methodology in relation to the purpose of research itself.

Creating ‘aha’ moments through layering

The cooking analogy is one tool among several that I use to generate ‘aha’ moments. What matters is the layering of learning activities. First comes the concrete, relatable analogy. Then comes guided discussion that draws parallels to real research projects. Finally, students are invited to apply the distinction in their own assignments, for example by articulating not only

which methods they plan to use but also why those methods are justified in light of their research questions and theoretical stance.

I have observed that without this progression, the analogy can remain superficial. Students may parrot back that ‘methods are the tools and methodology is the cookbook’ without transferring the insight to their own work. The lightbulb moment only fully ignites when they can explain their methodological choices in writing and defend them in discussion. This iterative reinforcement is essential.

Pedagogical reflections

There are broader pedagogical lessons in this. First, ‘aha’ moments are rarely the product of a single dramatic insight. More often, they are the cumulative effect of building bridges between familiar and unfamiliar domains, revisiting distinctions in varied contexts, and enabling students to test out ideas for themselves. Second, analogies are most effective when they are dynamic. If I impose the cooking metaphor without inviting students to adapt it, its impact is limited. But when students generate their own parallel analogies, they take ownership of the insight, making it more memorable.

Third, such teaching moments remind us that research methods education is not only about technical competence but about epistemic awareness. Students need to see research not as a checklist of techniques but as a reasoned response to questions of purpose, logic, and evidence. By clarifying the distinction between methods, design, and methodology, we open the door to richer engagement with research paradigms, ethical considerations, and the politics of knowledge production.

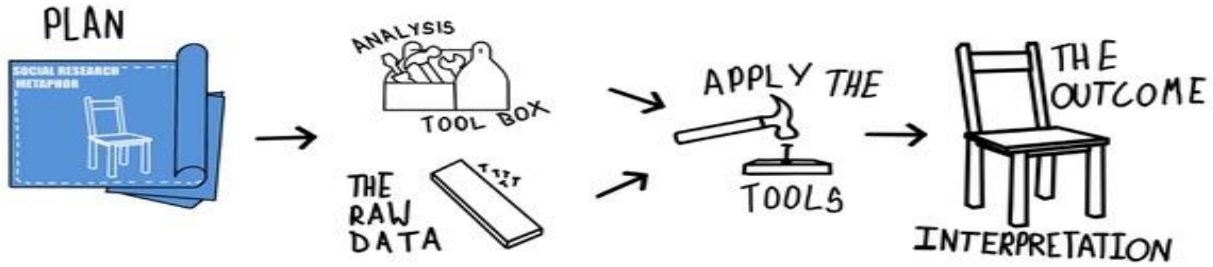
Conclusion

The question ‘How do you spark those “aha” lightbulb moments in research methods learning?’ invites us to think carefully about what makes learning stick. In my experience, the breakthrough often comes when students realise that methodology is the rationale behind the methods, not merely a list of them, and that design is the way methods are assembled to answer a question. The cooking analogy helps to trigger this realisation, precisely because it translates abstract distinctions into everyday experiences. From there, the task is to build layers of reflection and application that encourage students to use the distinction in their own research design.

Ultimately, lightbulb moments matter because they transform learning from passive absorption into active understanding. Students who once conflated methods with methodology become capable of articulating why they chose interviews instead of surveys, or why they sequenced their analysis in a particular way. They see themselves not only as users of research tools but as thoughtful designers of inquiry. That, to me, is the essence of sparking insight in research methods education.

2. The social research toolbox: Introducing the research process & bridging the quantitative/qualitative divide

Kirstie Ken English, University of Glasgow



The Social Research Toolbox is a visual analogy that compares the research process to the stages a carpenter goes through when building furniture to sell. It sparks 'aha' lightbulb moments for two key elements of methods learning. First, it introduces students to the stages of the research process. Second, it helps breach the quantitative/qualitative divide by emphasising that these stages remain regardless of the methods employed, with the key skill being understanding the strengths and weakness of different methods (tools). These two elements are relevant at different points in a student's learning journey, making the analogy valuable across a range of levels. In this piece, I outline how I apply this analogy in my teaching to support both these aspects of methods learning.

The research stages

Identifying and understanding the stages of the research process and how they interconnect is a fundamental skill for social science students. At its most basic this helps students critically analyse previous research by learning to locate key information within the literature reviews, methodologies, findings, and discussion sections of research papers (Ferrie et al., 2022). The

Social Research Toolbox not only highlights these stages but emphasises their function, fostering a practical grasp of the research process.

Here I summarise the four core elements of the analogy and how I discuss them in my teaching. In this example I outline research stages the stages when a researcher already has secondary data available to them, however the Toolbox can also be applied to discuss data production processes by changing from analytical tools (e.g. hammer = regression model) to data production tools (e.g. chainsaw = online survey).

Initial planning: Literature review

This stage is represented by a blueprint. The emphasis here is on engaging with existing knowledge to inform the approach. Students learn that just as a carpenter consults a design before building, researchers must review literature to shape their research direction.

Identification of appropriate tools: Method and methodology

At the second stage, analytical tools such as regression models or discourse analysis are linked to different instruments in a carpenter's toolbox, each with its own strengths and limitations. Alongside an understanding of the tools themselves, what informs the choice of tools is the raw materials(data) being utilised. At this stage I provide examples of the issues that occur when you use an inadequate tool for a job. For example, I might compare using sandpaper to insert a nail in wood to using thematic analysis to analyse large scale census data. The issue isn't the value of the tools themselves, but their appropriateness for the task.

At its most basic this stage is an opportunity to indicate to students the links between different types of data and different methods for data production and analysis. However, it can also be utilised to highlight broader methodological considerations. It can draw students' attention not only to their choice of method but other choices they make during research, promoting reflexive practices and transparency surrounding these choices. One of my core goals when introducing students to social research methods is to steer them away from the idea that the task of researchers is to find the one 'right' way to research a topic. This is prompted by students asking if a topic is quantitative or qualitative, as if some elements of the social world can only be understood in quantifiable or summative terms. I want students to consider the multitudes of useful choices they could make as researchers and how to share and take ownership of their decision-making process.

Applying the tools: Analysis

The application stage is the point where the chair is manufactured (the analysis conducted). This is the point where technical skills are important. Here I stress to students that although planning occurs in the earlier stages, during analysis (or fieldwork) new issues or opportunities may be revealed, requiring a return to the blueprint for further planning.

Communicating what has been built: Dissemination

In the analogy, the chair is built to be sold, which helps students understand the importance of the audience. This stage emphasises the need to clearly summarise findings and tailor communication to different audiences. This can help students consider the real-world implications of research providing a beneficial contextualisation to their learning (Lewthwaite and Nind, 2016).

The quantitative/qualitative divide

A major challenge in methods training is the quantitative/qualitative divide. By this I mean the dominance of qualitative methods in social research training and apprehension students experience surrounding numeracy and by extension quantitative methods (Payne, 2014). However, the Toolbox could also be applied to address the reverse with its strengths laid in the communicating the shared traits across quantitative and qualitative methods and the value of a diverse methods skillset. Addressing the imbalance of traits all research share and the value of a diverse methods skillset. Addressing the divide can have a range of benefits for students. For example, advanced quantitative methods training has been associated with increased employability (Rosemberg et al., 2022). Beyond this having quantitative methods skills expands the tools students have at their disposal, which is a key message I share in my teaching. However, I don't promote a diverse skillset simply due to a recognition of the benefits quantitative methods skills can bring (although I have first-hand experience of these). Working from a queer feminist perspective I hold many criticisms of quantitative methods, which may lead some researchers not to adopt them (Browne, 2008; Oakley, 2015). To make an informed choice on this, rather than one out of necessity, researchers must be informed on both quantitative and qualitative methods and be able to critically engage with a vast array of research. The Toolbox can help with this in the following ways:

Addressing anxiety

When students feel less at ease with either quantitative or qualitative methods to the extent where they don't know where to start with the other one of them, I find highlighting the similarities between both approaches useful. This is partly informed by pedagogical shifts towards breaking down quantitative/qualitative divides by teaching them together in general methods courses (Onwuegbuzie and Leech, 2005). I see limitations in fully adopting this approach due to the time required to teach any one method of data production or analysis in adequate depth. However, there is merit in moving away from the adversarial presentation of qualitative and quantitative methods. The Social Research Toolbox can be helpful in doing this. This is where the overview of the social research process highlighted in the previous section can be useful. Using the Toolbox I can highlight that all research regardless of the methods employed requires these stages.

Promoting critical engagement skills

By emphasising the purpose of each research stage, students develop the ability to identify key information in research papers—even when unfamiliar with the method used. When discussing methodology, I highlight the considerations researchers make based on the type of data they work with, helping students understand the rationale behind methodological choices. As stated previously the critical insight I hope to foster in students is not one searching for a single 'objectively right' approach to research. Rather I want students to be able to consider the various choices researchers made, how well they were communicated and if the risks and benefits of each choice were well balanced.

Promoting flexibility

Understanding the decision-making process behind tool selection shows students that greater methodological knowledge leads to increased flexibility in their own research. This can motivate them to engage with methods they previously found intimidating.

Conclusion

The Social Research Toolbox offers a versatile and accessible analogy for teaching research methods. It supports students in understanding the research process and navigating methodological choices, while also helping to bridge the quantitative/qualitative divide. Its adaptability makes it a valuable resource across different levels of study.

Going forward I aim to continue to develop the Social Research Toolbox analogy and combine it with other useful visual teaching tools such as Ferrie and Spreckelsen's (2023) dirty greenhouse. The Toolbox prompts students to ask: If the task of the social researcher is to uncover more of the social world (clean the dirty greenhouse) then what impact does the different methods (tools) we use have on our understanding of it.

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3. Starting with political ideas and grasping the idea of a ‘research paradigm’

Rossana Perez del Aguila, The Open University

There are different concepts in the research process that university students struggle to understand and one of them is the term ‘paradigm’. Finding the right example to illustrate the idea of a research paradigm is not easy. In the qualitative research methods modules that I have been teaching in undergraduate and postgraduate education programmes, I always felt anxious when presenting a lecture about ‘paradigms’. I ask myself the same question again and again: How can I translate an abstract concept that is key to understand students’ own beliefs when researching the social world?

A few years ago, I decided to introduce the concept of ‘paradigm’ with an example of how political parties operate in society. I got this idea when I was reading Morison’s book (1986, p.15) and found a diagram illustrating the links between ‘microsociology and macrosociology’ and research. The conceptual and methodological relationships in the graphic explained how sociologists ‘make sense of society’. It captured the role of ‘theories’ and more specifically how the two key paradigms (interpretivism and positivism) represented different world views and values when doing macro-sociological and micro-sociological research. Inspired by these complex relationships in sociological research, I created a simple graphic to teach the differences between positivism and interpretivism. I soon realised that this graphical explanation of paradigms had a resemblance with how right and left-wing political ideologies shape people’s views of the social world. It was a light bulb moment, and I decided to use this example as a pedagogical strategy in my research methods teaching.

Right and left-wing political parties are universal terms that are familiar to students from any continent. In the educational and social research methods classes, I ask students to imagine that they are politicians. Then I go through a logical sequencing of simple concepts helping them to make sense of how political ideologies turn into action in government policies. I discuss with students the following questions: 1) What is a political party? 2) What are the different values, beliefs and ideas of left and right parties? 3) How are these ideas reflected in a manifesto? 4) Why is the manifesto of an elected political party the basis for action? Moving to the social research world, I follow the same structure. I ask students to imagine that they are

researchers and ask them to think about the starting point when thinking about and studying the social world: 1) What is a paradigm? 2) What are the beliefs and assumptions of the positivist and interpretivist paradigms? 3) How are researchers influenced by these worldviews and values when designing and developing their research?

Students are asked to put on two different hats, one of a politician and one of a social researcher. As politicians, they reflect on how left or right ideological ideas influence the development of government social policies. As novice researchers, they reflect on their own values and assumptions about the social world and how these ideas influence the way they do research. Starting with simple questions about political ideas and government policies, students engage in conversations that enable them to grasp the complex concept of a research 'paradigm'.

I teach the term 'paradigm', drawing on Guba's and Lincoln's definition (1994, p.105), 'as the basic belief system or worldview that guides the investigator, not only in choices of methods but in ontologically and epistemologically fundamental ways'. I have followed Guba's and Lincoln's 'researcher-defined paradigm model' since my days as a doctoral student doing qualitative research. Their conception of paradigm is not 'limited or defined in relation to any specific subject area' (Chafe, 2024, p. 6). Although researchers' beliefs and assumptions might be influenced by the dominant paradigm in their discipline, when teaching 'paradigms' my main purpose is twofold: to make students reflect on their own philosophical position of the world, and to (re) socialise them into the wide range of possibilities that qualitative research holds for understanding the social world.

Part of the reason that paradigms are difficult to grasp is because as methods teachers we draw students towards a particular paradigm. My students go through a process of 'quantitative therapy' in which they are pushed to confront 'a fixed [positivistic/quantitative] mind-set around the creation of knowledge (Collins and Stockton, 2018, p, 6). They come into higher education with the assumption that causal relations and established measurement are the basis of authentic knowledge. The scientific discourse is embedded in students' perceptions of research but at the end of their courses they come to appreciate that qualitative non-statistical knowledge is valuable and worthwhile. The road to this intellectual transformation takes time and is an emotional and painful journey (Perez del Aguila, Allison and Kazmi, 2023).

We have come a long way since the days of the ‘paradigm war’ (Gage 1989). There is now a ‘paradigm proliferation’ and paradigms have changed and are complex. In this context, ‘pedagogy becomes critical’ (Denzin et al., 2024, pp.13, 25). Teaching students the idea of paradigm position in research is best done through critical reflection of the philosophical basis of the two traditional paradigms. I start with political ideas to help students to engage students with difficult questions about particular worldviews.

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4. The pine and the oak tree: A metaphor to engage students in methods learning

Jo Edson Ferrie and Thees F. Spreckelsen, University of Glasgow

Teaching methods is hard, partly because learning is tough (see Nind & Lewthwaite, 2017). Students can feel disrupted by the unfamiliar, from endlessly new terminology, learning in workshops and computer labs, to producing reports instead of essays. One strategy is to help students orient themselves and to recognise the disruption as a positive challenge. As educators we can make explicit our pedagogical framework, and how it is different to one used in disciplinary courses. We will exemplify this point by introducing two metaphors that help us make our teaching strategy visible to students. These help students recognise, plan and appraise their learning as an informed response.

The metaphors make use of two types of tree species. The oak tree (see figure 1) is as broad as it is tall, with multiple trunks as well as numerous branches and twigs. The pine tree (see figure 2) clearly has one trunk, and it is quite a climb until a cluster of branches appear at the top. In 2023[i], we used the oak tree as a metaphor for qualitative methods:

- Some ‘branches’ are close to the ground, allowing us to observe individuals in detail
- Others give a view at a mid-level at a community for example, and others reach up to provide a top-down view, for example qualitative big data
- Some branches have grown in very different directions and learning one, may not really help you learn another
- The tree looks relatively easy to climb, but this is deceptive, it takes us much training to climb along a branch that appears grounded, as it takes to climb up a branch and see beyond the canopy

Figure 1: An oak tree. Picture taken/owned by JEF

And we used the pine tree to describe learning quantitative methods:

- It's hard to climb/learning but there is a harness/teaching to help
- You must though follow the learning pathway set out, you cannot jump up the trunk, you must climb section by section
- From the top you have a top-down view, and branches are relatively easy to climb between (once you've learned the fundamentals of probability, rigour, software and parametric testing). Put another way, clarity might only come at the end of the course.

This piece builds on the earlier paper (Ferrie & Spreckelsen, 2023), using the metaphor slightly differently to explain the way that we have designed method pedagogy, and how making the pedagogy explicit to learners, helps them navigate the learning opportunities.

Figure 2: A pine tree. Picture taken/owned by JEF

Methods learning – climbing a pine tree

The tree metaphors can help students approach their quantitative and qualitative learning and can also be used to help students see where they are on the learning journey, and we can use the pine tree to help imagine introductory courses and the oak tree to help them visualise advanced learning. Introductory social science research methods learning can be, metaphorically, like climbing a pine tree. Methods taught, are seen as connected by one trunk, with side-branches for specific questions, addressing problems, or different data types.

As discussed in our 2023 paper, pedagogically, climbing a pine tree to the top takes effort, and it requires help. Learning to work with data requires taking incremental steps. Students who miss a class must catch up before learning the next step. This particularly occurs when working with numbers. We can reassure students that course designs account for this, that the materials and resources support them, providing a kind of harness. In qualitative methods, the incremental strategy is used by thinking through the stages of a project: sourcing literature, designing a research question, selecting methods, recruiting participants, collecting or collating data, analysis and dissemination. At least with an introductory course, it can be useful to treat all approaches to data as linear.

Describing the pedagogy behind learning methods to students has three strengths. It helps explain *why learning the foundations* of research methods is worth doing, *how the learning is different* to their disciplinary norms and even *not directly connected* to their questions of interest. That is, we can ask them to excuse the abstract nature of some of the learning. We also argue that once the tree is climbed, and competency is established, learning new approaches will be

easier. This is because building blocks are similar, and students have mastered a language of methods.

Take as an example, a skilled researcher addressing a wide range of questions with complex data. They will have had a generic introduction to data management and analysis, followed by iteration of this learning addressing issues of causality or interpretation together with avoiding bias. A researcher will have learned the importance of asking an answerable research question, choosing a method that connects with the question, considering the challenges of recruitment or data curation, considering ethics and analysis and these building blocks are applicable to all projects, and all methodologies.

The pine tree helps them understand how to learn the fundamentals, when they may be abstracted from their own research interests (more typical if the classroom hosts many students from multiple disciplines): it is hard work, and it is incremental, and it is mostly linear. The students notice that their learning is more scaffolded, reinforced by assessments that include skill development. Hopefully this helps them feel that they have time and opportunity to practice the terminology and skills and develop confidence.

Methods learning – exploring the branches of an oak tree

Once foundational courses are complete, students will want to branch out, increasing the relevance of their training to their own research interests. This learning is better captured using the metaphor of an oak tree. Here, the structure is more complex, branches are as thick as the trunk of a pine tree, allowing us to signal that one semester-long course will not make a student an expert in any methodology (whether derived from quantitative or qualitative paradigms). This often will be reflected in who teaches the course, for example with teams used because each educator has an expertise in a different branch/methodology. As a result, the combined lectures/workshops may not provide a cohesive, holistic picture of methods. For example, learning one methodological branch (e.g., ethnography) may not help students learn another (discourse analysis). Thus, students will need some critical engagement to extract the learning relevant to them. We can help by describing the ‘tree’ and explaining why we have selected the methodologies that we have. We can also help by signalling the availability of appropriate advanced training.

The branches of an oak tree grow at different angles and can be used to illustrate how decisions made take the research into different directions. The linear approach of introductory courses can be subverted here, as students learn that the research question can evolve during a project as the researcher engages with novel data, that they may return to the literature or work with civil society to plan the dissemination strategy as a first step.

The metaphor helps *direct students towards relevant training*. It articulates that some branches of our oak tree require a difficult climb up (critical discourse analysis) but help us understand how shared language(s) produce societies, whilst others are very close to the empirical ground (phenomenology) examining rich, personal data. The metaphor helps us focus on *what learning is required* to achieve the relevant methods training. We can reinforce, that however easy it looks to climb onto a branch, there is as much technical skill required to climb along it, to be able to see beyond the canopy.

Students might see their learning as being about specific areas only. The metaphor encourages them to seek connections. Or they might find that despite a strong training in research philosophy, learning a branch requires a further, deep, engagement with the philosophical underpinnings of a method.

To students the oak tree metaphor clarifies that progressing in their methods learning means: a more expansive learning experience; with students making choices about where they want to invest (future) learning time. The combination of having a heavily scaffolded learning journey (the pine tree) before meeting the multiple branches/methodologies, should help students embrace opportunities to work more autonomously. Thus, it is a step towards dissertation and independent project work.

Understanding a methods learning journey to learn methods better

Students generally, have not been asked to engage with pedagogy so explicitly in their learning. Our metaphors work for students, as devices to recognise, plan, and appraise their methods learning.

Even if using the metaphors doesn't help them orient to learning methods, it serves to create a relationship between students and educator. It reinforces how important their learning is to us.

Using the metaphor explicitly in our teaching, we have found even the most reluctant students have been open to giving us some time to help them adapt to our classrooms.

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5. The ‘perpetual stew’ of research writing

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We often hear about dishes passed down through generations, not just as recipes but as actual dishes built upon older batches, like a sourdough starter. For example, a restaurant in Thailand claims that its beef noodle soup has been simmering for almost half a century. Each evening, they clean the pot, remove most of the broth while leaving a base to simmer overnight, and top it up the next day with fresh stock and ingredients. Similar practices exist in many cultures, where stews, broths, and fermented bases are replenished and extended over time.

This idea of a ‘perpetual stew’ is, I find, a powerful metaphor for explaining how research writing differs from other types of writing and why feedback is so integral to the process. Unlike most assignments that students complete before starting research, which typically end with submission and grading, research writing has no neat, obvious endpoint. Instead, it moves through a continual cycle of feedback, revision, and further feedback until you decide your work is serviceable. In this sense, you are never truly starting from scratch, as Mullaney and Rea (2022) paradoxically observe. Each iteration is influenced by your previous work, and you remain open to further refinement. This is not simply a matter of recycling old material. Rather, your work matures, enriched by new ideas, lessons, and experiences added along the way. Finishing one project does not mark the end of your research writing. Each completed piece naturally feeds into your next project, even if it is on a different topic, often in unexpected and generative ways.

In an era of growing concerns about plagiarism, self-plagiarism, and the undisclosed use of AI-generated text, this metaphor offers students a useful lens through which to view their development as writers and researchers. It helps them recognise that being able to demonstrate how their work has evolved over time is one of the most effective ways to assert and protect their authorial voice, and to defend it if ever called into question.

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Section 2: Supporting learners to ‘get it’ using active, experiential or immersive learning

6. The ‘world café’ approach to experiencing group data generation

Jo Rose, University of Bristol

In the social sciences, students often want to use focus groups or group interviews for data collection, but do not have direct experience of collecting qualitative data in a group. It can be quite challenging for them to appreciate the complexities of collecting data from a group – and to think about the different ways in which data can be collected and therefore the type of data that is yielded by different methods. To help students consider some of the possible methods for collecting data from a group of people, I use a ‘world café’ style workshop: students participate in different activities to get a group of people talking, and have the opportunity to reflect on how it felt to participate.

I use a large non-tiered teaching room, with tables set up for groups of 4-8 students. Each table is set up to run a different type of qualitative group data collection method for students to experience. These activities can vary depending on the discipline and cohort. At the end of this piece, I have included some of the examples that I use in Education with both Master’s and Undergraduate students, to illustrate to students a wide range of types of group data collection methods. The students spend around 30 minutes at each activity (depending on the length of the session, number of students, and number of activities). After participating in each activity, students take a few minutes to note down their thoughts and reactions to that activity, then switch activities. At the end of the session, we have a whole-class plenary where students discuss how each activity felt for them, when they think it might be helpful (i.e. with what participant groups, or what type of research question), and whether they see potential for any of the methods in their research.

Why I use this approach

As a Psychology undergraduate student in the 1990s, I remember doing lots of different practicals in class where we learnt about research methods, but the thing that really helped me consider the *quality* of methods was volunteering as a participant in numerous other studies.

We didn't have to, but I signed up to every study that I was eligible to participate in: I really enjoyed seeing what other people were researching and reflecting on the processes that they used to collect data and how that made me feel as a participant. I still enjoy participating in any projects that I am eligible for and find it helps me reflect on methods (and I'm nosey!). The world café approach can create a noisy and slightly chaotic feel to the classroom, but it is generally energising for students and provides quick-fire opportunities for participation, and for explicit reflection on the participation process. Different people engage in the different activities in different ways, and hearing from others how they found the experience is very powerful – we can all tend to assume that just because *we* enjoy something, everyone will! The 'aha' moments I see come from students recognising how different approaches to group data collection can work for different participants, and for different types of research question.

Points to consider

- I generally introduce all the activities at the start, as well as including clear and simple instructions on each table.
- In the plenary, I share general pointers about group data collection, and my experiences of when the different methods have worked well or less well.
- Getting the right stimulus question for each activity is really important – it needs to be something that all students will have experience of or a view on.
- It helps to include a 'chair' role for each activity, so one of the students acts as a light-touch facilitator instead of participating. No student should take this role more than once, so they get to participate as well.
- Remember to allow time for activity orientation, post-activity reflection, changeovers – and it's really important to allow time for the plenary. As a teacher, I find that timekeeping needs to be very strong for this type of session!
- It may be that students only experience some of the activities, depending on how many there are. This works fine so long as there is an effective plenary: time is needed for the teacher to ask students to share some thoughts on what worked well with the different activities, what was challenging, how the different activities made them feel as a participant (and, where relevant, as a facilitator or chair), and to follow this up by drawing students' responses together and possibly relating to their own experiences of using or participating in the different methods.

- If there is a large class, it works well to have more than one table doing the same activity.

Conclusion

This session requires thought and preparation for the activities, and strong facilitation skills from the teacher. With this in place, it provides students with the opportunity to experience a range of different types of qualitative data generation in groups. I find that in the plenary, student usually discuss which approaches would work well (or less well) for different participant groups and different research questions, and how the different activities could work as a part of data generation – perhaps within a more traditional group interview or focus group, or as one in a sequence of data generation activities. Seeing their peers' reactions to different activities (different people engage more in different activities!) provides the opportunity for students to put themselves in others' shoes and consider the data generation from a range of perspectives: this is invaluable when it comes to considering how their own research is experienced by participants.

Examples of group discussion activities – there are many more that could be used, these are just some of my own personal choices!

Creative collage: The task is to illustrate a process or 'journey' using creative collage to provide a timeline (for example, the decision to go to university, or their relationship with education as they progressed through the years of compulsory education, or what a successful career might look like after graduation). The table includes big sheets of A1 paper, coloured pens, glue, items such as brightly coloured feathers, pipe cleaners, pieces of glittery card and whatever else you think might be fun. The activity is designed for students to get 'stuck-in' on a creative activity that will get them talking relatively informally. The data come from the conversation participants have about how they illustrate the 'journey', why they want to include things, what was important – and then how the timeline is described. Subsequent groups could add to the original timeline or create their own.

Sticky note ideas: Each participant has a set of sticky notes, and writes down their thoughts or reactions or ideas (one per post-it) in response to a prompt or stimulus or question (for example 'What makes a good student?' or 'What are the components of a good education system?' or

‘What are you excited about regarding doing your dissertation? What are your fears?’). They then pool the sticky notes and group or order them in a way that seems helpful or relevant to them. The data come from both what is on the sticky notes, and (more importantly) the conversation that happens about how the ideas should be grouped – this helps reveal what is important to people.

Active listening: One person is nominated as chair. A question is posed to the group, and participants take a set amount of time (usually 10 minutes) to write down their thoughts in response to that question (for example, ‘The steps I go through when preparing and learning from assessment’, or ‘The challenges I have faced on my course so far, and how I have managed them’). Each person in the group has 2 minutes exactly (timed) to share their points with the rest of the group. If they stop before the timer has gone, that is fine – they just wait for the timer to go (and they may think of more things to say after a pause). Every other individual in the group is an active listener, they pay attention and can respond non-verbally (e.g. with nods), but must not talk or interrupt: the speaker holds the floor for their 2 minutes. The chair takes notes, and at the end of the 2 minutes feeds back to the speaker with a summary of their points (max 1 minute). The data come from what each individual says in their uninterrupted 2 minutes.

Group interview with the jelly baby tree: Each participant has a picture of the ‘blob tree’ (an illustration of a tree with blob-like people at different places and in different stances on or around the tree - available from numerous sources online). The facilitator poses a question that asks participants to explain which of the jelly babies illustrates how they feel in relation to a particular issue, for example, how they feel about their course, or to what extent they feel like a part of where they live. Participants take a minute or two to consider this and then start a conversation about which jelly baby best illustrates them and why. The data come from the conversation.

7. Experiencing thematic analysis to answer a specified research question

Alasdair Jones, University of Exeter and Melanie Nind, University of Southampton

We each facilitate a thematic analysis workshop with second year social science undergraduates. We do this in different disciplines in different universities and in in different ways. But our reasoning is very similar, showing the commonality in what we do and why. And essentially our core aims are the same – we want our students to 'get it' - to get what analysing qualitative data in this thematic way is about, what it looks and feels like, what role the research question plays, and the importance of the human social researcher in the process. We do this through facilitating structured and hands-on data analysis practice.

Alasdair

For this 2-hour workshop for approximately 50 human geography students I use real interview data accessed from the dedicated Timescapes project teaching data set (Weller, S., Davidson, Edwards, & Jamieson 2019). The students work in small groups (of typically 3-4 students) to code a 4-page excerpt from an interview transcript, for which background information for the study from which the interview was derived (as well as demographic information about the interviewee) is provided. This additional information does the important work of contextualising the transcript for the students, bringing them closer to the experience of independent study and mitigating the pitfall of abstracted methods training. In addition, students are given a pre-specified research question – *How do mothers of primary-school-aged children in the UK experience motherhood?* – which they use to guide their analysis of the interview excerpt. This research question provides an important lens through which students can start to identify, select and organise themes. As preparation for the workshop, students are required to read Jennifer Attride-Stirling's (2001) *Thematic Networks* article as they will be using her coding approach (which I summarise in the workshop plenary) to code the interview excerpt.

I provide the groups with a set of physical handouts– comprising the interview excerpt (and background information), a blank codebook and instructions for the workshop activities. A pre-selected interview excerpt is provided to students so that they are coding the same data (in relation to a predefined research question), which aids learning in the plenary discussions which

facilitate collective sensemaking. I explain the task to the students, emphasising the significance of the research question provided as a guiding framework for their coding. I also recap a discussion of analytical deduction and induction from that week's lecture (to help reinforce the learning and reassure students about the parameters of the exercise), bringing that more abstract discussion to bear on the task at hand. I allow time for students to do multiple readings of the excerpt (first for a broader sense of it, then more inductively [looking for prominent themes in the data], and then more deductively [looking for themes guided by the research question and informed by their theoretical understandings]). I use examples from a study of my own, summarising the findings of different papers derived from the same data, to illustrate how thematic analysis can comprise both induction and deduction.

While coding their data, I encourage the students to iterate – to use paper, pen and highlighters to revise, refine and rehash their codes as they familiarise themselves with the data and develop their analysis. This is something the members of the teaching team (two human geography colleagues and I) focus on as we circle between the groups, looking to seed through dialogue the light-bulb moments where students identify a code or conceptualise a higher-order theme that neatly captures some of their codes while also answering the research question. This process can itself be seen as inductive – using the students' emerging ideas to think with them about how these can be labelled (as codes) and brought together (as themes). Students often start with 'responsibility' as code – it's the seventh word in the interview transcript concerned with experiences of motherhood – which starts a discussion of the different sorts of responsibility (financial, social, educational…) they've spotted in the text and of how responsibility can be conceptualised as a theme. The satisfaction students feel as they disaggregate the text and reassemble it as themes that address the research question is palpable, and evidenced by the contributions students make to the following plenary discussion of themes they have identified. In that closing plenary, among other things we reflect on the iterative nature of coding (and on how initial manual coding of data helps us understand and visualise coding as an iterative process), on the value of reading the excerpt multiple times, and on the role of reflexivity in our thematic analysis practice (noting, for instance, how students would often reflect on their own experiences as they grappled with the data).

Melanie

For a 3-hour workshop for approximately 50 education students, I use pictures of shoes instead of interview transcripts. For their assignment they will analyse their own interview data but first I want them to play with the idea and practice of labelling, clustering, and developing themes. As their English language abilities vary enormously, visual data to work with is freeing. I got the idea of practising with something playful without serious or ethical implications from observing a session for the video-stimulated recall, reflection and dialogue part of the NCRM Pedagogy of Methodological Learning study (Nind, Kilburn & Wiles, 2015). I got the idea of shoes from someone who used her collection of real shoes! For me, the pictures of shoes are still fun, less rich in texture and smell, but still evocative and easier to manage.

We work in small groups around large tables on the initial 3 phases from Braun and Clarke (2006): familiarisation with the data; generating initial codes; searching for themes. They enjoy sorting through the images and instinctively begin placing some with others (men's shoes/women's shoes, smart shoes/casual shoes); here they are finding that grouping data comes naturally. I prompt them to write descriptive labels (tag-like codes) on sticky notes to attach to the pictures – bringing a verbal process to what the eye sees (men's/ women's/ smart/ casual). I circulate round the groups, interested in what they find. Some are drawn to the materiality of the shoes and have labels of leather/canvas/satin. I have included many everyday shoes, but some are in in the mix to trigger more thought (hiking boots, ballet shoes, wedding shoes, and a pair of odd shoes). What to call these shoes is easy but how to group them is not. I give them bigger sticky notes on which to write their initial themes as they move into formalising their groupings.

Part way through the buzz of the activity I pause all the groups to help them to come together to (metaphorically) hover above themselves and their tables and see that they have been analysing data, using codes and initial themes. I ease them towards appreciating that they did not have *a priori* codes, but they did have social and cultural knowledge of the phenomenon of shoes and the human capacity to put this to use. I point out that there were higher rates of agreement on some tables than others! We share in the pleasure of the awareness that they have been working as social researchers. I then inject a huge BUT to spark the lightbulb moment that they have been working without a research question (they have engaged previously in work on what makes a good research question). I give them a research question –

What is the function of shoes? – and they return to work on re-labelling and theming their shoes.

At the end we have the deliberative plenary discussion about the patterns that recurred in the data, the various coding options that were possible, and the ones of these that were most useful. We reflect on how they became increasingly sensitised to looking for patterns that were meaningful and how group dialogue helped or challenged them to think differently. We reflect on how they could have begun with a set of codes rather than devise them for themselves in interaction with the data. I remind them that the next stages in thematic analysis are reviewing and developing themes; refining, defining and naming them; and producing the report of the process and findings.

Running the workshop this way takes some of the fear out of idea of doing data analysis. The experience, guided by prompts to reflect, sparks insights into the process and primarily that making sense of data is inherently pleasing. They take this with them into analysing their interview data the next week.

As these examples attest, thematic analysis is a technique that can be applied to many forms of data. It is also, however, a technique that students benefit from learning about in relation to quite specific data sets and guided (at least some of the time!) by specified research questions. In the examples, there are shared lightbulb moments – when students start to see the value of a research question as a guide for their analysis – and more dispersed ones, as, often through dialogue and (re)writing on paper or sticky notes, students distil, conceptualise or organise codes and themes. There are others still when abstract terms like ‘induction’, ‘deduction’ and ‘reflexivity’ take on a more embodied meaning – as students see how their own positionings, assumptions and experiences inform their analysis. The two kinds of data offer the familiarity of an everyday object or life experience together with the opportunity to step back from the familiar to identify patterns, explore themes and become analytical. And they get it that making meaning this way is one of the more satisfying things that social researchers do.

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8. Enacting methodologically grounded qualitative coding via critical use of manual, digital and GenAI tools

Christina Silver, University of Surrey

I teach Computer-Assisted Qualitative Data AnalysiS (CAQDAS) to students and researchers at various stages of their research careers, most typically via open-registration intensive workshops lasting between 1 and 5 days. Learners attend on a self-selecting basis to develop their analytical skills and learn how to get the most out of their chosen digital tools. This means leaners at each workshop have diverse backgrounds and experiences. For example, some are part-way through their doctoral studies, others are early-career researchers, and some are more well-established academics or applied practitioners. In addition, they come from a variety of disciplinary backgrounds, most often social science disciplines but spanning many other contexts as well. This means that my teaching of computer-assisted qualitative analysis has to connect with a variety of theoretical, methodological and practical needs.

Underlying how I do this is the principle that the analysis methods being used affect how best to use digital tools for each study. In the language of the CAQDAS pedagogy I co-developed called the Five-Level QDA method (Silver & Woolf, 2019), this involves ensuring that analytic strategies – what you plan to do – drive software tactics – how you plan to do it – when using any tool. The five levels comprise two levels of strategy (objectives and analytic plan), two levels of tactics (selected and constructed tools), and a middle level (translation) between the two. The method unpacks the contrasting nature of analytic strategies as emergent and iterative, and software tactics as algorithmic and pre-determined, focusing on learning how to translate back-and-forth between them, to accomplish analysis that remains true to the ethos of the qualitative method being used.

Those that come to my workshops use different analytic methods and different digital tools. They seek to learn how to harness their chosen CAQDAS-package (e.g. NVivo, MAXQDA, ATLAS.ti, etc.) to enact their chosen analytic method (e.g. Reflexive Thematic Analysis, Critical Discourse Analysis, Qualitative Content Analysis, etc.) A common technique across most – although not all – qualitative analysis methods and enabled by most digital tools designed to facilitate the process, is qualitative coding. Workshops where learners have diverse coding needs provide opportunities to discuss its various roles in the analytic process and the

importance of the choice and use of tools. Some are keen to explore technological developments in coding features, such as the capabilities provided by text-mining tools and Generative-AI. Others are keen to find ways of managing the messy process of pen-and-paper coding methods by transitioning to the use of digital tools without changing the essence of the analytic process.

There are different ways of teaching qualitative coding methods and tools, for example, a methods-first approach in which methods are taught first, followed by how they can be operationalised using tools; a methods-interwoven approach in which the teaching of methods and their technological operationalisation are oscillated, and a methods-via approach in which methods are taught through the use of tools (Silver et al 2023). Here I discuss teaching qualitative coding via the use of tools which brings to life how they can be enacted differently according to analytic method and the tools used.

Since Generative-AI (GenAI) tools that harness the capabilities of Large Language Models (LLMs) began to make their way into the qualitative analysis space, learners have become increasingly interested in understanding whether and how their use can or cannot contribute to the processes of qualitative coding. This adds a layer of complexity around the teaching of coding because GenAI-assisted tools can contribute to coding in ways not possible through the use of other tools. For example, suggesting codes and definitions based on selections of text (a form of inductive coding), identifying data segments that match researcher-specified code definitions and explaining the rationale (a form of deductive coding), and reviewing human coding for e.g. inconsistencies, capturing nuance and relevance (forms of code refinement). Such GenAI capabilities raise significant questions about the nature of interpretation in qualitative analysis and whether GenAI tools can do it.

I have designed a series of comparative coding exercises that are powerful ways to discuss the interpretive processes involved , and to explore the potential use of different tools, including GenAI, to deepen critical reflection among learners about what qualitative coding is, its place in different analytic methods, and the role of different tools and interpretive processes in enacting it (Silver, forthcoming). One of these exercises compares human-coding with content-based auto-coding and GenAI coding, via a deductive coding exercise designed to explore similarities and differences in how humans interpret concepts, whether the use of digital tools replicates or

can contribute to the process, and the nature and implications of using different tools to enact coding.

Each learner separately codes the same extract from an interview or focus-group transcript using highlighter pens on a hard-copy print out, or comments in a Word file according to their preference. They are provided with code names and definitions and asked to apply them to the transcript extract, without discussing the process with anyone else. Some of the codes are more content-based and descriptive, others more nebulous and interpretive. The group then shares and discusses the similarities and differences in their individual coding.

At the strategies level, this prompts discussion about the different sorts of concepts that codes can capture, the importance of code definitions, the interpretive nature of coding, and the role of researcher reflexivity. At the tactics level, it prompts discussion about the differences when coding in hard-copy and using a word processor, reflecting on the impact of the tool on the way humans engage with the text. Almost always there are some interesting differences in how learners apply the codes, and I facilitate the methodological grounding of their coding experiences and the differences between their coding by asking questions designed to bring to the surface their assumptions.

We then move into a CAQDAS-package to consider how the same coding exercise – i.e. using the same transcript excerpt and the same deductive codes and definitions - could be enacted using (non-GenAI) tools designed to facilitate qualitative coding. First, we explore content-based coding tools, taking one of the more descriptive codes and brainstorm which words and phrases we could search for to capture relevant passages of data that might be candidates as instances of that code. We create collections of the terms and then use the available tools to find and auto-code the ‘hits’ and surrounding context. This is followed by attempting to do the same for one of the more nebulous concepts.

At the strategies level, this prompts discussion about the extent to which the explicit use of language sometimes adequately captures relevant meaning, and sometimes cannot do so, deepening discussions about interpretation when coding goes beyond the explicit. At the tactics level, it prompts discussion about using tools appropriately, not as short-cuts but because they contribute to the analytic task at hand. These discussions emphasise the importance of choosing tools in the service of analytic methods, rather than simply because they are available,

or appear to speed up the process, which are underlying principles of the Five-Level QDA method.

We then layer this up further by instructing GenAI coding tools to do the same coding we did at the beginning of the exercise (in hard-copy or in a Word file), to see how the result compares to the human coding. This works well if the human coding is replicated in the CAQDAS-package first, so that the GenAI coding overlays it and direct comparisons can be made. It also works well to again compare a more content-based code with a more nebulous concept, and it can be particularly instructive to use the same two codes as in the second part of the exercise to make direct comparisons across tools.

At the strategies level, this deepens discussion about what interpretation is when considering any differences in the extracts that the GenAI tool coded in comparison to the earlier human coding. At the tactics level, this is layered up by discussing circumstances in which such coding may contribute, for example, to support certain analytic methods, or when working with certain types of qualitative material and so on.

Throughout this three-phased comparative exercise, we ask ourselves and each other a series of questions, derived from several frameworks I have developed to encourage critical thinking about tool use for qualitative coding (Silver, forthcoming). These include asking why tools are being used, when they are being used, how they are being used, what they contribute to the process, and whether they match the study perspective. In so doing, we can critically reflect on what is gained through the use of tools, and what is lost, which I found to be particularly powerful questions to ask myself when I began learning about the potential role and implications of the use of GenAI for all aspects of the qualitative research process (not just coding). This and other related comparative coding exercises, also facilitate discussion about enacting qualitative coding appropriately in relation to the methodological spectrum. For example, discussing the value of differences in how individual interpret in purist approaches, the requirements for achieving inter-coder consistency in more positivist approaches, and the benefits and challenges of combining epistemological perspectives in pluralist approaches.

In the sessions I've led on these topics recently, I have found learners to be incredibly engaged in these discussions, rarely simply adopting GenAI to shortcut analysis as is often feared, nor dismissing their role out-of-hand before experimenting for themselves. Exercises such as the

one described here, can not only be powerful ways to teach methodologically appropriate use of tools to enact qualitative methods, but also to discuss the techniques involved in those methods from a variety of perspectives, via the use of tools. A frequent 'lightbulb' moment in this respect involves reflecting on the fact that highlighter pens are tools, just like CAQDAS-packages and GenAI are. Although very different in nature, all tools have consequences on how we enact methods, and comparing their use can bring to life the methods themselves. Therefore, exercises like this, that are designed to foster critical engagement with and about methods and tools, via the strategies drive tactics framing of the Five-Level QDA method, help learners see their role in and responsibility for ensuring the choice and use of methods and tools are appropriate in undertaking and demonstrating rigorous qualitative research.

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9. From lecture to lived method: Bringing ethnography alive in the classroom

Heather May Morgan, University of Aberdeen

As a lawyer/ linguist, turned philosopher/ social scientist, turned health services researcher and digital health innovator, my methodological identity has at least remained consistent over the past two decades! Although I have traversed disciplines and worked on multiple and mixed methods projects, my enduring passion and notable contribution to research and teaching has concerned ethnography/observation.

'Ethnography' broadly involves the systematic study of, and writing about, people, societies, and cultures using direct observation. Ethnography requires immersion and depth of genuine shared experience, connection, compassion and co-production with groups in everyday places and spaces over a period of time, meanwhile gathering all forms of data possible – memories, conversations, information via notes, pictures, artefacts – and then a professional distance for writing up, which is conducted in ways that other approaches omit from data collection, analysis and reporting. I consistently champion embracing the complexity of conducting such work in challenging operational settings to realise its value in knowledge generation. I have broken boundaries in applying observational and participatory techniques within places I do not belong, police stations, mother and baby groups, and ambulances.

Despite the competitive funding landscape, I have advocated for building in this resource-intensive and ethically provocative approach into projects of all scales and I continue to pro-actively teach the next generation of researchers not just the what and why but also the how. In a one- or two-hour lectures as part of a series of 'introductions to' various qualitative research methods, I employ some tactics to spark 'aha' lightbulb moments in the students' learning about ethnography.

Over the years, I have meant to write up a pedagogical reflection on teaching ethnography/ observation. I have published a methodological case study (Morgan 2017) and papers (Morgan et al 2015, Porter et al 2020) reporting ethnographic research findings for NIHR but I have never explained the way that I impart, inspire and equip others to pursue this method themselves within a classroom, and so I appreciate this opportunity.

When I teach ethnography/ observation, predominantly to postgraduate students in the applied health sciences with clinical or scientific backgrounds (and very much in quantitative comfort zones where research experience is concerned), I am looking for them to imagine how it is to do ethnography, to be an observer/ participant, to see the ordinary in new ways, to perceive wonder in the mundane, to challenge conventions and norms in their perspectives.

After the initial introduction to the session, I begin by physically re-positioning myself around the room to question why I stand at the front to lecture. I ask how they all knew to file in and sit on chairs at desks facing the front. I invite them to imagine me stood there with my back to the class and how it would feel if I was behind them. There are some laughs, some interesting expressions, but we all start to consider why we do things.

I then develop this and move a chair, which I sit on, at first facing students with a notepad and pen, intently staring. Next, I sit to the side behind the class, discreetly, before joining a row of students, covertly 'fitting in' as one. I talk about observer/ participant roles in ethnography, using body language and props to discuss the effects these have on natural settings and relationships between research participants and ethnographers, referencing Gold's Typology (1958).

Following on from these more physical 'play acting' gestures, I talk about activities like getting the bus to class, buying groceries, everyday things we engage in. I query why we do things like wait at a bus stop – how do we know to do that, what we ask the driver, why we move quickly and awkwardly to a seat, perhaps say 'good morning' to a fellow passenger. Why do we discuss the weather with a shop assistant, talk holidays with hairdressers?

We then consider people, cultures and exoticism. The weather and holidays – are they uniquely British customs? What assumptions are we making? How do we fit in? What do we miss? How do we take care and acknowledge the privilege we may have in being able to conduct ethnographic research – quite literally 'writing about people'. I display a 1920s photograph of anthropologist Bronislaw Malinowski (image here: https://static.polityka.pl/_resource/res/path/be/16/be16c69a-a731-4786-aa27-cbf1a7fa7413), widely regarded as the Father of Ethnography, Malinowski, a then middle-aged white man donning a pale suit, is sat in the middle of a group of black men wearing traditional clothing. His work, while having a profound and lasting effect on the discipline of social anthropology due to his groundbreaking field research among indigenous communities, became controversial as his

representations of ‘others’ and, his ethnocentric diaries, later raised questions about his (perhaps of its time) outlook.

In a direct attempt to decolonise the curriculum at the University of Aberdeen, where I teach, I present students with Horace Miner's 1956 'Nacirema'). As we read the short piece, I observe the ‘aha’ moments as each student, each reader, realises that this is a joke article, a critique of Malinowski, and those about whom they are reading are ‘Americans’ (anagram). The charm boxes, household shrines and mouth rites lose their magic and become oddly familiar.

Through this process, I try to bring ethnography to life by creating an immersive experience to help students understand not just the theory (which features in the slide deck too!), but the practice. I want them to question everything they do and see, to acknowledge the wonder an ethnographer should find in every detail, and their merits as data/evidence, but also to be responsible researchers when representing people, societies and cultures.

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10. Theory-informed research: exploring the potential and the limitations of using theory in the research process

Jo Rose, University of Bristol

In dissertations at all levels, students need to engage with theory – at the conceptual stage (thinking about the focus of the research and developing the research question), at the design stage (thinking about how they will answer their research question), and at the analysis/ interpretation stages (thinking about what their data tell them and how to frame it). These stages are of course intertwined. Students can struggle with *how* to use theory in their research, however, either shying away from it, or conversely assuming that everything about their research, including design and analysis, will be dictated by theory. The following activity (which focuses initially on survey analysis) has supported students to explore the potential of theory to *inform* the research cycle. The activity arose out of my desire for students to critically engage with and evaluate theory – but after a few iterations I realised that we also had really valuable discussions about the potential and limitations for use of theory in research.

I use this activity in a class about motivation and aspiration, on a Master's conversion programme in Psychology of Education. I believe that the principles would work well for both third year undergraduate and Master's level, for any topic where there are a number of theories that could be used to frame and understand the field, and where open-ended survey data can be sourced.

This is a two-hour session with a fairly large class (usually around 80+ students). The intended learning outcomes for the session are that students will be able to:

- Describe, summarise and apply theories (in my case, of motivation in education)
- Select an appropriate theory to explore a chosen context, and justify that selection
- Recognise the strengths and limitations of a theory in supporting exploration of a context or dataset.

In the first half of the session, I introduce students to a range of theories about motivation and aspiration. These have included, for example: Maslow's Hierarchy of Needs; Dweck's Mindsets and Achievement Goal Theory; Deci and Ryan's Self Determination Theory; Eccles' Expectancy

Value Model of Behavioural Choice; Gottfredson's Circumspection and Compromise; and Oyserman et al's Possible Selves. At the start of the class, I ask students a series of questions about their own learning and academic motivation and as we go through the theories, I ask reflection or discussion questions to highlight how the theories can be used to help them reflect on their own circumstances. We then explicitly pull that together at the end of the first half, relating the original questions to the theories.

In the second half of the session, students start working in small groups, usually between 4 and 6 students. I introduce a list of questions that can help students critically evaluate theory, which currently includes:

- Is the theory logically coherent?
- Does the theory have any contradictions?
- Are there gaps in the theory?
- What critiques do other researchers have of the theory and/or the evidence for it?
- How well does the theory predict?
- What predictions can be made from the theory?
- What is the evidence for these predictions?
- How good is the quality of that evidence?
- How good is the theory's explanatory power?
- Does it provide a rich description?
- How good is the quality of the evidence for explanatory power?

This supports students in their understanding of criticality, and highlights that no one theory can do everything – different theories have different strengths and different purposes.

I provide each group with part of a dataset from a survey where 2000+ young people (ages 15/16 and 17/18) were asked (amongst other things) to list up to five of their 'goals, hopes, plans and dreams'. Each group has open-ended responses to this question from a few hundred students, which gives them more than enough to work with. I ask students to start to analyse their portion of the dataset, by creating categories for the responses – essentially using content analysis. Specifically, I ask whether any of the theories we discussed can help students to create useful categories.

As the students work through the dataset sections, I (and usually a teaching assistant) move around the room to support students in their discussions. The students usually start by trying to create categories from theories and fit the data into those categories. This is when the 'aha' moments start: students realise that the survey data is not structured around the theories, so there's not enough information to do this effectively. The survey data then help them evaluate the theories and recognise what the affordances of different theories are. In the plenary I ask the following questions:

- Can you use the theories to categorise the responses?
- Can you use the theories to ***interpret*** or ***understand*** the responses? (i.e. find an underlying motivation)
- How else can you categorise or interpret the responses?
- What else would you like to know about these responses, to help you think more about the theories?
- What did the theories enable you to do with the data?
- How did they help you think about the responses?
- What were the limitations of the theories in this exercise?
- Did the responses help you think about the theories at all?

These two sets of questions at the end of the task help to structure the 'aha' realisation. Students begin to recognise that different theories have different conceptual affordances and different practical affordances (i.e. for use in analysis); they begin to explain the importance of integrating theory in the design to help focus analysis; and they discuss how analysis can take you beyond the bounds of particular theories and see the value in that.

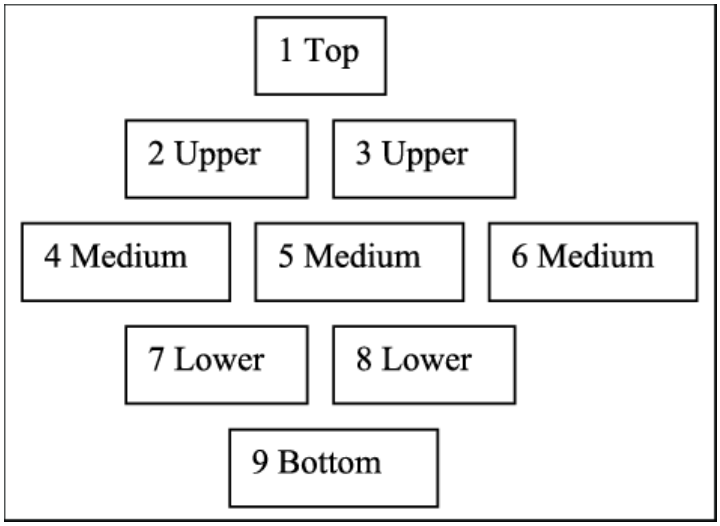
Section 3: Lightbulb moments through creative exploration

11. An exercise in thinking critically about participatory research

Melanie Nind, University of Southampton

I teach our doctoral students in education about participatory and emancipatory research in an optional afternoon workshop. I want to inspire them to think in new ways about how we might conduct research without zealously advocating an ideology. The challenge I find is wanting to convey so much about the topic *and* foster critical thinking about it in the little time we have together such that they can apply what they learn. My solution has been a mix of exposition and class discussion with an exercise sandwiched in the middle. This exercise has proved to be fun, motivating and thought-provoking in equal measure. As the exercise facilitates discussion and understanding of what is important about participatory research data generation methods, I share it here with other methods teachers. For context, I introduce the students first to the changing dynamics and discourses of participatory, emancipatory and inclusive research and to their functions to include, disrupt and create culture change. We only look at methods after considering the features of the wider social turn toward democratising research.

The exercise itself is done in small groups using sticky notes and the diamond 9 method (Clark, 2012). I ask the students to write one research method for generating data on each of their nine sticky notes and then to arrange them in diamond 9 configuration (see figure) according to which is the most and least participatory. As it can be time consuming to generate their nine methods to work with, I give them some starter suggestions: structured interviews, focus groups, photovoice. These provide deliberate contrasts and serve a useful purpose as talking points in the plenary. The process of positioning (and re-positioning) the methods in the hierarchy requires the students to engage with core concepts in participatory research about control and voice and choice. They are stimulated to consider the researcher-researched power dynamic, reflect on how particular methods can be made more or less participatory (such as unstructured rather than structured interviews), and some even discuss whether it is the method or its users and purposes that make research participatory. When they have completed the task (or the allotted time is up), I invite them to look at each other's work and to reflect and comment on the exercise.



The diamond 9 configuration

In the plenary I also share some of the things I observed and dialogue that I jotted down as they worked. This is useful as inevitably some groups take longer to reach consensus and so have an unfinished product but rich learning points in their dialogue that I can illuminate. The nuances of talk such as, 'how is photovoice different from photo elicitation?' and 'it depends on who the interviewer is - it being a peer could change everything' are helpful for highlighting the power dynamics surrounding, as well as within, the methods. Further between group dialogue ensues. Rarely do groups include diamond 9 as one of their methods so a finale question is where they would place this method in their diamond. I tell them about previous groups who have sabotaged the exercise by refusing to make a diamond shape; one group put all the methods in a line to make their point. These uses, I say, show that the method is well-suited to participatory research because the participants can grab hold of it and take it in a new direction to communicate their perspectives. The lightbulb is truly lit as these students really appreciate how, for methods to be participatory, they need to flex and yield to participant power.

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12. A Truly wonderful origami fox: Collage-making around ‘The story of animals and me’ to explore how a research question can be felt through

Micol Pizzolati, University of Bergamo

What happens in and with the student groups I’ve been meeting over the past three years, thanks to my teaching of *Applied Social Research*, is something I truly cherish — it challenges, inspires, excites and moves me. These are third-year students in a BA in Communication Studies. In their journey so far, they’ve explored how sociology helps explain representations and behaviours through empirical research, and how choosing and applying a method is always shaped by context. In my course, I aim to foster both reflection and skill-building around research techniques rooted in feminist, postcolonial and participatory traditions. In doing so, I am learning how to teach approaches that invite participants to create their own narratives — often grounded in biographical experiences — by engaging with the making of artefacts, whether material or digital.

So, I guide students into processes that combine well-established qualitative methods — such as interviews and focus groups — with techniques drawn from outside conventional research, especially from artistic and therapeutic fields. My intention is to help them discover how such practices can surface associations that might otherwise remain blurred or backgrounded, and to enable a representation of complexity that may yield unexpected insights.

There’s a passage in the textbook I co-wrote with two colleagues and friends that feels especially important to me. In the chapter on the research question, it says:
‘Participants are not simply treated as sources of data, but as actors in the research who are involved in formulating and carrying forward research questions.’ (Giorgi, Pizzolati & Vacchelli, 2021, p. 54)

This is a meaningful — and slightly elusive — idea. That’s why I decided to offer my students an experience of what it might feel like to formulate and carry forward a research question. To do so, I drew on one of the approaches we cover in the textbook: the collage interview. In a session about halfway through the course, I brought in an abundance of materials — paper, newspapers, magazines, colours, scissors, glitter, stickers, threads, tape… — and invited the

students to spend the first hour creating an individual collage around the theme *'The Story of Animals and Me'*, and the second hour discussing, freely, what had happened to them as they made it.

Interestingly, one student decided to make an origami instead of a collage — a choice that sparked a great conversation about the value of unexpected, out-of-the-box responses in research and how letting participants take their own path can bring richness and surprise to the process.

That day I didn't take notes of our discussion, but I did take photographs of the fifteen collages that were made — and later described with affection and amusement. And it's through those images — taken with permission to share with others and show our work — that I now return, more than a year later, to that class session, to share a few details here. I include four collages — the ones that struck me the most at the time:

(a) an image of a very luxurious interior, onto which had been pasted a photo of a black cat and a clipart of a little dog
(b) a mix of words, photos, drawings and symbols expressing which animals had provoked fear (spiders, swans, sharks, dogs) and which had inspired great affection (cats)
(c) cuttings from ads for mosquito extermination services, alongside supermarket promotions for cured meats and fish
(d) a (truly wonderful!) origami fox.

Visuals that support learning

I remember thinking that these students had, in their reflections, managed to express how — in making their collages — they were caught between immersing themselves in their own stories and, so to speak, using them to bring into focus certain questions that could be explored in empirical research, whether through that technique or others. We didn't go into detail on this during that lesson. With the clarity of hindsight, I attempt to articulate those questions in my own words today:

> (a) Why is it that some — indeed, many — people can't imagine life without companion animals?
> (b) Do those who speak of fearing certain animals also worry that this fear might make others see them as lacking in sensitivity?
> (c) How do we navigate, in our everyday lives, the contradiction of loving some animals while living in a society organised around the killing of others?
> (d) Can the friendship between a person and a non-human animal be described using the same words we use to talk about friendship between humans?

This experience shows how using creative, embodied practices — like collage-making — can open new pathways for students to engage with thinking about how research ideas can emerge by drawing beyond just the intellectual level. What makes this approach distinctive is that it grounds students' curiosities in their own experiences: by making space for personal stories, hands-on exploration, and emotional reflection, students are invited to *feel* and *anchor* potential topics to be explored. The interplay between the material, tactile engagement and affective reflection helped them connect with the winding but inspiring journey of empirical research. I believe we were able to foster moments of insight in our classroom, where making collages becomes more than just a possible tool that enters the scene only after defining 'what you want to find out', and it is discovered as a meaningful way to enter the world of empirical research.

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13. Analysing photographs in qualitative research

Nicole Brown, UCL

Introduction

In contemporary academia, where an ever-increasing emphasis is placed on participatory and creative research designs, analysis continues to be one of the most intimidating steps in social science research. Many experienced and novice researchers from postgraduate taught through to professorial level ask their participants to supply photographs as part of their data collection, only to then not analyse the photographs but to merely use them as 'a way into a conversation'. In my experience as research methods trainer, the reason for the reluctance to engage with visual materials is a particular level of uncertainty or anxiety around analysis.

The 'aha' moment I try to facilitate is simple but powerful: analysing images is not fundamentally different from analysing texts. Once learners see this, a whole domain of research materials opens up to them.

There's no magic: visual and textual analysis share the same logic

Researchers often treat images as mysterious or requiring special expertise. In reality, the underlying questions of qualitative analysis remain the same:

What is here? What does it mean? How does it relate to the context? How does it support or challenge the research questions?

The difference between textual and visual data is only superficial. Textual data offers words to read; visual data offers things to see. But in both cases, researchers need to describe and interpret carefully and transparently. Only, with text, people trust themselves to interpret without overinterpreting because they have a lifetime of experience of reading and interpreting text. With images, people often feel that they lack that experience, although in truth they don't. Nowadays, we are surrounded by still and moving images more than ever before: advertisements; social media posts; memes; and caricatures. They all rely on their consumers knowing and understanding visual language.

Making this equivalence explicit is the first key move to spark the 'lightbulb' moment, as this makes learners realise, they already have interpretive skills they can transfer.

A simple two-step approach: ‘What do you see?’ and ‘What do you make of it?’

Another issue with the interpretation of visuals is that people often look at an image, and interpret it straight away, not realising that they actually do so. As a result, when they sit down in the hope to analyse a photograph, they have practically nowhere to go because they have already jumped to interpretations.

To break down that barrier, I introduce a straightforward process that demystifies visual analysis using the two questions: What do you see? and What do you make of it? By introducing visual analysis as a two-step process with a descriptive level responding to ‘What do you see?’ learners are encouraged to slow down and reflect on whether they jump to conclusions early.

At this level of interpretation, researchers are asked to provide careful, grounded description and to observe details without rushing to analysis. The task is to focus on naming colours, objects, composition, expressions, spatial arrangements, or the positioning of light sources.

Once the descriptive level is exhausted, researchers should focus on interpreting the observations they have made to respond to the question: ‘What do you make of it?’ Interpretation at this level requires the researchers to connect the visual to theory, context, potential participant meaning and to consider multiple possible, even opposing, readings.

This two-part question acts as a scaffold. It slows learners down and makes their reasoning visible. It also mirrors what they already do with textual data: quoting and then interpreting. This approach consistently generates ‘aha’ reactions because it reassures people they already know how to analyse. Now they’re just applying it to a new medium.

The approach in practice

Whether I teach in-person or online workshops, I always bring examples for learners to engage with. I share a photograph and set the task ‘to analyse the photograph’. Learners usually dive right into the process without asking details about the context of the photograph and without focussing on the two questions on the slide. In small groups, they usually agree on a generic interpretation suggesting that the photograph is of a woman who is depressed and/or fatigued. It is only through the plenary discussion, where I specifically ask to respond to the question ‘What do you see?’ that learners realise that we cannot actually be sure that the person in the

photograph is a woman. The collaborative element makes the interpretive process explicit, and the discussion reveals how different perspectives and information about the context enrich analysis. When I share details relating to the context of the photograph, I also emphasise how close to the truth their interpretation of the photograph is without even having known about the contextual details.

For early-career researchers in academia or the third sector, who often work with participatory or creative methods, this two-step approach is especially valuable. When participants in their research produce images or creative outputs, researchers want to analyse them rigorously without flattening participant meaning. The two-step framework preserves that respect: first attending closely to what participants chose to show, then interpreting thoughtfully in context.

So, although I approach the teaching of analysing photographs as a linear, two-step process, there are many more implicit considerations embedded within this framework, which we explore together in our plenary discussions. One such underlying question is, ‘What does all of this mean?’ This question reflects the deeper interpretive work that must accompany methodological rigour. Drawing meaningful conclusions requires more than technical execution. It demands engagement with context, theoretical grounding, and complementary sources. These elements, though not always overt in my instructional model, are essential for producing insights that are both valid and relevant. As such, my teaching must also cultivate the critical reflexivity needed to navigate the complexities that lie beyond procedural steps. This is why I also model reflexivity, acknowledging that our interpretations are situated. We discuss whose meanings are prioritised, and how to check interpretations with participants in participatory designs.

Conclusion

The goal in all of this is to demystify analysis. There is no special, arcane skill needed to work with visual materials other than what we have a lifetime of experience of. It is the same commitment to careful, transparent description and interpretation that underpins all qualitative research.

By teaching researchers to ask, ‘What do you see?’ and ‘What do you make of it?’, we open the door to richer data sources, while keeping the analysis rigorous. That moment of realising ‘I can do this’ is the lightbulb I am after.

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14. Weaving, not cataloguing: A playful way to teach the literature review

Yenn Lee, SOAS University of London

Background

I work at a research-intensive university in London, where my primary responsibility is to teach research methods to postgraduate research students across the social sciences, arts, and humanities. This includes a semester-long, credit-bearing module on research project management, which all new students are required to complete in their first year, prior to their upgrade from MPhil to PhD candidacy. The cohort is large, typically comprising over 90 participants from highly diverse backgrounds and subject areas. As a result, I need classroom exercises that are disciplinarily agnostic and conducive to peer-led discussion.

One such exercise I use is in teaching the literature review. It is a task that tends to preoccupy students, largely because it forms a significant part of the assessment for their PhD upgrade. Yet many tell me that the nuts and bolts of how to approach it remain deceptively opaque.

When I first created the exercise several years ago, my goal was to help students realise that conducting a literature review is not simply a matter of reading extensively and demonstrating that they have done so before moving on to the 'real' research. Instead, its true value lies in the researcher's ability to interpret and synthesise what they have read into a coherent narrative while situating their own project within that narrative.

There is no shortage of resources that emphasise this point. A recurring piece of advice is to avoid presenting one's reading as a 'laundry list': Author A said this; Author B said that; and so on. However, despite these warnings, students often fall into exactly that pattern. In this context, I developed this exercise to interrupt that tendency and encourage a more critical and creative approach.

Many possible ways to weave a narrative

As shown in the figure, a slide from the session, this exercise involves providing a pre-selected mix of 19 film titles and asking students to discuss how they might 'weave' them into a narrative before presenting their approach back to the whole class. There are no other prescriptions. Students are encouraged to team up with colleagues sitting near them, likely from disciplines and cultures different from their own, and if there are films that they have not seen, they are free to ask others who have or to look up synopses online together. The list also includes a 'wild card', allowing each group to add one film of their choice if they feel it will strengthen their narrative.

Ice Age (2002)	The Da Vinci Code (2006)	The Avengers (2012)	Bridget Jones's Diary (2001)	Spy Game (2001)
The Day After Tomorrow (2004)	Despicable Me 2 (2013)	Rise of the Planet of the Apes (2011)	The Bourne Identity (2002)	Suffragette (2015)
Kingsman (2014)	Men in Black (1997)	Jurassic Park (1993)	Wall-E (2008)	The Hunger Games (2012)
Notting Hill (1999)	Skyfall (2012)	Rush Hour 3 (2007)	Her (2013)	

'Weaving' exercise

It has been a pleasure to encounter fresh perspectives each year. Some groups have chosen to cluster the films thematically, while others have focused on chronological developments to identify patterns over time. Some have attempted to reverse-engineer how the list came about in the first place, whether by commercial success, critical acclaim, or other criteria.

Recurring themes include critical observations that the selection is overly focused on Hollywood productions and could be made more 'decolonised'. Other themes often explored include the use of technology, both on and behind the screen, evolving portrayals of women, and, more recently, the climate crisis. The emergence of the climate crisis as a connecting thread is particularly interesting, reflecting a growing concern among students about global challenges facing their generation—something I had not anticipated when I first created the list.

Depending on the directions students take, I can introduce additional points for discussion: How important is it to have actually watched these films for this exercise? How do we justify the time

span covered by this selection, namely from 1993 to 2015? What should we do with titles that do not fit easily into the narrative we are aiming for? Conversely, are there films that students wish were included (besides the wild card)? How should we handle franchises, such as whether to include sequels released after the list was compiled? Given that some films are adapted from books, should we consult the original sources to inform our interpretation?

If fellow teachers wish to adopt a similar activity in their classrooms, they can, of course, create their own mixes to suit the composition of their students and their research interests. The exercise has broad applicability.

Why this exercise works

Having run this exercise numerous times over the years, I am pleased to share that student feedback has been consistently positive. Many have said it helped them grasp what it means to integrate various sources and position their own projects in relation to those sources. Others have found that it prompted them to rethink their literature reviews, realising, for example, that their drafts read more like annotated bibliographies than developing arguments.

A key factor in the exercise's effectiveness is that there is no single correct answer or approach. Working with these seemingly random film titles alleviates the pressure of 'getting it right' and invites a playful yet purposeful engagement with form and argumentation. Using film titles also detaches the task from disciplinary jargon and content expertise, allowing students to focus on how to justify the inclusion or exclusion of certain material and communicate clearly with their intended audience. It mirrors the literature review process in that researchers must work with what is available, decide what to prioritise, and reflect on the frameworks they use to connect disparate pieces into new insights.

Moreover, the exercise builds confidence in learners who may feel intimidated by the reality of having just embarked on a multi-year PhD project. Few have seen all 19 films; instead, everyone begins with the same dataset and negotiates the subsequent steps collaboratively. For international students or those unfamiliar with UK academic conventions, it also provides an accessible entry point into critical discussion and peer interaction. By creating a low-stakes environment, the exercise enables students to identify patterns, tensions, and connections without feeling they must be fluent in methodological terminology from the outset.

When I close the session by reiterating that the literature review is an irreducible part of research, demanding the same critical thinking and analytical skills as data collection and analysis, many students nod in recognition, as if seeing the task in a new light.

Literature review in times of AI

This exercise has also stood the test of time. Students are increasingly exposed to AI-powered tools that promise to speed up the literature review process. These tools, which range from suggesting relevant articles to generating summaries or thematic maps, can be useful, especially for managing large volumes of information. However, they also promote a procedural approach to reviewing the literature. Researchers may begin to see the task as one of extraction: input a few keywords, retrieve relevant papers, and summarise each in turn.

While the debate continues about whether, and to what extent, it is acceptable to outsource reading to such tools, what is often lost is the sense of the literature review as participation in a scholarly conversation. This exercise reminds students that whatever tools they use, or choose not to use, it is their responsibility to make sense of complexity, not merely to catalogue it. This is why each group's final woven narrative (tapestry) differs, even when they begin with the same set of film titles.

Section 4: Learning relationally with peers and others.

15. The unstructured interview topic guide exercise

Rosalind Edwards, University of Southampton

I teach qualitative research methods to Masters level social science students. By the end of the semester-long module we want students to gain an understanding of what it is to be informed, and reflexive qualitative research practitioners. On the front cover of our module guide we have an image of lightbulbs to capture the illumination about qualitative researching that we aim for.

Module guide cover

The students who take the module each year are an internationally diverse lot, but more significantly they have quite different levels of familiarity with qualitative research. While some may have knowledge of qualitative approaches, others often have only studied, for example, demography or statistics, and have little insight into qualitative research. In the case of one of the basic qualitative tools: interviewing, students can hold a view of this method as just chatting and not very rigorous. So, a key pedagogic question is how to switch on the lightbulb understanding that in-depth, unstructured interviewing is a skilful interactional dialogue and a thorough process of enquiry?

For quite a few years now I have been using a particular workshop exercise to help students think through how to develop and use unstructured interview topic guides. The workshop is preceded by an hour-long lecture on interviewing that looks at the various forms qualitative

interviews can take, along with debates about the nature of interview data, and a range of methodological and practical issues. The latter include types of qualitative interview questions, including broad descriptive openings; what, where, when, why and how queries; and comparative questions; and techniques such as silence, reinforcement, repetition, and probes. The lecture also stresses the importance of active listening.

The associated 'interviewing' workshop involves the students collectively generating an interviewing guide for an in-depth qualitative investigation of 'feelings about housework', followed by partnering in pairs and conducting a brief interview with each other using the guide. I use housework as the topic of inquiry because it is one that everyone can relate to and knows something about, even if they don't do much of it! The feelings element of the research is an attempt to position the activity firmly in the qualitative paradigm.

In the centre of a whiteboard[1] I write the interview focus in capitals 'FEELINGS ABOUT HOUSEWORK' (with feelings underlined), and I give the students a few minutes to think about questions they want to suggest for the guide. (If students read the module guide, they will have advance notice of the topic ...) I then ask the students to call out their suggestions, recording the subjects on the board in a form of a spider diagram or mind map. I organise and link the topics as we go along, grouping similar subjects together. The workshop is timetabled for 45-50 minutes, but if we had longer, I would just list the students' suggestions and ask them to group the items themselves.

Here are some of the key, cumulative lightbulb moments of realisation that often occur for students as we proceed through the interview guide exercise.

- What are qualitative questions?

Generally, the first questions students suggest for the interview guide are along the lines of 'how many hours housework do you do a week?' or 'what percentage of your time do you spend on housework?' I ask them what the answers to these questions will tell them about their interviewee's feelings on the topic. We acknowledge not much and talk about the difference between quantitative and qualitative eliciting questions. But we also consider that such numerical information might be useful as background context. This discussion spurs the

[1] This exercise could be carried out online via visual mapping tools

students to suggest questions that bring emotions into the enquiry. Sometimes these are along the lines of ‘do you enjoy housework?’, and we can discuss how ‘closed’ questions that can be answered with a straight ‘yes’ or ‘no’ will need follow up probes, or that we need to think about questions that are ‘open’ and require more extensive responses.

- Assumptions about what constitutes the topic

Occasionally a student will suggest something like ‘what do you think counts as housework?’ for the interview guide. When this happens, I get excited, write ‘definition’ on the whiteboard, and point out the importance of finding out how your interviewee understands the topic of enquiry. More often the issue of what falls within the parameters of housework for the interviewee doesn’t get raised, so after a while I ask the students whether cooking is housework, or washing up, or shopping, or dressing children, or taking out the rubbish, and we discover that we don’t all have the same view on what we consider as housework. I reinforce the point about not assuming you and your interviewee share a similar understanding of the topic of your investigation, write ‘definition’ on the whiteboard and remind students about broad descriptive opening questions that I raised in the lecture.

- Assumptions about interviewee circumstances

Division of domestic labour is a recurrent issue that students raise in the workshop exercise, through questions about who does the housework. As well as returning to the issue of whether and what this particular topic might or might not tell us about feelings, we discuss how we should avoid making assumptions about the interviewee’s household circumstances. They may be living on their own, they may be living in shared accommodation, or with parents, or partner and children. They may be buying-in housework help or be employed to do cleaning for others. But it is important to acknowledge that the students are thinking like social scientists when they are interested in pursuing division of labour issues.

Once we have a strong set of (relevant) interview guide topics up on the whiteboard, I ask students to pair up with each other, and to use the guide to conduct a practice interview with their partner, swapping roles after a period of time. We then come back together as a whole class to feedback how it felt to be the interviewer as well as the experience of being interviewed. Students are often enthusiastic about discussing the interesting and surprising substantive things that they learned about each other, raising similarities and differences in what they each

considered housework and their feelings about it. What we have in action here as the lightbulb moment concerns not making assumptions about shared understandings.

Generally, the students can need more encouragement to raise and reflect on their experiences of the process of being the interviewer. It transpires that often this is bound up with being unsure about what order to put the topics in the spider diagram guide and how to phrase them as questions, such that they felt there was no natural flow or direction for the interview. We draw out some messages from this experience. We acknowledge that if it was our actual research project we would know our interview guide very well and wouldn't need to keep looking at it or be stumbling about how to form questions. We would have a strong sense of what we wanted to know and why. From this we think about what active listening in an interview means – that we can follow what the interviewee is saying attentively, engage with what they are saying and respond flexibly and appropriately to them with our interview questions as and when, rather than following a strict question order and format. We can build from here into considerations of what makes for a successful in-depth qualitative interview.

16. Getting students engaged with quantitative methods: Inquiry-based learning and group assessment

Jessica Mancuso, University of Manchester

I have heard 'I'm just not a methods person' from undergraduates many times. Both students and staff often divide themselves into 'methods people' or 'theory people (David, 2011), imposing a separation between the two. This can make methods seem less essential to the discipline, even though the connections between theory, methods, and methodology are integral to sociology (Parker, 2011) (and to social sciences more broadly). Therefore, as a first-year methods teacher, one task is to guide students in seeing the value and role of methods in sociology and in developing theory. Moreover, in the class I convene, I need to demonstrate the importance of both qualitative and quantitative approaches and teach how research methods work in practice and how to critically consider the ways data is gathered about social life.

The biggest challenge in this is getting sociology students to be curious about quantitative methods. Overall, there has been a noticeable deficiency of quantitative teaching and learning in UK sociology, impacting students' understanding of the value and function of statistics in its research (Williams *et al.*, 2016). Students are often reluctant to learn these research skills, a trend seen in the social sciences generally (Adeney and Carey, 2011). The stress that comes over students' faces every semester, when it sinks in that the time has come for maths and statistical analysis, is familiar. Throughout the module, students frequently express that they are not a maths person, think numbers are confusing, or that statistics are stressful. Anxiety, especially, seems to creep in with the stress of being assessed on such skills. Dharmi Kapadia (2018), a colleague and one of the educators who previously convened my first-year methods module, wrote about strategies for engaging students. She emphasises that working with quantitative data enhances their data analysis skills and confidence in using it outside the classroom. She goes on to say that this is an increasingly important quality for students to have as our future 'thinkers, scholars, researchers, and data analysts' in a world becoming more and more inundated with large quantities of information. They should learn how to responsibly interpret different forms of data and understand how it is used in research. In agreement with this, it is not surprising that staff, not just students, become anxious about teaching/learning quantitative methods, especially if it is not their speciality and they want to teach statistics 'right',

ensuring it is rigorous while also having the learning be ‘fun’ and ‘painless’ (Lewis-Beck, 2001: 8-9; Adeney and Carey, 2011). To address this, my module employs an inquiry-based learning approach, where, with the support of teachers, students design and lead research projects as their final assessment. This approach enables students to conduct research, helping them become excited about methods (Parker, 2011; Archer-Kuhn, 2023). By using secondary survey datasets, students explore a research topic to produce a research report, presenting their findings as their final assessment.

In this piece, I focus on how I developed the quantitative assessment by transitioning from an individual research report to a group project, with the aim of facilitating 'lightbulb moments' for students learning research methods. Although students may be apprehensive about group work, it has several benefits, including the division of workload and encouragement of cooperation (Adeney and Carey, 2011). However, for this assessment, I made this choice primarily to create a supportive learning experience so that it was less overwhelming to learn about quantitative methods than working alone – what Williams (*et al.,* 2016) calls ‘a safety in numbers’ comfort factor. Collaboratively learning and working towards a common goal can reduce anxiety, providing an opportunity to enhance critical thinking skills and deepen knowledge of the discipline (McKay and Sridharan, 2024).

The assessment aims to enhance both peer and teacher support for students engaging with new and complex material, while also providing more flexibility and creativity in working with quantitative data. To help with students’ confidence in learning complex material, the assessment is scaffolded through smaller tasks such as group progress meetings with the course convenor, peer and self-review and a final poster presentation at a class end-of-year conference (Parker, 2011; Archer-Kuhn, 2023). Guidance and a structure for the assessment are provided. For example, students choose from pre-approved datasets to conduct their research, and they are offered readings to guide their projects. Additional support is provided throughout the module, having students conduct statistical analysis in weekly tutorials and they are taught study skill sessions that are embedded into lectures, such as how to design a research poster. Lastly, they are provided with marking criteria on teamwork and research integrity to gauge the quality of work and the goals they want to meet for this assessment.

As Kapadia (2018) says, for students who think they’re ‘rubbish at maths’, completing this assessment is an achievement. Together, the groups create research questions and

hypotheses, explore empirical literature and theory, choose the appropriate data set, process and analyse the data, and design a poster. By the end of the year, students have conducted bivariate analysis on large datasets, which includes generating frequency tables, two-way crosstabulations and chi-square tests. They experience working as a group, what it takes to organise a research project and how they can disseminate their research.

Over the past three years of doing this assessment, I have found that many students shift from being fearful and anxious to feeling more confident and critical about quantitative methods and group work. I have spoken with several students about how they are surprised at how easy they found quantitative data analysis. During group progress meetings groups share that through peer support they have more easily comprehended relevant concepts and analytical techniques than they would have been able to do individually. In these instances, their anxieties about complex material were put to ease through collaborative problem-solving. I, too, have been surprised, mainly around the critical and nuanced questions students bring about their projects, something that was rare when students were completing the individual assessment. They ask about their role in how the data is being interpreted and some are interested in more advanced statistics. Overall, I am finding that this approach to assessment has enabled students to get curious about research methods and areas they would like to explore, while pointing out the value that quantitative analysis has for sociology.

However, this assessment is not foolproof and inquiry-based learning, as well as group assessment, can present challenges. For example, some students seek more structure and guidance to reflect the kind of learning approaches they are more used to (Archer-Kuhn and MacKinnon, 2023). There are also challenges with implementing group work, such as the difficulty in organising students, fairness in assessment, free riders, as well as trying to ensure positive student experiences of collaborative work for a range of diverse learners (El Massah, 2018; Forsell, Forslund Frykedal and Chiriac, 2021; McKay and Sridharan, 2024). I have used a scaffolding learning approach to address common pitfalls of group work. For example, to mitigate the risk of free riders and issues of fairness, the progress meeting and group presentation are in-person assessments with all students required to participate equally to explain the part they have done in the project. Each student also submits a peer and self-review, in which peers mark one another and their self on teamwork performance, contributing to 15% of each student's mark. Of course, there are challenges, and through this experience, I

have found a personal teaching a-ha moment in how to navigate anxious students attempting to avoid doing statistical analysis. There are structural ways this is accomplished, for instance, students are required to complete analytical workbooks in mandatory tutorials for our class. But I have found that putting the onus on our sociology students that their education is their responsibility has also been effective. In my teaching, I instil that their learning and engagement in our module is a prerequisite for the year two mandatory Survey Methods module. Moreover, I explain that the programme is designed so that each year students have methods courses that build on each other and that this knowledge is crucial in doing well in their third-year dissertation. This seems to resonate with (at least some) students, grounding their understanding of why they need to learn methods in the first place. Indeed, this conversation is an attempt to address the issue of students' viewing methods as less essential than theory within sociology, as outlined earlier.

Overall, this change in assessment has helped generate a shift in students from being anxious to becoming more comfortable with using quantitative methods and seeing it as more approachable in my class. Looking ahead, the module will be further developed using a team-teaching approach to integrate both qualitative and quantitative expertise into our teaching to best support our students. Indeed, undergraduate research methods and statistics classes in the social sciences can be taught by non-experts in the discipline. However, making this class team taught is enabling us to use our expertise to think about the wider picture of how students are learning about quantitative (and qualitative) methods over the whole programme, so that our module is a starting point for the rest of the journey at university (Adeney and Carey, 2011; Parker, 2011).

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17. Sparking integrative thinking across methodological boundaries: building connection in a mixed methods 'masterclass'

Rebecca Johnson, University of Warwick

Introduction

This two-day, intensive, workshop-style masterclass is designed to support postgraduate health science students in developing confidence and creativity in mixed methods research. By combining technical knowledge, narrative framing, and applied practice, the program aims to break down perceived boundaries between methodological traditions and foster integrative thinking. The ultimate goal is to enable students to connect more deeply with their scientific enquiry and to design studies that align meaningfully with their research purpose.

Teaching Philosophy: Connecting Enquiry and Design

My teaching philosophy is grounded in the belief that genuine learning emerges when students are encouraged to connect with their motivation to discover. In the postgraduate classroom, my aim is to spark 'aha' moments through *connection*—between students and their curiosity, between their research questions and methodological tools, and between theory and practice.

Rather than positioning students as passive recipients of knowledge, I engage with them as researchers. I want them to see that the purpose of their scientific enquiry is not separate from their study design but fundamentally linked to it. When students begin to approach mixed methods research with curiosity, experimentation, and openness, they realise they are not confined by rigid methodological doctrines. Instead, they can view qualitative and quantitative approaches as complementary—like a well-considered wine and cheese pairing—rather than mutually exclusive.

Part of the role of a researcher is to become more attuned to the purpose of their enquiry. This awareness often develops through methodological exploration. I encourage students to embrace the unknown, reminding them that uncertainty is a natural and productive part of research. By navigating methods, they simultaneously navigate their purpose more deeply. However, I also recognise the pressures students often feel in the classroom: the desire to ensure they 'get it right' and fear around not deviating from established methodological

boundaries. Methodological tension is frequently experienced as a divide between qualitative and quantitative philosophies, particularly around what determines quality. To address this, I combine technical instruction with a narrative of purposeful enquiry, helping students see methodological choices not as rules to obey, but as tools for advancing their scientific questions.

Core Elements of the Masterclass

The workshop is structured around three interwoven elements:

1. **Technical Foundations of Mixed Methods** – Developing knowledge of designs, sampling, data collection, analysis, and integration.
2. **Narrative of Purpose** – Anchoring methodological decisions in the deeper 'why' of scientific enquiry.
3. **Applied Practice and Connection** – Linking theory and purpose through active learning, peer collaboration, and reflective exercises.

This structure encourages students to use mixed methods not just as a technical framework but as a lens for deepening their enquiry, uncovering insights that may otherwise remain hidden.

Classroom Approach: Learn, Apply, Reflect, Consolidate

Each session follows a consistent rhythm: **learn, apply, reflect, and consolidate**. Students transition from lecture input to applied practice, then to small-group discussion and reflection, before consolidating learning in a large group.

> **Day 1** introduces the rationale for mixed methods, basic design structures, and principles of sampling and data collection.
> **Day 2** focuses on analysis and integration, including the distinction between summary and synthesis. Students then apply this learning to construct and refine their own mixed methods study designs.

To make methodological thinking visible, students are asked to **draw their designs** at each stage. Equipped with paper and markers, they sketch how their enquiry and methods connect, adding detail after each session. This iterative process helps them identify gaps, test

alternatives, and build confidence in their decisions and they do this independently as well as with small group peers.

Encouraging Playfulness and Experimentation

While some students initially hesitate to draw their designs, I encourage them to embrace playfulness and experimentation. Even those reluctant to visualise their ideas benefit when nudged to start with a single box or step. I model the process by sketching alongside them or by drawing on their behalf as they articulate their design. This often surfaces the true challenge: articulating their uncertainty and decision-making process.

By sharing their designs within small groups, students engage in collective problem-solving. They reflect, modify, and justify their choices, gaining valuable feedback from peers. Challenge questions—such as 'If you approached this problem using an alternative method, what would change, and why?'—encourage critical reflection and methodological justification. These exercises strengthen students' ability to defend their design choices while also exploring reasonable alternatives. Equally, the alternatives consideration provides a way to strengthen their confidence in their design decision.

In some cases, students discover that mixed methods is not the most appropriate design for their research. Rather than being discouraged, this realisation reinforces their confidence, as it arises from a deliberate and informed consideration of alternatives. This process alleviates 'decision paralysis' and demonstrates that there is rarely a single 'right' way to design a study—only more or less appropriate choices given the research purpose.

Outcomes and Student Reception

The approach to this masterclass is designed not only to impart technical knowledge but also to build confidence and integrative thinking – to spark those moments in mixed methods education. By the end of the two days, each student has developed a mixed methods study design that has been scrutinised, justified, and refined through peer feedback and reflection. More importantly, they have strengthened the connection between their methodological decisions and the purpose of their enquiry.

Student reception has been overwhelmingly positive. Many enjoy the applied, hands-on approach and the creativity involved in drawing their designs. The opportunity to reflect with peers and to explore different methodological options often leads to significant breakthroughs.

For some students, readiness to draw and visualise their ideas is harder to achieve. These learners sometimes hesitate or feel reluctant, but with gentle encouragement—such as beginning with a single element or experimenting with different layouts—they are able to gain confidence. In articulating their choices, verbally or visually, they confront the underlying uncertainty that often holds them back. This process of ‘giving voice’ to their methodological challenges frequently leads to their own lightbulb moments.

Conclusion

This masterclass is not about teaching a single correct way to conduct mixed methods research. Instead, it is about **fostering integrative thinking across methodological boundaries** and helping students connect more deeply with their research purpose. By weaving together technical instruction, narrative framing, and applied practice, the approach supports learners in developing methodological flexibility, critical reflection, and creative confidence.

Ultimately, the goal is to cultivate researchers who see beyond the dichotomy of qualitative and quantitative, and who instead embrace mixed methods as a powerful means of enquiry—one that allows them to ask deeper questions, discover new insights, and strengthen the link between their purpose and their design.

18. Emotion: A barrier or a tool in learning methods?

Jo Edson Ferrie, University of Glasgow

In 2023, colleagues at the University of Glasgow (McEwan et al., 2023) published a fabulous article about how Statistics students are challenged by maths anxiety. These are not social science students, but those who have applied to, and been accepted to study in our School of Mathematics & Statistics. Anxiety then, could be understood as a valid, even universal emotion felt by people learning the skills to harness data. As educators, we have a role in helping students accept that learning difficult things may trigger anxiety (amongst other emotions) and this is part of the challenge of learning. As an educator in the social sciences, many of my students have not chosen to work with data often not appreciating that this is a core part of their degree, and so emotions often including anxiety manifesting in reluctance, frustration and feelings of failure. If we can help students name and surface their feelings, then we have space to provide strategies and reassure them that the challenge can be overcome.

It occurred to me, and this piece aims to argue, that we don't talk about emotion enough in methods learning, and the vacuum is fertile ground for negativity, impacting many students. In turn acknowledging emotion helps us examine where it comes from, remove the negative emotions that can become a barrier, and focus on positive emotions that can be used as a tool.

In part, the case I am making is around the framing of emotions. The alternative is to make methods learning less difficult and while I champion effective pedagogies to make methods learning accessible, University-level courses will always require a degree of difficulty.

A rush of adrenalin can be interpreted as an incoming crisis or exhilaration depending on the context. If we do not discuss emotion, within our academies and classrooms, we are not allowing students to practise interpreting the painful parts of learning as a challenging opportunity, rather than as harmful. In turn, emotion is part of doing research, we often feel passion for our chosen field, joy when learning works, trepidation as we submit our work for peer review. This piece will attempt to capture some of the emotional resistance experienced by students as they learn methods, followed by how acknowledging the emotional quality of the learning experience can help sustain engagement in methods learning.

Teaching methods is concerned with equipping researchers with their toolkit as they become practitioners. Learning how to work with, and harness emotion is a key skill particularly where data relates to humans. For example, many ethics committees would scrutinise a submission that admitted that the topic may trigger signs of distress amongst participants. There is a clear distinction between distress triggered by an incompetent researcher (bad) and that triggered because the original experience was emotional, and that recalling that trauma/event often requires emotional storytelling, and this is ok if the participants are fully informed, fully have the right to decline to participate and/or withdraw, and the researcher is competent. But where does this competency come from? If it is unethical to allow a student/new researcher to engage in emotionally difficult research because we are unsure of their competence, how do they develop competency? In turn, an ethics committee that is shy of emotion are also neglecting the ways we use emotion, for example, to build rapport at the start of an interview or focus group. Equally, how do we know if a researcher working with numerical data has the emotional resources to work with numbers that capture distressing experiences, such as reporting the experience of victims of violence, war crimes, and human rights violations?

As I have contemplated how we help students learn to practise with emotional data, I have also considered whether we can help students learn to acknowledge, and use the emotions, for example anxiety, that they experience in learning methods.

Emotion is not particular to methods. Yet there are a number of distinctions to what and how methods teachers teach, that can help students embrace emotion and this can help them in their disciplinary learning too. For many students, acknowledging that learning is emotional, is experienced as a lightbulb moment. In my experience, teaching across qualitative, quantitative and theory courses, teaching undergraduates, postgraduates and colleagues, there are five qualities of the emotional response to methods learning that require attention, the remainder of the piece will explore how we can support students who resist the learning opportunity:

Predisposition: Learners often have an emotional reaction to learning methods, this reaction is often negative, pre-dates the first lecture and manifests as resistance.

Disruption: They way methods educators teach, is a disruption to how students usually learn, and this undermines their capacity to predict how the time they invest, will return the grade they seek.

Futility: As students progress in their methods learning they understand how all research is limited, from embedding error into algorithms to failures to recruit as planned. In turn, students become aware a) that the research they learn about is also limited and few facts actually exist and b) their educators are fallible. This is a different type of disruption. Some students have argued that interpreting as learning research methods is futile because all research is limited.

Urgency: students can feel untrained as they approach their dissertation/independent project, and this is exacerbated if their chosen topic aligns with lived experience because they view their work as urgent and requiring excellence, and it can be tough to separate the success of the project from success of the self (Greenwood & Ferrie, 2025).

Legitimacy: All of this combines to leave students contemplating an independent project when they don't feel ready to be the creator of knowledge, they do not feel that they have the authority to say what is true.

As a methods educator, it has helped my students to name and claim these emotions. As a collective, educator *with* student, we can reflect that whatever we want to achieve, is on the other side of fear. Achievement requires a challenge. Learning is disruption and cannot be acquired neutrally.

Normalising the disruption is key and needed when teaching methods because the learning challenge is often greater for many students, than disciplinary learning. It helps to spend a little time exploring why they are predisposed to fear, resist and/ or avoid methods learning. In the social sciences, most students come to methods learning as a core subject, that is, it is a requirement that they complete a methods course(s) to qualify for their degree. Courses are usually core where they are seen as of critical importance, a defining aspect of what it means to be a sociologist, or an economist or a political scientist for example. Yet students are rarely told this by their discipline, it would help us, if disciplinary colleagues encouraged students to embrace opportunities to learn methods.

Where universities have opted for methods courses to service a range of disciplines then, there is a paradox, of the disciplines recognising the inherent value of learning methods for disciplinary practice, but the institution signalling to students that there is a disconnect between methods and disciplines. Such large classrooms including hundreds of students cannot claim to

be interdisciplinary, at best they can be described as pan-disciplinary (Ferrie et al, 2022). Large lecture theatres are tough places to learn, particularly if the content is novel. Understandably perhaps, students have feelings about methods then, often providing feedback that the learning was irrelevant to their degrees despite the core status of the course. It is a little difficult to put names to these feelings, but I have encountered students who are frustrated at having to do a course they see as beyond their disciplinary interests, and this often manifests as anxiety, and claims of futility. Such negativity is avoided where class sizes are smaller and are linked to disciplines particularly where the methods learning is foundational.

Another aspect contributing to anxiety is learning something or using tools that they have struggled to harness in the past. This is often associated with using numbers and we spend a good amount of time when working with quantitative data to show that we are pattern seeking, rather than directly following on from high school mathematics. Working with all forms of data, we acknowledge the strain of learning new terminology as well as learning new skills, at the same time as engaging with new learning strategies (see the pine and the oak tree metaphor, Edson Ferrie & Spreckelsen in this resource). There are also new rule systems and bureaucracies such as ethics which are often limited to a lecture but could be a course in and of themselves. There is so much new knowledge that we present as vital knowledge – you must know this – that their disciplinary classrooms have barely touched upon.

It has helped our students to guide them from the first learning opportunity to the assessment, to help them see that while the assessment is also very different to what they are used to, we are testing their application of skills developed during the course. Our Intended Learning Outcomes echo that this is an introduction, and that we expect them to perform accordingly. Thus, we are clear, that there is time to practise within our classrooms, that is why we have labs, or we have practical activities within tutorials. Reassurance is needed. Students must be encouraged that the assessment isn't going to ask them to demonstrate skills not built into the course, but a culmination of all that they have practised. Reassurance only works because we have talked through their emotional response to learning methods, we have named their feelings around futility, disruption, resistance and urgency, and they can begin to claim some legitimacy knowing that we are testing them at the appropriate level.

By acknowledging the emotional challenge of navigating the tension of building competencies while feeling incompetent, we can help students take a rational approach to learning methods,

of building a case that their work has rigour, and helping them practice how they demonstrate this to themselves and to others. Built into the arguments here then is how we reassure students that the learning will build towards competency, and we hope, confidence in how they work with data.

At the start of the piece, I mentioned framing, and how by being upfront that the learner's experience may be emotional, we can invite them to frame this emotion as a positive – it's exciting to have a challenge, thrilling to overcome the challenge, affirming to succeed. Learning methods after all, is still learning, and the best learning is disruptive.

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Concluding remarks

Rachel Shanks, University of Aberdeen

This publication came about as the NCRM Pedagogy Network, led by Melanie Nind, wanted to create a lasting resource that would help current and future research methods educators and their students. We were curious to find out what colleagues did to help their students 'get' research methods, whether that was in an undergraduate or postgraduate class or beyond, and whether related to qualitative, quantitative or mixed methods. We specifically asked about the metaphors that people used with students to help untangle the complex language and jargon that can accompany methods. However, this led us to question our own use of metaphors of sparking lightbulb and 'aha' moments. To use another metaphor, we are following in the footsteps of the fantastic publication 'How many qualitative interviews is enough?' and while we have not used the term 'expert voice' for our contributors I hope that you have read and understood their passion for helping students, so instead of 'expert voices' I would call them 'passionate and generous colleagues' as they answered our call for abstracts in spring 2025 and submitted their final drafts in early July. Thus, they were generous with their time in the busy end of the academic year in the northern hemisphere and they are generous with sharing their thoughts, ideas and activities for others to use with their students. Their passion shines through as they have sought new ways to help their students and have honed exercises over years of teaching, reflection and adaptation.

We are not saying do everything in this publication and your students will understand research methods, of course not. What we're proposing is that having read these contributions you may wish to try out one or two, maybe adapt another so that it fits as best it can in your course, your context and with your students. Maybe trying out something from here will lead you to create a new resource or set of activities, if so, please do share it with the rest of us!

Through ethnography, through weaving movie titles, analysing photographs, finding themes in interview transcripts we have brought together different techniques, approaches and ideas to help learners come to a clearer and more useful understanding of research methods in the widest sense of the term. From paradigms to emotions, from observation to AI, these shared

reflections offer other educators' different ways to enthuse the next generation of students and researchers with their tried and tested activities.

From the word cloud below created in NVivo you can see that the words 'students', 'research', 'methods', 'learning ', 'data' and 'qualitative' were the most commonly used.

Word cloud created in NVivo of the text in the contributions

As well as Christina Silver, Yenn Lee in her Weaving chapter and Rosalind Edwards, address the issue of AI in literature reviews. Yenn makes the important point that it is students' responsibility as researchers 'to make sense of complexity, not merely to catalogue it' and so not to create 'a laundry list' in the literature review. Whether it is finding threads between photographs, shoes or movie titles, embracing and working with complexity is something that these contributions aim to support students with. We hope you find something useful here to help you and your students come to your own lightbulb or 'aha' moments.

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