Teaching Research Methods

Challenges and Opportunities

In September 2022, a group of lecturers from across the UK gathered at Sage's offices in London to discuss the challenges and opportunities they'd face when teaching research methods in the academic year to come.

The resources and insights in this toolkit are the outcomes of these sessions. They are not exhaustive but by sharing these outcomes we hope the questions raised will resonate with other educators, provoke further areas for discussion with colleagues and ultimately assist research methods teachers.

This toolkit includes:

- Recordings by keynote speakers Andy Field and Jo Ferrie
- Decolonizing research methods: Summary of discussion
- Recorded lightning talks on teaching pain points
- Questions raised and possible solutions
- Resources from Sage

If you have any feedback or questions, please reach out to **pr@sagepub.co.uk**

Follow **@Sage_Methods** and our speakers on Twitter for more:

- **Prof. Andy Field** @ProfAndyField
- **Dr. Jo Ferrie** @JoFerrie

Teaching Statistics: Damnation and Deliverance
Prof. Andy Field

Themes from the talk
- What are the problems students face and how can we solve them?
- TLDR: We don't know how to solve them but through reflection, reflection, and more reflection we can:
  - "Find our voice in teaching"
  - "Work out how best we can use differentiated learning"
  - "Scaffolding using the General Linear Model (GLM)"

1. Find our voice in teaching
- Personalization
- Engaging examples
- Narratives
- Inject humour
- Songs

2. Differentiated learning
- Signposting the difficulty of material
- Able to flag when it is tricky
- Optional materials

3. Scaffolding
- Using a GLM provides a toolbox that students can always use
- Sampling variation (standard error)
- Parameters
- Intervals (confidence or HPD)
- Null hypothesis significance testing (NHST)
- Estimation

Take home points
- There are obstacles
- There isn't a lot of research that helps to overcome these obstacles
- Rapport is crucial

What can we Change about how we Teach Research Methods?

Dr. Jo Ferrie

Themes from the talk

- Knowledge production is key: Each lesson what are we trying to achieve? What connects us to the world that we live in?
- *A is for Activist* by Innosanto Nagara takes us on a journey through the alphabet and encourages us to engage with it as active thinkers in the world.
- Q is for question
  - questioning coercion
  - querying qualities counter false assertions
- O is for open minds operate best
  - critical thinking over tests
  - wisdom can't be memorized
  - Educate! Agitate! Organize!

Questions and thoughts from the talk:

"How do students become autonomous within a very structured learning space?"

"How do they build a bridge between what I'm teaching and what matters to them?"

"Encourage students to think that we are producers of knowledge not reproducers"

"Research integrity isn't synonymous with reproducibility"

Nagara, Innosanto. (2013) A is for Activist. New York, Seven Stories Press

Decolonizing Research Methods
Summary of Discussion

What does decolonizing methods mean?

How does decolonizing differ from diversification, and how does it overlap?

Consider both the research and research tools. Decolonizing means thinking critically about what they were designed to do, what the foundations and histories underpinning research approaches are, and who their founders are. Research methods are part of a wider system of knowledge production, and we need to assess this critically, as well as talking about how methods can be used to colonize.

What resistance are we encountering?

- Limitations of decolonisation when teaching in English and from an Anglo-American perspective
- This work requires departments not just individuals

Practical difficulties in incorporating decolonization into teaching given the amount of content you need to cover and limited teaching time.

It is possible to acknowledge both the size of the undertaking and that incremental changes in literature and teaching are still useful and better than nothing. We are not trying to be perfect; we are trying to give students the tools to think critically, acknowledge limitations and past decisions.

What actions can we take?

- Specific figures can be a good way into discussions about power
- Reinforcing work throughout a programme of study
- Asking for student feedback on decolonization and diversity in module evaluations
- Talking broadly about 'diversity' and what it means
- Institutions need to prioritise decolonizing the curriculum
- Perspective-taking as a pedagogical tool

Knowing what we don't know

Metrics and outcomes are not always linked to decolonizing work and success measures can hide/distort the picture, creates a space for institutional critique.

The important thing is to start somewhere and take incremental steps towards transformational goals.
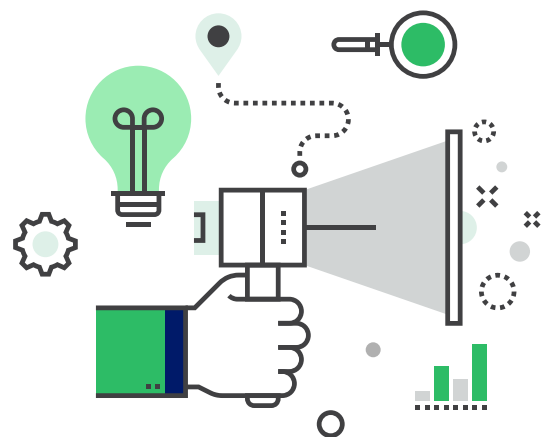
Interested to know more: A more comprehensive version can be found **here**

Insight from the Lightning Talks

How do we Reduce Statistical Anxiety?
Dr Simon Massey

Lecturer in Quantitative Sociology, Manchester Metropolitan University

Watch Simon's talk

Questions

- How do we tackle statistical anxiety?
- How is anxiety passed on?
- How does it impact students from different backgrounds?
- How do you make teaching more accessible for students?
- Is this a uniquely British problem?
- How do we make students feel supported/ connected to lecturers especially in large cohorts?

Solutions

- Academics: their critiquing an expert
- Student-driven sessions
- Informal environment
- Telling students, they're culturally different
- Exposing how maths is used daily
- Stripping it down to basics: Addressing what they already know
- Simplifying impressing themselves

How do we (meaningfully) Integrate Employability Skills?
Prof. Jackie Carter

FaCSS, Director University of Manchester Q-Step Centre

Watch Jackie's talk

Questions

- How to help students understand the relevance of skills across fields?
- There isn't time for bespoke conversations
- How to show real world application in a mixed cohort?
- How are students using skills from degree in the workplace?
- How to help students understand this?
- Relevance of methods to workplace & further degrees
- Where is critical thinking – do employers want this?
- Employers don't think students have problem solving or communication skills?
- Sociology – Making students quantitatively aware
  - Not doing 'social research methods – transferable

Solutions

- Self-reflection posters
- Individual sessions
- Teaching R skills e.g. coding transferable
- Badge from the start
- In module descriptions
- Highlight the benefit of critical thinking
- Use business language when developing portfolios
- Make students more quantitatively aware
- Different teaching styles
  - Diss + presentations

How do we Teach Groups with Different Abilities?
Dr Tom Pering

Department of Geography, Senior Lecturer in Volcanology, University of Sheffield

Questions

- How do we fix low retention rate/attendance?
- Mature students - how to fill gaps?
- How to teach multiple softwares?
- Getting students to do advances topics
- How to support students who are strong with maths whilst not overwhelming others?
  - How not to leave people behind?
- Anxiety
- How to tailor to different interests?
- Stratifying students ascending to ability?
- Students not attending informal drop-ins/ help sessions

Solutions

- Quizzes
  - Automatic feedback (dynamic)
- Initial assessment of ability
- Offline challenge materials
- Bridging course
  - Pre-assessment (PG students)
  - Refresher
- Optional support labs/sessions
  - Hybrid
  - Drop ins
- Real-world scenarios
  - Group work

How do we Assess the Skills of Students when they use their own Data?
Dr James Allen–Robertson

Senior Lecturer, Department of Sociology, University of Essexd

Questions

- How to assess when students collect their own data?
- How to do actual social data science? Challenge choosing topics
  - Not just coding
  - How to assess the whole research process?
  - Make sure data relates to research question
- Data collection challenges
  - Demoralizing for students
  - Twitter not always compatible with methods
  - Primary data analysis

Solutions

- Leniency marking?
- E.g. Diss Marking slightly differently
- Reflective chapter to write
- Nothing earth shattering
- Splitting it up
  - Come up with an idea
  - Potentially providing data for them
- Provide list of suggested titles?
- Pilot Study
  - Reflect and adjust

How do we Keep Research Methods Relevant?
Dr Paul Christiansen

Senior Lecturer in Statistics, University of Liverpool

Questions

- Lack of understanding of research process
  - Lack of connection between data, analysis + questions
  - Trying to do analysis without hypothesis
- Filling gaps lack of philosophical knowledge from school
- No one is coming in to learn research/statistics
  - Methods is compartmentalized
  - Viewed as necessary evil but not integral, an afterthought
- Colleagues
  - Vulnerability of exposing failures
  - Communcation between course conveners
  - Not enough support staff
  - Lack of investment in teams
- Class sizers
- Pressure on students from research methods importance – credits
  - Mysticism of academia
- How to evaluate data from different sources?
- How to keep examples relevant?
- Increase engagement
  - Increase confidence

Solutions

- Updating cases
- Managing class sizes
  - Lecturers increase pedagogical content + methods knowledge
- Demystifying research
  - Honesty
- Make sure examples date well
- Explain knowledge production
- Increase department conversation + communication
  - "It takes a village"
- Use examples from lectuerers
  - Link all together
- Deconstructing lab reports

Sage Research Methods
Teaching

Open resources at your fingertips

Sage Research Methods Teaching is our newest **open access** solution to quantitative methods teaching. It disseminates materials developed by methods faculty with the aim of inspiring their peers to find new ways of teaching quantitative methods at both undergraduate and graduate level. It also saves time, with oven-ready lecture slides and other resources.

Jointly developed by Sage Publishing, the **Nuffield Foundation,** and the **ESRC,** with extensive input from coordinators and lecturers based at several **Q Step Centres** in the UK, **Sage Research Methods Teaching** currently hosts circa 1000 files, covering topics including data analytics, modelling, and descriptive statistics.

Resources include

- Presentations
- Worksheets
- Assignments
- Guidance Notes
- Exam Examples
- Case Studies

In partnership with

Nuffield Foundation

Q-Step

A step-change in quantitative social science skills

Funded by the Nuffield Foundation, ESRC and HEFCE

UKRI Economic and Social Research Council

Continually updated through community effort and contribution.

To start unlocking inspirational FREE content, explore
teaching-methods.sagepub.com

Recommended reading from Sage

Drawing from our collection of books, journals, and digital tools, we've rounded up additional resources to assist you in the classroom.
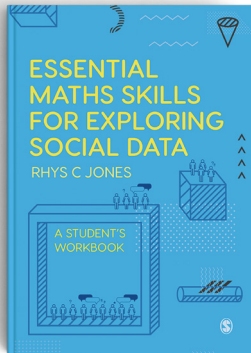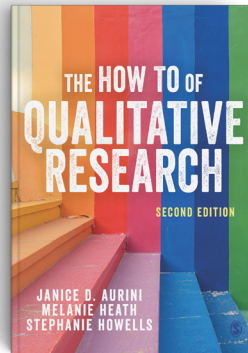
9781526463388 (2020)
Essential Maths Skills for Exploring Social Data

Rhys Jones, University of Surrey

For students anxious about statistics, this hands-on workbook is packed with clear explanations, real-world examples and practical exercises to gain the necessary maths skills to tackle statistics with confidence. Grounded in a social science context.

9781526495044 (2021)
The How To of Qualitative Research

Janice D. Aurini, University of Waterloo, Canada
Melanie Heath - McMaster University, Canada
Stephanie Howells - University of Guelph, Canada

Whatever type of data or data collection method you use, this book will help you to navigate the nuts and bolts of qualitative research, from forming your research question to effectively writing up. Your roadmap and toolbox all in one.
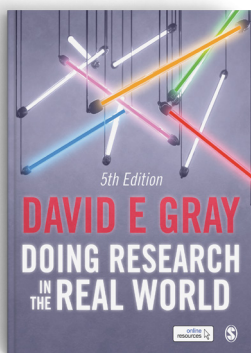
9781529742442 (2021)
Doing Research in the Real World

David E Gray, University of Greenwich, UK

From first planning to writing up your research, this complete guide will help you push your project forward.

Walking you through every step you need to take, it helps you build your knowledge of theory and methods and offers straightforward guidance to empower you to make good research decisions and learn best practice.
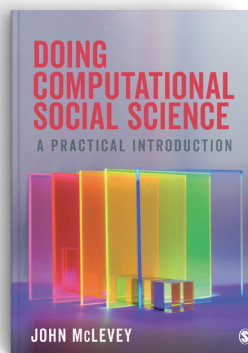
9781526468185 (2021)
Doing Computational Social Science

John McLevey, University of Waterloo, Canada

Computational approaches offer exciting opportunities for us to do social science differently. This beginner's guide discusses a range of computational methods and how to use them to study the problems and questions you want to research.

Additional recommended Sage content
These digital resources will further assist you in the classroom.

Digital resources

- **Critical Thinking hub** – Here, you'll find all the latest resources from Sage on Critical Thinking, as well as any forthcoming events.

- **Methodspace** – An online community for social and behavioral research methods, which enables scholars and students to share experiences and solve problems on a global scale.

- **Sage Research Methods** supports research at all levels by providing material to guide users through every step of the research process.

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