

# HPSC0140 Social Research Methods and Data Analysis in STS

## Course Syllabus

2022-2023 session | Convenor: Dr Michel Wahome

## Course Information

This course introduces students to the theory and practice of research methods in STS and social science more generally, comprising both qualitative and quantitative methods. It will cover research design; qualitative and quantitative methods; research management and ethics; and the epistemology of social research. The course is strongly recommended for any students wanting to undertake empirical social science research for their dissertation, and for students who want to familiarise themselves with how social scientists (particularly within STS) undertake research.

Course website:	See Moodle
Moodle Web site:	HPSC0140
Assessment:	See Moodle
Timetable:	See UCL on-line timetable
Prerequisites:	None
Required texts:	See Moodle
Course tutor(s):	Dr Michel Wahome
Contact:	<a href="mailto:m.wahome@ucl.ac.uk">m.wahome@ucl.ac.uk</a>
Office location:	22 Gordon Square
Office hours:	TBC

## Schedule

Week	Date	Topic	Lecturer
1	10/1	Introduction. What is Social Research: (including what is “methodology”?)	Dr Michel Wahome
2	17/1	Decolonizing Methodologies in STS	Dr Michel Wahome
3	24/1	Research Design and Analysis	Dr Michel Wahome
4	31/1	Methods: Surveys and Sampling	Dr Michel Wahome
5	7/2	Methods: Case Studies	Dr Michel Wahome
	14/2	Reading Week	
6	21/2	Methods: Documents and Archives	Dr Joe Cain
7	28/2	Methods: Visual Methods	Dr Jean-Baptiste Gouyon
8	7/3	Methods: Interviews and Focus Groups	Dr Simon Lock
9	14/3	Methods: Ethnography and Observation	Dr Noemi Tousignant
10	21/3	Review	Dr Michel Wahome

## Aims & objectives

This course introduces students to the theory and practice of research methods in STS and social science more generally, comprising both qualitative and quantitative methods. It will cover research design; qualitative and quantitative methods; research management and ethics; and the epistemology of social research. The course is strongly recommended for any students wanting to undertake empirical social science research for their dissertation, and for students who want to familiarise themselves with how social scientists (particularly within STS) undertake research.

By the end of this course you will:

- Be introduced to a range of qualitative and quantitative social research methods used in STS and understand their strengths and weaknesses.
- Be introduced to underlying epistemological, ontological, ethical and axiological issues underpinning social research.
- Know how to formulate research questions.
- Understand the relationship between research questions and methodological approach.
- Have engaged with the relevant academic literature on research methods.

## Assessments

	Description	Deadline	Word limit
Research paper review	See below & on Moodle	7 February 2023	1,000 words (40%)
Research Methods Essay	See below & on Moodle	4 April 2023	2,000 words (60%)

### Assessment 1 (40%)

Drawing on the methodological lessons learned to date, select one of the options below and write a review of the methods used. Things you might want to describe:

- What was the research question?
- What methods were used?
- Were they appropriate? Explain why you think that.
- What other methods could have been used? Explain why they might be better/worse.

Friederici, N., Wahome, M., and Graham, M., (2020) "Appendix A: Methodology" *Digital Entrepreneurship in Africa*. Cambridge: The MIT Press, 2020. [doi: 10.7551/mitpress/12453.003.0010](https://doi.org/10.7551/mitpress/12453.003.0010)

Lock, S.J. *et al.* (2014) “‘Nuclear energy sounded wonderful 40 years ago’: UK citizen views on CCS”, *Energy Policy*, 66, pp. 428–435. doi:[10.1016/j.enpol.2013.11.024](https://doi.org/10.1016/j.enpol.2013.11.024).

Smallman, M. (2020) “‘Nothing to do with the science’: How an elite sociotechnical imaginary cements policy resistance to public perspectives on science and technology through the machinery of government”, *Social Studies of Science*, 50(4), pp. 589–608. doi: 10.1177/0306312719879768.

Unsworth, A. and Voas, D. (2018) ‘Attitudes to evolution among Christians, Muslims and the Non-Religious in Britain: Differential effects of religious and educational factors’, *Public Understanding of Science*, 27(1), pp. 76–93. doi: 10.1177/0963662517735430.

**Assessment 1 Criteria** (please also refer to those given in the Departmental Handbook)

1. Has the student identified the research question?
2. Has the student identified the research methodology?
3. Has the student understood that the choice of research methods is linked to the question being asked?
4. Has the student understood the pros and cons of different social research methods?
5. Is the assessment written in clear English?
6. Is the assessment structured in a logical way?
7. Has the student presented their assessment in a coherent and well-argued way?

**Assessment 2 (60%): Essay**

You have the opportunity to undergo a summer research internship within UCL’s Department of Science and Technology Studies. Write a research proposal for a project you would like to undertake during this internship. The proposal should explain what question you want to investigate, why you want to carry out this research, and outline how you would undertake the project, describing which methods and analytical approaches you will take and why you have selected these (rather than other methods).

Things to think about:

1. Try to choose a research topic that is relevant to science and technology studies. It might help you to look at the research profiles of staff on the departmental website or to think about other modules you have taken and the kinds of questions that arise in these modules
2. Remember that your choice of a research method(s) should be guided by your research question.
3. You can choose your methods from the range covered in the course. All work should contain references to methods text books and other literature.

To structure your proposal you can follow the following format:

1. Introduction – statement of research question and why it is interesting/needs to be answered

2. Background – what we already know about the topic of your question
3. Methods – how you will investigate the question (description), why you have chosen this method (critique), what are the shortcomings of the methods (critique), what other methods did you consider and why did you reject them (critique)?
4. Conclusion – summarise your key points and confirm the approach you will take.

Assessment 2 Criteria (In addition to the departmental criteria in the STS Handbook)

1. The student follows the instructions
2. The student is able to formulate research questions.
3. The research proposed in the essay demonstrates a good understanding of the relationship between research question and methodological approach.
4. Each choice of research method is convincingly argued.
5. The document demonstrates engagement with the relevant literature and class materials.
6. The essay is written in a clear and accessible way with good English.

## **Submitting Assessments:**

You **MUST** submit your assessments using the submission points below.

1. Check you work is referenced properly. Remember the Turnitin score is not an indication of plagiarism-free work.
2. Do not put your name anywhere on the work that you upload - **only use your UCL student number/candidate number.**
3. Do not put your name in the filename of any work you upload (we see the filename!).
4. Put the essay number or a brief essay title in the filename you upload
5. Please submit files as a word document if possible.

In order to be deemed 'complete' on this module students must attempt both the assignments.

## Reading list

We have a weekly reading list for this module, but here are a few key texts you could usefully read all of (& they also appear on the week by week lists below). The Sage Handbook covers pretty much every method you can think of, as well as analytic techniques & theories of knowledge. Decolonizing methodologies presents a comprehensive view of all the aspects of carrying out research, but from a very clear stance about the power of research.

- Norman. K. Denzin & Yvonne. S. Lincoln (Eds.) (2018), *The Sage handbook of qualitative research* (Fifth ed) Sage: London, Thousand Oaks & New Delhi
- Linda Tuhiwai Smith (2012). *Decolonizing methodologies: research and indigenous peoples* (Second Edition ed.). London: Zed Books. Introduction
- Alan Bryman (2016 or 2012), *Social Research Methods*. Oxford: Oxford University Press.
- Matthew B. Miles, A.M. Huberman and Johnny Saldaña (2020). *Qualitative data analysis: a methods sourcebook*. 4<sup>th</sup> Edition. Sage: Los Angeles

Please look at the **UCL Online Reading List** for links to the key readings.

## Weekly Overviews

### Week 1: Introduction. What is Social Research: including what is “methodology”!

This session provides an overview of the module and associated assignments, what social research methods and methodology are, qualitative and quantitative approaches, primary and secondary data, what strategies are used when doing research, and the different tools available that will be explored further during the module. Using two case studies we will explore how methods can be used to answer research questions.

Recommended Readings:

1. Bell, J., & Waters, S. (2018). *EBOOK: DOING YOUR RESEARCH PROJECT: A GUIDE FOR FIRST-TIME RESEARCHERS*. McGraw-Hill Education (UK). This is a great general textbook take a read of chapter 1 and 2.
2. Kumar, R. (2019). *Research methodology: A step-by-step guide for beginners*. Sage. Another great overview book if you prefer this style.
3. Dawson, C. (2019). *Introduction to Research Methods 5th Edition: A Practical Guide for Anyone Undertaking a Research Project*. Robinson. A very simple and concise intro but will give you all the basics in a clear manner.

## Week 2: Decolonizing Methodologies in STS

Decolonization of research leads to greater accuracy, data validity and improvements in research ethics. This is achieved through contextualization and the inclusion of marginal perspectives and approaches.

In this session will also unpack a research paper to help prepare for the first assignment.

Recommended Readings:

1. Fan, F. (2016). Modernity, Region, and Technoscience: One Small Cheer for Asia as Method. *Cultural Sociology*, 10(3), 352–368. <https://doi.org/10.1177/1749975516639084>
2. David M. Perry, Matthew Gabriele (2021). A New History Changes the Balance of Power Between Ethiopia and Medieval Europe. *Smithsonian Magazine*, (Online) June, 29, 2021. <https://www.smithsonianmag.com/history/new-history-changes-balance-power-between-ethiopia-and-medieval-europe-180978084/>

Watch:

3. Chicago: “NOVA; Papua New Guinea: Anthropology On Trial,” 10/03/1983, YouTube: [https://www.youtube.com/watch?v=x4hBpxbsl\\_Q](https://www.youtube.com/watch?v=x4hBpxbsl_Q). (Watch at least the first 15 minutes).

## Week 3: Research Design and Analysis

In this lecture we explore how to design research to answer specific questions or for a particular project. This includes: 1) establishing the research questions - developing critical awareness of how to phrase a research question, 2) the research process - matching topics with methods, 3) reviewing methods - developing an understanding of the power and limitations of methods and finally 4) analysis. Robust analysis is linked to data validity, so empirical validity is central to a discussion of methodology.

Recommended Readings:

1. Bialik, Carl. (2015). As A Major Retraction Shows, We’re All Vulnerable To Faked Data. *FiveThirtyEight.com*. (Online). May 20<sup>th</sup>, 2015. <https://fivethirtyeight.com/features/as-a-major-retraction-shows-were-all-vulnerable-to-faked-data/>
2. Matthew B. Miles, A.M. Huberman and Johnny Saldaña (2020). Qualitative data analysis: a methods sourcebook. 4<sup>th</sup> Edition. Sage: Los Angeles. *Read Chapter 4: Fundamentals of Qualitative Data Analysis and Chapter 11: Drawing and verifying conclusions.*

Watch:

[Case Study: https://methods.sagepub.com/video/ask-a-researcher-teresa-perez-shadowing-participant-observation-interviews](https://methods.sagepub.com/video/ask-a-researcher-teresa-perez-shadowing-participant-observation-interviews)

**Note:** the many books already on this reading list have chapters on analysis, so read them too. So, for example, if you are thinking about case studies, go and read about analysis in Robert Yin's book about case studies, or if you are thinking about visual research, go & read about analysis in Martin Bauer & George Gaskill's book, or if you are thinking about interview research, read Steiner Kvale's book, etc.

## Week 4: Methods -- Surveys and Sampling

This session will provide an introduction to survey-based research, focusing mainly on quantitative surveys. We'll think about the practical issues of sampling and designing a good survey instrument (questionnaire).

Recommended Readings:

1. Chris Moreh (2019). Online survey design and implementation: Targeted data collection on social media platforms. In *SAGE Research Methods Cases Part 2*. SAGE Publications, Ltd., <https://dx.doi.org/10.4135/9781526479709>
2. Lesley Andres (2012). *Designing & doing survey research*. Sage: London, Thousand Oaks, New Delhi. Read Chapter 2: Mapping out the survey research process. (You can read more if you want to, this book is great because it spell out in detail each step of the survey research process.)
3. David Gillborn (2010). The colour of numbers: surveys, statistics and deficit-thinking about race and class. *Journal of Education Policy*, 25(2), 253 - 276.

## Week 5: Methods -- Interviews and Focus Groups

This face-to-face session has three aims: (1) improve skills for interviews as a part of data gathering; (2) introduce processes in preparation, conduct, and processing of interviews; and (3) discuss questions relating to processing interviews as data.

Recommended Readings:

1. Simon J. Lock, Melanie Smallman, Maria Lee & Yvonne Rydin. 2014. "Nuclear energy sounded wonderful 40 years ago": UK citizen views on CCS. *Energy Policy*, 66, 428–435.
2. Daniel L. Kleinman and Sainath Suryanarayanan. 2012. Dying Bees and the Social Production of Ignorance. *Science, Technology & Human Values*. 38(4): 492-517.
3. Allison, Fred H. (2004). Remembering a Vietnam war firefight: Changing perspectives over time. *The Oral History Review* 31(2): 69-83. *This paper is in UCL Library: [link to paper](#); [link to journal](#); also appears in Perks and Thomson (2015), a [reader](#).*
4. Robert Perks and Alistair Thomson (eds.) 2015. *The Oral History Reader*, 3<sup>rd</sup> edition (London: Taylor and Francis). Print ISBN: 9780415707329. eBook ISBN: 9781315671833. Adobe ISBN: 9781317371328. (UCL Library [catalogue](#); UCL students can [download](#)).

5. Steiner Kvale. 2008. *Doing Interviews*. Sage: Thousand Oaks & New Delhi. Read chapter 5: Conducting an interview (pp. 52 – 66) & try to skim Chapter 9 : Analysing interviews, as well as any other bits of this fantastic book that you can.

## **Week 6: Methods -- Documents and Archives**

This week we look at how to use texts as primary research sources. We will talk about how documents, whether published, archived or 'grey,' are not merely or passive containers of data to be 'mined.' What questions do we need to ask about their function, style, language and structure, and about why, how and by whom they were created, collected, circulated, classified, read and recreated?

Recommended Readings:

1. Alan Bryman (2016 or 2012), *Social Research Methods*. Oxford: Oxford University Press. Read chapters 23 Documents as sources of data and 13 Content Analysis (you can also read: Chapter 22 Language in qualitative research)
2. Creager, Angela NH, Mathias Grote, and Elaine Leong. "Learning by the book: manuals and handbooks in the history of science." *BJHS Themes* 5 (2020): 1-13.
3. Yale, Elizabeth. "The Book and the Archive in the History of Science." *Isis* 107, no. 1 (2016): 106-115.

## **Week 7: Methods -- Visual Methods**

The lecture will cover fundamental aspects of working with images and other visual representations as primary sources for your research. The main aspect of the lecture is to look at images as communication devices. We look at different methods to analyse visual artefacts, semiotics, intertextuality and frames.

Recommended Readings:

1. Rose, Gillian. *Visual methodologies: An introduction to researching with visual materials* (4th edition). Sage, 2016. Chapter 1 & 2 (pp.1-47)
2. Bauer, Martin. W. & Gaskell, George. *Qualitative researching with text, image and sound*. London: SAGE Publications Ltd. Read Chapter 6 (pp. 94-107), then skim Chapter 13 (pp. 228-245) & Chapter 14 (pp. 247-262). [NB: the 2<sup>nd</sup> two chapters on this list focus on analysis, so worth a skim now then come back to them in week 9 if you're interested in this kind of research!]

## Week 8: Methods -- Case Studies

Using a case study is a powerful approach to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context. It is an established research design that is used extensively in a wide variety of disciplines, particularly in the social sciences. By developing an intensive, systematic investigation of a single individual, group, community, or other unit the researcher can examine in-depth data relating to several variables. In this session we explore what case studies are, how they are conducted and how to pick relevant methods to make the case study robust, along with discussion of the analysis process. Examples will include multi-sited research, and interdisciplinary research case studies.

Recommended Readings:

1. Robert Yin (2018). *Case study research and applications: Design and methods*. Sage: Thousand Oaks, London and New Delhi. Read Chapter 1: Getting started: how to know whether and how to use the case study as a research method, Chapter 4: Collecting Case Study evidence
2. Thomas Schwandt and Emily F. Gates (2018). Case study methodology. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (Fifth ed., pp. 341-553). London and Thousand Oaks: Sage.
3. Malcolm Tight (2017) *Understanding Case Study Research: Small-scale Research with Meaning* (First Ed., pp.224)

## Week 9: Methods -- Ethnography and Observation

Ethnography is the signature method of cultural anthropology; it is also used by sociologists, geographers, and other social researchers. This week is about how to observe, record, and describe social action/interaction as a research method. We will cover key terms such as culture, participant observation, fieldnotes, thick description, multi-sited ethnography and digital ethnography.

Essential reading:

1. Giampietro Gobo, *Doing Ethnography*. SAGE Publications Ltd. (2008) Chapter 1: "What is Ethnography," (13 pages): <https://methods-sagepub-com.libproxy.ucl.ac.uk/book/doing-ethnography/d6.xml>
2. Sharon Traweek, *Beamtimes and Lifetimes: The World of High Energy Physicists*. Harvard University Press (1988). Prologue: An Anthropologist Studies Physicists (17 pages): [https://www-jstor-org.libproxy.ucl.ac.uk/stable/j.ctv260711b.5#metadata\\_info\\_tab\\_contents](https://www-jstor-org.libproxy.ucl.ac.uk/stable/j.ctv260711b.5#metadata_info_tab_contents)

Watch:

1. 11-minute video by Dr. Marsha Henry on “Qualitative Research and Ethnography,” (or read the transcript):  
<https://methods-sagepub-com.libproxy.ucl.ac.uk/video/qualitative-research-and-ethnography>
2. 12- minute video by Dr. Jamie Lewis on “Ethnography in a Laboratory Setting,” (or read the transcript):  
<https://methods-sagepub-com.libproxy.ucl.ac.uk/video/ethnography-in-a-laboratory-setting>

Additional reading:

Christine Hine, “Ethnographic Strategies for the Embedded, Embodied, Everyday Internet,” in *Ethnography for the Internet: Embedded, Embodied and Everyday*. Bloomsbury Academic (2015):

<https://www-bloomsburycollections-com.libproxy.ucl.ac.uk/book/ethnography-for-the-internet-embedded-embodied-and-everyday/ch3-ethnographic-strategies-for-the-embedded-embodied-everyday-internet>

Margaret Lock and Vinh-Kim Nguyen, “Introduction,” in: *An Anthropology of Biomedicine*. Wiley-Blackwell (2010). (Access through UCL Explore)

## Week 10: Review

In this lecture we review our understanding of research design and methodology and prepare for the final assessment.

Recommended Readings:

1. Becker, Howard (2008). *Logic. Tricks of the Trade: How to think about your research while you’re doing it*, University of Chicago Press.

Watch:

Case Study: <https://methods.sagepub.com/video/researching-consumer-perspectives-on-sustainability-using-metaphor-elicitation>

See individual sessions on Moodle for further activities.

Details of college and departmental policies relating to modules and assessments can be found in the STS Student Handbook [www.ucl.ac.uk/sts/handbook](http://www.ucl.ac.uk/sts/handbook)

All students taking modules in the STS department are expected to read these policies.