

University of Lucerne
Digital Skills Workshop
Fall 2025

SYLLABUS

Experimental (Survey) Methods in Social Sciences

Class meetings: Friday 09:15 - 16:30 (November 14 & 21); Saturday 09:15 - 16:30 (November 15 & 22)

Instructors: Dr. Emma Hoes (hoes@ipz.uzh.ch) and Dr. Joanthan Klüser (klueser@ipz.uzh.ch)

Format: in person

- Friday Nov 14: room HS 3
- Saturday Nov 15: room 3.B57
- Friday Nov 21: room 1.507
- Saturday Nov 22: room 3.B47

Course credits: 3 ECTS

Max. 15 students: first-come-first-serve

COURSE DESCRIPTION

In today's social science research, experimental methods are not just valuable—they are essential. As platforms limit data access and the credibility of findings comes under increasing scrutiny, survey experiments offer a flexible and powerful way to test causal claims in a transparent and reproducible manner. This course provides a hands-on, full-cycle introduction to survey-based experiments, structured around the creation of a Pre-Analysis Plan (PAP) and grounded in the principles of open science.

Over four full-day sessions, students will move step by step from a research idea to a testable and implemented experimental design. The first half of the course focuses on theory-building and transparency: we'll discuss the replication crisis, questionable research practices, and the role of PAPs in increasing scientific credibility. Students will then develop their own research questions, define hypotheses, consider sampling strategies, and build a PAP.

In the second half of the course, the focus shifts to implementation and analysis. Students will translate their plans into working experiments using the survey platform QuestionPro, field their own surveys on research platforms such as Prolific, and conduct initial data analysis using R, including visualizations. Each student will present their full project on the final day—including design choices, data results, and reflection on the process.

Along the way, we'll dive into key methodological topics such as causal inference, various experimental designs (e.g., vignette, conjoint, field, survey), validity, ethical challenges (e.g., consent, deception, and debriefing), as well as the nuts and bolts of survey design: item wording, attention checks, manipulation checks, and measurement strategies.

The course is ideal for students interested in developing their own experimental project or thesis, and those who want to gain practical experience with transparent, reproducible research workflows. No prior background in experimental methods is required, but students should be familiar with basic research design and be comfortable working in R.

LEARNING OUTCOMES

By the end of this course, you will be able to:

- Formulate clear, testable hypotheses and translate them into a structured experimental design
- Develop a complete Pre-Analysis Plan (PAP) aligned with open science standards
- Understand the logic of causal inference and key dimensions of experimental validity
- Navigate ethical issues such as informed consent, deception, and debriefing
- Design survey instruments that include effective treatments, manipulation checks, and measurement scales
- Implement a survey experiment using tools like QuestionPro and field it on research platforms such as Prolific
- Conduct basic data analysis and visualization in R to assess experimental outcomes
- Present the full research process from theory to implementation and results
- Reflect on the role of open science and transparency in improving research quality

ASSESSMENT

This course is **pass/fail**, based on two main assignments:

1. Pre-Analysis Plan (PAP)

Students will submit a written PAP for their own survey experiment, including research question, hypotheses, design rationale, sampling strategy, and planned analyses. This will be developed during Days 1 and 2 and submitted prior to Day 3.

- **Deadline:** November 18th, 17:00
- **Grading:** Pass/Fail

2. Final Project Presentation

On Day 4, students will present their full study, including the theoretical background, PAP summary, survey design, mock data analysis, and reflections. The goal is to show the full arc from idea to execution and initial results.

- **Grading:** Pass/Fail

Readings:

Preparatory readings will be assigned for Days 1 and 2 to support discussions on experimental logic, open science, and design principles. Days 3 and 4 will be mostly hands-on, with practical work on survey building, fielding, and presentations.

1. PROGRAM

Day 1 (Friday (14/11)- 09:15 - 16:30)	<ol style="list-style-type: none">1. Open Science Practices (replication crisis, theoretical expectations, power, p-fishing)2. Introducing PAPs3. Formulate problem/Research Question & Hypotheses<ol style="list-style-type: none">a. Sample selection
Day 2 (Saturday (15/11) 09:15 - 16:30)	<ol style="list-style-type: none">1. Causal Inference2. Experimental Designs<ol style="list-style-type: none">a. Validity & Generalizability3. Ethics (consent, deception, debriefing)4. Hypothesis Testing5. Translating RQ & Hypotheses to Experimental Design6. Survey Design (attention checks, manipulation checks, item wording, scales)

Day 3 (Friday (21/11) 09:15 - 16:30)	<ol style="list-style-type: none"> 1. Survey Implementation (Qualtrics, platforms) 2. Field Survey (Prolific) 3. Data analysis + visualization 4. Prepare Presentation for Day 4
Day 4 (Saturday (22/11) 09:15 - 16:30)	<ol style="list-style-type: none"> 1. Presentations 2. Summary and Conclusion: The Future of Survey Experiments

2. REQUIRED READINGS

READINGS DAY 1.

Green, D. P. (2022). *Social Science Experiments*. Cambridge University Press. (chapters 2 + 6)

Open Science Collaboration. (2015). Estimating the reproducibility of psychological science. *Science*, 349(6251), aac4716.

READINGS DAY 2.

Gaines, B. J., Kuklinski, J. H., and Quirk, P. J. 2007. "The Logic of the Survey Experiment Reexamined." *Political Analysis* 15: 1-20.

Green, D. P. (2022). *Social Science Experiments*. Cambridge University Press. (chapters 4 + 5)

Schuldt, J. P., Konrath, S. H., and Schwarz, N. 2011. "'Global Warming' or 'Climate Change'?": Whether the Planet is Warming Depends on Question Wording." *Public Opinion Quarterly* 75: 115-124.

INSTRUCTORS' BIO

Emma Hoes is a political scientist at the Department of Political Science at the University of Zurich (UZH). She holds a PhD from the Department of Political and Social Sciences at the European University Institute in Florence, Italy. In her work, she explores how digital technologies influence the quality of our information ecosystem.

Jonathan Klüser is a political scientist at the Department of Political Science at the University of Zurich (UZH). He holds a PhD from the Department of Political Science at Aarhus University, Denmark. In his SNSF-funded project "Beyond Traditional Elites:

Influencers' Agenda Setting Powers in the Digital Age" he researches the potential of entertainment figures to steer the political discourse in digital spaces.

FURTHER READINGS

Though not assigned for the course, the following texts may serve as useful background reading or places for further inspiration in the design and analysis of survey experiments.

Holland, P. W. 1986. "Statistics and Causal Inference." *Journal of the American Statistical Association* 81: 945-960.

Druckman, J. N., Green, D. P., Kuklinski, J. H., and Lupia, A. 2006. "The Growth and Development of Experimental Research in Political Science." *American Political Science Review* 100: 627-635.

Kuklinski, J. H. and Hurley, N. L. 1994. "On Hearing and Interpreting Political Messages: A Cautionary Tale of Citizen Cue-Taking" *The Journal of Politics* 56: 729-751.

Schuldt, J. P., Konrath, S. H., and Schwarz, N. 2011. "'Global Warming' or 'Climate Change'?": Whether the Planet is Warming Depends on Question Wording." *Public Opinion Quarterly* 75: 115-124.

Banerjee, A., Green, D. P., McManus, J., and Pande, R. (2014). "Are poor voters indifferent to whether elected leaders are criminal or corrupt? A vignette experiment in rural India." *Political Communication* 31(3): 391-407.

Glynn, A. N. 2013. "What Can We Learn with Statistical Truth Serum?: Design and Analysis of the List Experiment." *Public Opinion Quarterly* 77: 159-172.

Albertson, B. L. and Lawrence, A. 2009. "After the Credits Roll: The Long-Term Effects of Educational Television on Public Knowledge and Attitudes." *American Politics Research* 37: 275-300.

Hainmueller, J., and Hopkins, D. J. (2015). The hidden American immigration consensus: A conjoint analysis of attitudes toward immigrants. *American Journal of Political Science*, 59(3): 529-548.

Clifford, S. and Jerit, J. 2015. "Do Attempts to Improve Respondent Attention Increase Social Desirability Bias?" *Public Opinion Quarterly* 79: 790-802.

Miratrix, L.W., Sekhon, J.S., Theodoridis, A.G., and Campus, L.F. 2018. "Worth Weighting? How to Think About and Use Weights in Survey Experiments." *Political Analysis*: in press.

Bolsen, T. 2013. "A Light Bulb Goes On: Norms, Rhetoric, and Actions for the Public Good." *Political Behavior* 35: 1-20.

Hainmueller, J., Hangartner, D., and Yamamoto, T. 2015. "Validating Vignette and Conjoint Survey Experiments Against Real-World Behavior." *Proceedings of the National Academy of Sciences*: In press.

Druckman, J. N. and Leeper, T. J. 2012. "Learning More from Political Communication Experiments: Pretreatment and Its Effects." *American Journal of Political Science* 56: 875-896.

Hertwig, R. and Ortmann, A. 2008. "Deception in Experiments: Revisiting the Arguments in Its Defense." *Ethics & Behavior* 18: 59-92.

Mullinix, K. J., Leeper, T. J., Druckman, J. N., and Freese, J. 2015. "The Generalizability of Survey Experiments." *Journal of Experimental Political Science*.

Books

Gerber, A.S. and Green, D.P. 2012. *Field Experiments: Design, Analysis, and Interpretation*. New York: W.W. Norton.

Groves, R.M., et al. 2009. *Survey Methodology*. Wiley-Interscience.

Morgan, S.L. and Winship, C. 2015. *Counterfactuals and Causal Inference*. 2nd Edition. New York: Cambridge.

Mutz, D.C. 2011. *Population-Based Survey Experiments*. Princeton, NJ: Princeton University Press.

Schuman, H. and Presser, S. 1981. *Questions and Answers in Attitude Surveys: Experiments on Question Form, Wording, and Context*. SAGE Publications.

Glennerster R. and Takavarasha, K. 2013. *Running Randomized Evaluations: A Practical Guide*. Princeton, NJ: Princeton.

Auspurg, K. and Hinz, T. 2015. *Factorial Survey Experiments*. SAGE Publications.

Survey, Experimental, and Survey-Experimental Methodology

Sensitive Items

Tourangeau, R. and Smith, T. W. 1996. "Asking Sensitive Questions: The Impact of Data Collection Mode, Question Format, and Question Context." *Public Opinion Quarterly* 60: 275-304.

Blair, G. and Imai, K. 2012. "Statistical Analysis of List Experiments." *Political Analysis* 20: 47-77.

Kreuter, F., Presser, S., and Tourangeau, R. 2009. "Social Desirability Bias in CATI, IVR, and Web Surveys: The Effects of Mode and Question Sensitivity." *Public Opinion Quarterly* 72: 847-865.

Mediation

Jamieson, J. P. and Harkins, S. G. 2011. "The Intervening Task Method: Implications for Measuring Mediation." *Personality & Social Psychology Bulletin* 37: 652-661.

Green, D. P., Ha, S. E., and Bullock, J. G. 2009. "Enough Already about 'Black Box' Experiments: Studying Mediation is More Difficult than Most Scholars Suppose." *The ANNALS of the American Academy of Political and Social Science* 628: 200-208.

Imai, K., Keele, L. Tingley, D., and Yamamoto, T. 2011. "Unpacking the Black Box: Learning about Causal Mechanisms from Experimental and Observational Studies." *American Political Science Review* 105(4): 765-789.

Sampling and Representativeness

Wang, W., Rothschild, D., Goel, S., and Gelman, A. 2015. "Forecasting Elections with Non-representative Polls." *International Journal of Forecasting*: In press.

Chandler, J., Paolacci, G., Peer, E., Mueller, P., and Ratliff, K. A. 2015. "Using Nonnaive Participants Can Reduce Effect Sizes." *Psychological Science*: In press.

Banducci, S. and Stevens, D. 2015. "Surveys in Context: How Timing in the Electoral Cycle Influences Response Propensity and Satisficing." *Public Opinion Quarterly* 79: 214-243.

Factorial Experiments

Hainmueller, J., Hopkins, D. J., and Yamamoto, T. 2014. "Causal Inference in Conjoint Analysis: Understanding Multi-Dimensional Choices via Stated Preference Experiments." *Political Analysis* 22: 1-30.

Treatment Preferences

Hovland, C. I. 1959. "Reconciling Conflicting Results Derived from Experimental and Survey Studies of Attitude Change." *American Psychologist* 14: 8-17.

Leeper, T. J. 2017. "How Does Treatment Self-Selection Affect Inferences About Political Communication?" *Journal of Experimental Political Science* 4(1): 21-33.

Ethics

Sterling, T. D., Rosenbaum, W. L., and Weinkam, J. 1995. "Publication Decisions Revisited: The Effect of the Outcome of Statistical Tests on the Decision to Publish and Vice Versa." *The American Statistician* 49: 108-112.

Franco, A., Malhotra, N., and Simonovits, G. 2015. "Underreporting in Political Science Survey Experiments: Comparing Questionnaires to Published Results." *Political Analysis* 23: 306-312.

General Statistics

Gelman, A., and Stern, H. 2006. "The Difference Between 'Significant' and 'Not Significant' is Not Itself Statistically Significant." *The American Statistician* 60(4): 328-331.