Introduction to Survey Research
Government 496/696-003

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27 March 2020

Course Information

GOVT 496/696-003: Introduction to Survey Research
Wednesdays 2:30-5:20PM
Kerwin 101

Instructor Information

- **Dr. Andrew Ballard**, Assistant Professor of Government
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  Office Hours: By appointment

- **Dr. Jeff Gill**, Distinguished Professor of Government and Mathematics & Statistics
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- **Dr. Ryan T. Moore**, Associate Professor of Government
  Kerwin Hall 226, ryantmoore.org, rtm@american.edu
  Office Hours: By appointment, via https://calendly.com/ryantmoore

- **Dr. Elizabeth Suhay**, Associate Professor of Government
  Kerwin Hall 213, suhay@american.edu
  Office Hours: Wednesday 11:00am-1:00pm

- **Le Bao**, Teaching Assistant, PhD Candidate
  Kerwin Hall 109J, lb4126a@american.edu
  Office Hours: Monday 11:00am-2:00pm, or by appointment.

Course Description

This is an introduction to survey research and polling. Surveys, generally speaking, address questions that are of interest to political researchers, political actors, corporations, government, and journalists. The scientific principles that underlie survey work come from theoretical and empirical knowledge produced by different fields, including political science, sociology, statistics, psychology, and computer science. Surveys provide researchers a way to measure attitudes, behaviors, values,

and norms. We will cover all aspects of this topic including: questionnaire design and wording, survey modes (in person, mail, telephone, Internet), sample size and power, unit and item non-response, calculation of summary statistics, standard errors and other measures of uncertainty, modeling, and ethical issues. The theoretical foundation will center on the notion of Total Survey Error (TSE), which is composed of coverage, sampling, nonresponse, measurement, and post-survey errors. Practically, the course will cover the sequential steps of survey generation and analysis: establishing objectives, question and study design, sampling strategies, pretesting, mode selection, data wrangling, statistical analysis, and assessment.

Learning Objectives

By the end of the course students will have the ability to design, implement, and critically evaluate survey-based research, including in both academic and non-academic settings.

Learning Strategies

Readings

Primary readings will be from the following text, available on Amazon:

- Fowler, Floyd J. Jr. 2014. *Survey Research Methods, 5th Ed.* SAGE Publications.

Other readings are available free of cost online, either through Google Scholar or the American University library. Particularly, we will often draw from the following texts that are available through the library:

- Atkeson, Lonna Rae and R. Michael Alvarez. 2018. *The Oxford Handbook of Polling and Survey Methods*. Oxford University Press.

- Rea, Louis M. and Richard A. Parker. 2014. *Designing and Conducting Survey Research: A Comprehensive Guide, 4th Ed.* San Francisco: Jossey-Bass.

Readings should be completed before the course meeting under which they are listed below.

Computers and Notes in Class

For most class meetings, we will focus our attention on major methods and issues in survey research from the theoretical to the practical. We will also discuss implementation of methods in R, but this will be a secondary focus of class meetings. There will often be time in class to pose your specific questions about R coding, however. As such, you may want to bring a laptop to class to try out new code, to update your code files, etc.

Requirements and Evaluation

The student's final course assessment includes four problem sets, a preliminary survey plan, the final project, and participation and seminar contributions. A summary of the course assessments is in Table 1.

If you cannot submit an assignment on time, arrange to submit it early. We encourage you to use office hours to discuss any specific assignments, difficulties, or questions about the course.

Assignment	Weight	Due date
Problem Sets (4)	40%	Jan 29, Feb 19, Mar 4, Apr 1
Final Project	40%	Apr 29
Participation	20%	(throughout)
(Attendance, contributions, discussion questions)		
Preliminary Plan	0/1	Mar 25

Table 1: Course Assessment Summary

Academic integrity is a core value of institutions of higher learning. It is your responsibility to avoid and report plagiarism, cheating, and dishonesty. Please (re-)read the University policy on academic integrity at http://www.american.edu/academics/integrity/code.cfm, particularly Sections I and II.

Participation

Students are required to do the weekly reading, attend class, complete all assignments, and contribute significantly to course discussions about the material.

To facilitate discussion, keep you up to date on the readings, and get you to think about engaging the readings in a broader research context, you will be responsible for submitting discussion questions each week. On Blackboard, submit *two* discussion questions for each class period. These will be due at **6:00pm on Tuesdays**, the night *before* each class.

Problem Sets

The four problem sets should be completed outside of class. You should submit a printed out hard copy of your solution set **at the start of the class** in which the problem set is due. You may also submit your solutions to the course Blackboard site under Assignments/Problem Sets/PS [number]. We recommend this additional step as a way of creating a backup of your final submission that is time-stamped and visible to the instructors. These files should be in `.pdf` format. You may work with others on the problem sets, but every keystroke of your submission must be your own. You may not copy code or answers from others, but you may develop your solutions with classmates. This includes all support from resources outside of class. You are responsible for understanding every line of code and analysis you submit.

Final Project

For the final project, students will work individually or in pairs to design an online survey. The final project submission will include a set of roughly 15-20 survey questions, and a detailed plan for the survey.

The plan is a proposal you would take to a supervisor in a survey organization in academia, government, campaigns, or business. The plan should include a clear statement of the question the survey intends to answer, with appropriate motivations from the relevant substantive and statistical literatures. It should include details on how the survey will be deployed, including sampling, mode, and data collection. It should include power analysis as part of justifying the deployment.

For undergraduates, the plan is not required to include statistical analysis, *per se.* For graduate students, the plan will include the simulation and analysis of data intended to look like the planned empirical survey data.

The preliminary plan is due shortly after the Spring Break and should be submitted like a problem set. The preliminary plan will be scored as 1 or 0, approve or disapprove. If the instructors do not approve a preliminary plan, the student must improve the preliminary plan and resubmit it until it passes.

Software, Statistics, Data, and Literature Support

The primary software for the course is R. See http://j.mp/2e8zBkC for help getting started. Support for statistical software is available through CTRL. See http://j.mp/ZrBr2Z for CTRL's workshop schedule.

The Department of Mathematics and Statistics offers statistical consulting services, with extensive hours. For the schedule and contact information, see http://j.mp/1EmVqkY. As they advertise, "The Statistical Consulting Center is located in the Research Commons Area in the AU Library. The Center provides assistance with statistical problems in the clients' research areas. It is a free service for American University students, faculty, and staff. Walk-in hours: Fridays, 2:00 - 4:00 p.m. During walk-in hours only: 202-885-6643". They can also schedule help at other times; email statisticalconsulting@american.edu for help.

The library itself offers support for various software. Our librarian is Olivia Ivey, whom we recommend reaching out to as you formulate a question, search for data, and try to put your question in a larger intellectual or policy context. You can schedule time with her at oliviaivey.youcanbook.me.

Intellectual Property

Course content is the intellectual property of the instructor or student who created it, and may not be recorded or distributed without consent.

Course Evaluation

The course evaluation will take place online towards the end of the semester. Please take time to provide this important feedback.

Replication Policy

Students must retain copies of all .R and .Rmd files that include their data processing and analysis for problem sets, labs, and the final project. In keeping with standard practice in the discipline, these files should be able to be run by others, and should reproduce all results the student submits.

Further Information for American University Students

For further detailed information on the important issues of academic integrity, emergency preparedness, academic support, discrimination, and use of social media, please see here.

Calendar

15 January

Introductions (all). Tour of the syllabus. The importance, varieties, and challenges in modern survey research. Numerical introduction to concepts in survey research. Technologies for survey research. A case study. Introduction to R, RStudio, and RMarkdown for survey data analysis, including problem sets and final projects.

☐ Required reading: This syllabus.

22 January

Data Structures and Data Wrangling (Ryan T. Moore)

☐ Required reading:

1. Hadley Wickham and Garrett Grolemund. *R for Data Science: Import, Tidy, Transform, Visualize, and Model Data*. O'Reilly Media, 2017. http://r4ds.had.co.nz/. Chapters 1, 2, 4, 5, 15, 26, 27, and 29.

29 January

Sampling and Margin of Error (Jeff Gill)
Problem Set 1 is due. Wickham and Grolemund (2017), exercises 5.7.1.2, 5.7.1.7, 15.3.1 (all), 15.4.1 (all), and 15.5.1 (all).

☐ Required reading:

1. Fowler, Floyd J. Jr. 2014. *Survey Research Methods, 5th Ed.* SAGE Publications.

   (a) Chapter 5

2. Jeff Gill and Jonathan Homola. "Issues in Polling Methodologies: Inference and Uncertainty." In OUP Handbook on Polling and Polling Methods. Lonna Atkeson and Michael Alvarez (eds). 2018, Oxford University Press.

3. David Mallard Understanding polls: Margins of error.

5 February

Commonly Used Survey Datasets (Andy Ballard)

☐ Required reading:

1. Brace, Paul, Kellie Sims-Butler, Kevin Arcenaux, and Martin Johnson. 2002. Public Opinion in the American States: New Perspectives Using National Survey Data. *American Journal of Political Science, 46*(1): 173-189.

2. Boxell, Levi, Matthew Gentzkow, and Jesse M. Shapiro. 2017. Greater Internet Use Is Not Associated With Faster Growth in Political Polarization Among US Demographic Groups. *Proceedings of the National Academy of Sciences, 114*(40): 10612-10617.

3. Hopkins, Daniel J., John Sides, and Jack Citrin. 2019. The Muted Consequences of Correct Information about Immigration. *The Journal of Politics, 81*(1): 315-320.

12 February

Questionnaire Design, Question Wording and Ordering (Andy Ballard)
Guest Speaker: Paul Schroeder, Chief Business Officer, EurekaFacts, LLC.

☐ Required reading:

1. Fowler, Floyd J. Jr. 2014. *Survey Research Methods, 5th Ed.* SAGE Publications.

   (a) Chapters 6 and 7

2. Rea, Louis M. and Richard A. Parker. 2014. *Designing and Conducting Survey Research: A Comprehensive Guide, 4th Ed.* San Francisco: Jossey-Bass.

   (a) Chapters 2 and 3

19 February

Total Survey Error (Jeff Gill)
Guest speaker: Natalie Jackson, PRRI
Problem Set 2 is due.

☐ Required reading:

1. Fowler, Floyd J. Jr. 2014. *Survey Research Methods, 5th Ed.* SAGE Publications.

   (a) Chapters 2 and 13

2. Biemer, Paul P. 2010. Overview of Design Issues: Total Survey Error. *Handbook of Survey Research*: 27-57.

3. Groves, Robert M. and Lyberg, Lars. 2010. Total Survey Error: Past Present, and Future. *Public Opinion Quarterly* 74: 849-879.

26 February

Survey Modes, Nonprobability Samples, Power, Sample Size (Jeff Gill)
Guest Speaker: Stas Kolenikov, Abt Associates

☐ Required reading:

1. Floyd J. Fowler, *Survey Research Methods*, Chapter 5.

2. Jonathan Homola, Natalie Jackson, and Jeff Gill. "A Measure of Survey Mode Differences." Electoral Studies, Volume 44, 255274, (December) 2016.

3. Matthias Schonlau and Mick P. Couper. "Options for Conducting Web Surveys." Statistical Science, Volume 32, Number 2 (2017), 279-292.

4. Atkeson, Lonna Rae, Alex N. Adams, and R. M. Alvarez. "Mixing Survey Modes and its Implications."The Oxford Handbook of Polling and Survey Methods. Oxford University Press, 2018. 53.

4 March

Analyzing and Interpreting Survey Data: Crosstabulation, Weights, and Regression (Ryan T. Moore)
Guest Speaker: Kate Williams, Lead Behavioral Methods Scientist, Nielsen Research
Problem Set 3 is due.

11 March

No class. Spring Break.

18 March

The Cost of Performing Surveys, Response Rates, and Incentives (Liz Suhay)
Guest speaker: Gonzalo Rivero, Data Science Manager in the Statistics and Evaluation Sciences Unit, Westat

☐ Required reading:

1. Floyd J. Fowler, *Survey Research Methods*, Chapter 3 and 4.

2. Mogens Jin Pedersen and Christian Videbaek Nielsen. 2016. "Improving Survey Response Rates in Online Panels: Effects of Low-Cost Incentives and Cost-Free Text Appeal Interventions." *Social Science Computer Review* 34(2): 229-243.

3. Roger Tourangeau, J. Michael Brick, Sharon Lohr, and Jane Li. 2017. "Adaptive and Responsive Survey Designs: A Review and Assessment." *Journal of the Royal Statistical Society* 180(1): 203-223.

25 March

International Surveys and Hard to Reach Populations (Liz Suhay)
Guest speaker: Katie Simmons, Senior Research Scientist, Associated Press-NORC Center for Public Affairs Research
Preliminary Plan is due.

☐ Required reading:

1. Jeffrey A. Karp and Jack Vowles. 2018. "Cross-National Surveys and the Comparative Study of Electoral Systems: When Country/Elections Become Cases." In Lonna Rae Atkeson and R. Michael Alvarez (eds.), *The Oxford Handbook of Polling and Survey Methods*. Oxford University Press, 2018.

2. Prakash Adhikari and Lisa A. Bryant. 2018. "Sampling Hard-to-Locate Populations: Lessons from Sampling Internally Displaced Persons (IDPs)."In Lonna Rae Atkeson and R. Michael Alvarez (eds.), *The Oxford Handbook of Polling and Survey Methods*. Oxford University Press, 2018.

3. Justin A. Berry, Youssef Chouhoud, and Jane Junn. 2018. "Reaching Beyond Low-Hanging Fruit: Surveying Low-Incidence Populations."In Lonna Rae Atkeson and R. Michael Alvarez (eds.), *The Oxford Handbook of Polling and Survey Methods*. Oxford University Press, 2018.

1 April

Experimental Design and List Experiments (Liz Suhay)
Guest speaker: Laura Stoker, Associate Professor, UC Berkeley
Problem Set 4 is due.

☐ Required reading:

1. Donald T. Campbell and Julian C. Stanley. 1963. *Experimental and Quasi-Experimental Designs for Research.* Houghton Mifflin Company. pp.5-26.

2. Yanna Krupnikov and Blake Findley. 2018. "Survey Experiments: Managing the Methodological Costs and Benefits."In Lonna Rae Atkeson and R. Michael Alvarez (eds.), *The Oxford Handbook of Polling and Survey Methods.* Oxford University Press, 2018.

3. "Four Qualtrics Surveys for Students with Annotations" (Peruse the example designs.)

4. (Optional) Jeffrey R. Lax, Justin H. Phillips, and Alissa F. Stollwerk. 2016. "Are Survey Respondents Lying About Their Support for Same-Sex Marriage?" *Public Opinion Quarterly* 80(2): 510-533.

8 April

Advanced Experiments: Conjoint Designs and Multiarm Bandit Designs (Ryan T. Moore)
Guest Speaker: TBD

☐ Required reading:

1. Jens Hainmueller, Daniel J. Hopkins, and Teppei Yamamoto. Causal inference in conjoint analysis: Understanding multidimensional choices via stated preference experiments. *Political Analysis*, 22(1):1–30, 2014.

2. Molly Offer-Westort, Alexander Coppock, and Donald P Green. Adaptive experimental design: Prospects and applications in political science. *Manuscript.*, 2018. http://j.mp/2FsHlKr.

15 April

Big Data and the Future of Survey Research (Andy Ballard)
Guest Speaker: Winter Mason, Computational Social Scientist, Facebook.

☐ Required reading:

1. Bond, Robert M., Christopher J. Fariss, Jason J. Jones, Adam DI Kramer, Cameron Marlow, Jaime E. Settle, and James H. Fowler. 2012. A 61-Million-Person Experiment in Social Influence and Political Mobilization. *Nature 489*(7415): 295.

2. Jackson, Natalie. 2018. The Rise of Poll Aggregation and Election Forecasting. *The Oxford Handbook of Polling and Survey Methods.* Oxford University Press.

3. Klasnja, Marko, Pablo Barbera, Nick Beauchamp, Jonathan Nagler, and Joshua A. Tucker. 2018. Measuring Public Opinion with Social Media Data. *The Oxford Handbook of Polling and Survey Methods.* Oxford University Press.

22 April

Wrap-Up, Ethics, and Industry Best Practices (all)

☐ Required reading:

1. AAPOR Best Practices for Survey Research

2. Floyd J. Fowler, *Survey Research Methods*, Chapter 11 and 12.

29 April

Final project is due, 2:30pm.