Survey Design and Analysis

Time: TBD
Location: TBD

Professor Hilary Izatt
Office Hours: TBD

Overview

Welcome! I am excited to meet you all. This course is designed to deliver basic skills that are valuable in the knowledge economy you are about to enter. Political science classes often give students the ability to define and contrast concepts at the heart of the most important puzzles in the real world: popular but incorrect beliefs about the Covid-19 pandemic, inter-partisan animosity, racial attitudes, media trust, support for immigration, and so on. Sometimes, we even spend a little time developing the skills to analyze data others have collected. *(Example: what is the correlation between party identification and vaccine hesitancy in 2021? Hint: it's very large.)*

We do not spend as much time developing skills students need to study these puzzles themselves: the ability to *measure* important concepts, decide on a sample, design a survey instrument, analyze survey data, and present original results to peers. The core challenge stems in part from the fact there are few, if any, steadfast "rules of measurement" that all political scientists, let alone all social scientists, rely upon. Every concept is unique in some respect, this argument goes, and so requires unique measurement techniques.

Yet careful measurement is fundamental to our understanding of the world. It is a critical aspect of description, analysis, and explanation. The task of measuring a concept requires the same type of precise and rigorous thought that goes into crafting an appropriate statistical test of a hypothesis. If we do not think carefully about how we measure a concept, our understanding of public opinion and mass political behavior will be meager at best. After all, the same rule of thumb that applies to many parts of life also applies to scientific research: "garbage in, garbage out."

Therefore, this seminar has one goal: the development of a public opinion survey that can help us answer a political science question important to you. We will spend time at the beginning talking about the questions we will explore in this course. Below is a list you can choose from. If you would like to propose another, feel free to do that, though we cannot do too many different projects at once, due to cost constraints (I will explain).

These are broad questions, so we will have to do some work to make them specific enough to test with our opinion survey:

- *How worried are Americans about speaking their minds about politics these days? What causes people to feel hesitant to speak their minds?*
- *What causes Covid-19 vaccine hesitancy in the U.S., and how much does it have to do with politics?*
- *How do Americans feel about the new electoral restrictions that were passed in many states after the 2020 presidential election? What causes people to believe the outcome of the 2020 election was fraudulent?*

Your research team (3 people per team, I will choose) will need to pick one of these topics for your final project by Friday, January 14. These are big questions, so there is a lot of room to put your individual mark on whichever one your team chooses.

To complete the final project, we will all take three steps. The first is to review the theory of measurement. We will learn how to evaluate the reliability and validity of the questions we ask to measure important public opinion concepts. This first part of the course is abstract, and we will test your mastery of this material via problem sets.

The second step in this course reviews practical measurement techniques for self-reported surveys. It turns out most of the work we do in the study of political behavior and public opinion involves survey self-reports. We ask people questions—increasingly via the Internet but also via telephone, paper-and-pencil survey, or even face-to-face—and they give us answers. This is really hard, but we have some best practices which are good to learn. We will apply these best practices to constructing our questionnaire, question by question. Again, there will be short weekly assignments to turn in.

The third step will be collecting, analyzing, writing up, and presenting results. Your papers will be collaborative, just like much of the rest of the work you will do.

To summarize, by the end of the course, I want you to be good at several things that are hard to be good at:

1. *Writing clear, valid, and reliable survey questions.*
2. *Evaluating and improving questions others have written.*
3. *Analyzing public opinion data in simple ways.*
4. *Presenting results to an audience.*

You do not need a stats background to take this course, but we will be using Stata. You need to buy the student version of Stata. I also would like you to bring clickers to class. If you don't buy a clicker and register it, you will miss a lot of credit.

Readings

The textbook we will use is Fowler's Survey Research Methods 5th edition, Sage, 2015. It is a very straightforwardly written book, not too technical, and quite easy to read. It is available for purchase in paperback, which I recommend. It is also available electronically online though the UM Library, but only in the 4th edition. You are welcome to use the 4th edition if you do not wish to purchase the book. If you are going into a field with survey research demands, you might find it useful to have the hard copy.

There will also be a set of readings posted electronically on Canvas. I may be adding substantive readings to focus our projects. You will be doing primary research, which will also require that you conduct independent literature reviews for your own bibliography.

Requirements

Seminar Participation: There will be lectures, but be ready to participate each day. I will try to learn your names quickly. In every class, you should be prepared to discuss key topics and ask questions. Begin thinking early about your term paper, and ask questions about how the measurement techniques we discuss might be applied to the question you choose.

Problem Sets: There will be small assignments throughout the course. Each is worth about 5% of your final grade, so you need to keep up. We will evaluate each of these on a 100-point scale.

Final Project: Student collaborative teams will write an original 20 page, double-spaced paper. The page limit includes tables and figures but the bibliography is separate. You will present your findings to the class. The paper is intended to be engaging, innovative, and important. If you are not having fun, you are doing something wrong. *(Or, perhaps, you and I might have different definitions of fun. Still, I want you to have fun.)*

Grading

Course grades will be determined based on completed weekly assignments (50% total) the final presentation + paper (15% + 25%), as well as attendance and participation in class (10%). No incompletes will be given except for medical or family emergencies. Late assignments or papers will only be accepted in cases of medical emergency. There are no midterms. There is no final exam.

Course Accommodations for Students with Disabilities

The University of Michigan is committed to providing equal opportunity for participation in all programs, services, and activities. If you have a disability, you can request academic accommodations for this course by contacting the Services for Students with Disabilities (SSD) Office

SSD is capable of providing accommodations to people with mental health conditions, chronic health conditions, learning disabilities, deafness, visual impairment, mobility impairment, Attention Deficit/Hyperactivity Disorder (ADHD), Autistic Spectrum Disorder (ASD), Acquired/Traumatic Brain Injury (ABI/TBI), temporary disabilities, and other disability statuses which do not neatly align with these diagnostic categories.

Once SSD determines your eligibility for accommodations, you will be issued a Verified Individual Services Accommodation (VISA) form. Please present this form to me at the beginning of the term, or at least two weeks before you need accommodations (such as assignment due dates).

Calendar

I. Introduction: Conceptualization and Measurement	
Week 1 Jan. 5	**Course Introduction** *Survey Research Methods*, Ch. 1 Couper, M.P. 2013. "Is the Sky Falling? New Technology, changing media, and the Future of Surveys." *Survey Research Methods* 7 (3): 145-156. Discussion about topics for study.

Week 2	**Jan. 10-12**	**Introduction to Measurement Theory and the Concept of Total Survey Error** *Survey Research Methods*, Ch. 2. Individual Assignment: Evaluate the concept of "media literacy" and critique the following article: Ashley, S., A. Maksl, and S. Craft. 2013. "Developing a news media literacy scale." *Journalism and Mass Communication Educator* 68 (1): 7-21. <u>Optional</u>: Bartholomew, D.J. 1998. "Scaling Unobservable Constructs in Social Science." Applied Statistics 47 (1): 1-13. Brackstone, G. 1999. "Managing data quality in a statistical agency." Survey Methodology 25 (2): 139-149. Chaffee, S.H. 1991. *Explication*. London: Sage. Kramer, G.H. 1986. "Political science as science." In *Political Science: The Science of Politics* (ed.) Herbert F. Weisberg. New York: Agathon. Pp. 11-23. Jacoby, W. 1999. "Levels of Measurement and Political Research- An Optimist View," American Journal of Political Science pp. 271-301. Roos, J. Mica. 2012. Measuring Science or Religion? A Measurement Analysis of the National Science Foundation Sponsored Science Literacy Scale, 2006-2010. Public Understanding of Science.

Week 3	**(Jan 17 is MLK day)**	**Sampling, Populations, Frames, and Coverage Error**
	Jan. 19	*Survey Research Methods*, Ch. 3, 4. Individual Assignment: What if we used a non-random sample to collect our data? Many scholars use Mturk workers to answer survey questions. In one page, identify one potential problem with using these respondents for making population inferences about your core concept. The following papers are uploaded in Canvas for you to use to make this comparison: Berinsky, A.J., G.A. Huber, and G.S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk." *Political Analysis* 20 (3): 351-368. Couper, M.P. 2000. "Web Surveys: A Review of Issues and Approaches." *Public Opinion Quarterly* 64 (4): 464-494 . <u>Optional</u>: Squire, P. 1988. "Why the 1936 Literary Digest Poll Failed." *Public Opinion Quarterly* 52:125-133.
Week 4	**Jan. 24-26**	**Validity and Reliability in Measurement** *Survey Research Methods*, Ch. 6 Carmines, E.G., and R.A. Zeller. 1979. *Reliability and Validity Assessment*. Beverly Hills, CA: Sage. Pps. 9-49. Bushman, B. J., and G.L. Wells. 1998. "Trait aggressiveness and hockey penalties- Predicting hot tempers on the ice." Journal of Applied Psychology, 83(6), 969-974. In-Class Discussion: Measures of media exposure. Individual Assignment: In one page, weigh in on the validity

		of Dilliplane et al.'s new measure of media exposure. Dilliplane, S., S.K. Goldman, and D. Mutz. 2013. "Televised Exposure to Politics: New Measures for a Fragmented Media Environment." *American Journal of Political Science* 57: 236-248. Prior, M. 2013. "The Challenge of Measuring Media Exposure: Reply to Dilliplane, Goldman, and Mutz." Political Communication 30 (4): 620-634.
II. Best Practices for Question-Asking		
Week 5	**Jan 31-Feb 2**	**Surveys as Conversations: Optimizing versus Satisficing** *Survey Research Methods, Ch. 5* Pasek, J., and J.A. Krosnick. 2010. "Optimizing survey questionnaire design in political science: Insights from psychology." In J. Leighley (Ed.), Oxford Handbook of American Elections and Political Behavior. Oxford, UK: Oxford University Press. Pps. 27-33 Individual Assignment: Evaluate 5 survey items in the assignment posted on Canvas. Identify problems, suggest improvements. Optional: Malhotra, N., J.A. Krosnick, and R.K. Thomas. 2009. "Optimal design of branching questions to measure bipolar constructs." *Public Opinion Quarterly* 73 (2): 304-324.

Week 6	**Feb. 7-9**	**Question Writing Continued** Pasek, J., and J.A. Krosnick. 2010. Optimizing survey questionnaire design in political science: Insights from psychology. In J. Leighley (Ed.), Oxford Handbook of American Elections and Political Behavior. Oxford, UK: Oxford University Press. Pps. 33-44 Team Assignment: Write and submit 3 items for measuring the dependent variable in your hypothesis.
Week 7	**Feb. 14-16**	**Evaluating your Survey items: Cognitive Interviewing and In-Person Interviews** *Survey Research Methods*, Ch. 7, 8 Team Assignment: Pretest your questions with 3 people not in the class. Write a two-page evaluation of the results.
Week 8	**Feb. 21-23**	**Building the Questionnaire in Qualtrics** Team Assignment: Program your questions into Qualtrics master survey. Reference Reading: Snow's guide to Qualtrics.
	Feb 28-Mar 2	**SPRING BREAK** Data will be collected during break.
Week 9	**Mar. 7-9**	**Ethics in Surveys and the IRB Process** *Survey Research Methods*, Ch. 11. Individual Assignment: Pass the UM "Human Subjects-Social and Behavioral" PEERRS test. Submit a copy of the electronic receipt to Canvas. http://my.research.umich.edu/peerrs/?_ga=2.200131566.1786014429.1514733214-1134952684.1508809970

Week 10	**Mar. 14-16**	**TBA *(Finish discussion of measurement issues or begin training in data analysis.)***
<u>III. Analyzing and Interpreting Relationships between Measured Concepts</u>		
Week 11	**Mar. 21-28**	**Data Processing: Cleaning, Recoding, Scale Building, Descriptive Analysis, Visualization** *Survey Research Methods*, Chapter 9 Team Assignment: Perform a simple reliability test (Cronbach's alpha) with Stata on data we collected. Write no more than one page describing the results. Submit Stata "do" file for your recodes, including frequencies of individual items, histogram of one scale.
Week 12	**Mar. 28- 30**	**Data Analysis I: Bivariate Analyses, Cross-Tabulations, Measures of Association** *Survey Research Methods*, Ch. 10 Team Assignment: Submit Stata "do" file and discuss bivariate relationships between dependent and independent variables.
Week 13	**Apr. 4-6**	**Data Analysis II: Multivariate Analyses and Regression** *Survey Research Methods*, Ch. 12 Team Assignment: Submit Stata "do" file and discuss results of the multivariate analysis.
Week 14	**Apr. 11-13**	**In-Class Presentations**
Week 15	**Apr. 18**	**In-Class Presentations**

Final paper is due Friday, April 22 at midnight to Canvas.