

SURVMETH 988.229: Introduction to Survey Research Techniques
Workshop Syllabus
Summer 2017
(Last updated: May 25, 2017)

Time: 9:00 AM-12:00 PM, Monday-Friday, June 5 – June 9, 2017
Location: 2353 Mason Hall
Class website: <https://umich.instructure.com/courses/160523>
Instructors: Z. Tuba Suzer-Gurtekin, Institute for Social Research, U of Michigan,
tsuzer@umich.edu
Emilia Peytcheva, RTI International,
emilia@umich.edu
Office hours: By appointment (please send an email message to set a time)

Overview of the Workshop

Surveys continue to play an important role in addressing many kinds of problems about many kinds of populations stand-alone or as a part of an integrated information system. Surveys that rely on grounded scientific principles guarantee the contribution of representative, valid and reliable information in addressing a variety of problems. The scientific principles depend on good understanding of theories and empirical research from disciplines such as psychology, sociology, statistics, and computer science. In this course, a selected set of theories and empirical research will be introduced as the foundation of survey research principles according to the Total Survey Error (TSE) framework. In particular, the course will cover the TSE components such as coverage, nonresponse, and measurement error sources and remedies. This course will introduce the principles for the major stages of the survey process, including hypothesis and problem formulation, study design, sampling, questionnaire design, interviewing techniques, pretesting, modes of data collection, and data cleaning, management, and analysis. These technical aspects of survey design and data analysis are handled by an integrated staff of specialists in large surveys. Thus, the course will also discuss team and project management in the context of survey research. The course will not provide training in a set of skills needed to conduct a survey from beginning to end. More intensive training is required for survey skill development than can be offered in a one-week course.

Readings

Primary readings will be from the following volume, available at local bookstores:

Groves, R.M., Fowler, F.J. Jr., Couper, M.P., Lepkowski, J.M., Singer, E., & Tourangeau, R. (2009). *Survey Methodology, 2nd Edition*. New York: Wiley. (available online: <http://mirlyn.lib.umich.edu/Record/006868217>)

In several weeks, readings will also be drawn from the following short, paperback books which are recommended for purchase:

Converse, J., & Presser, S. (1986). *Survey Questions: Handcrafting the Standardized Questionnaire*. Newbury Park: Sage Publications. (available online:

<http://mirlyn.lib.umich.edu/Record/012841736>)

Kalton, G. (1983). *An Introduction to Survey Sampling*, Beverly Hills: Sage Publications. (available online: <http://mirlyn.lib.umich.edu/Record/012841441>)

Fowler, F., & Mangione, T. (1990). *Standardized Survey Interviewing*, Newbury Park: Sage Publications. (available online: <http://mirlyn.lib.umich.edu/Record/012841712>)

Attendance

Regular attendance is expected and required. If a student is unable to attend a class session, they are required to notify the lead instructor for the day via email at least 15 minutes before the start of the class session.

Workshop Schedule

The following are the expected dates of lecture topics:

<i>Date</i>	<i>Topic</i>	<i>Instructor</i>
<i>Day 1: June 5</i>		
9:00 am - 10:00 am	Introduction; Inference and Error in Surveys Introduction to survey methodology Steps of the process of a survey Key concepts and principles of survey quality	<i>Suzer-Gurtekin</i>
10:10 am- 11:00 am	Coverage error Probability sampling Sampling frames	<i>Suzer-Gurtekin</i>
11:10 am- 12:00 pm	Sampling Simple random sampling Sample size calculation Systematic sampling	<i>Suzer-Gurtekin</i>

Readings:

Groves, R.M. et al. (2009). Chapters 1, 2, 3 and 4:

Chapter 1: An Introduction to Survey Methodology

Chapter 2: Inference and Error in Surveys

Chapter 3: Target Populations, Sampling Frames, and Coverage Error

Chapter 4: Sample Design and Sampling Error, Sections 4.1-4.3, 4.6

Kalton, G. (1983). *An Introduction to Survey Sampling*. Beverly Hills: Sage, Chapters 1-3, 8.

Chapter 1: Introduction

Chapter 8: Sampling Frames

Chapter 2: Simple Random Sampling

Chapter 3: Systematic Sampling

Optional Readings:

Lyberg, L. E., and Stukel, D. M. (2017). The Roots and Evolution of the Total Survey Error Concept In P. P. Biemer, E. D. de Leeuw, S. Eckman, B. Edwards, F. Kreuter, L. E. Lyberg, C. Tucker, and B. T. West (Eds.), *Total survey error in practice* (pp. 1–23s. Wiley Series in Survey Methodology.

Groves, R.M., & Lyberg, L.E. (2010). Total Survey Error Past, Present, and Future. *Public Opinion Quarterly*, 74(5), 849–879.

Kalton, G. (1983). *An Introduction to Survey Sampling*. Beverly Hills: Sage, Chapter 11.

<i>Date</i>	<i>Topic</i>	<i>Instructor</i>
Day 2: June 6 9:00 am - 12:00 pm	Sampling Stratification Cluster sampling Stratified cluster sampling Probability proportionate to size sampling Construction of unit weights	<i>Suzer-Gurtekin</i>

Readings:

Groves, R.M. et al. (2009). Chapter 4, Sections 4.4, 4.5, 4.7,4.8, 4.9, 4.10.

Optional Readings:

Kalton, G. (1983). *An Introduction to Survey Sampling*. Beverly Hills: Sage, Chapter 11.

Chapter 4: Stratification

Chapter 5: Cluster and Multistage Sampling

Chapter 6: Probability Proportionate to Size Sampling

Tucker, C., & Lepkowski, J.M. (2008). Telephone survey methods: Adapting to change. In J.M. Lepkowski et al. (eds.), *Advances in Telephone Survey Methodology*. New York: Wiley, 3-26.

<i>Date</i>	<i>Topic</i>	<i>Instructor</i>
Day 3: June 7 9:00 am - 10:00 am	Questions and Answers in Surveys Overview of response behavior Comprehension Memory search Estimation and judgment Delivery of response	<i>Peytcheva</i>
10:10 am - 11:00 am	Questionnaire Development Research findings on question wording, structure, and context	<i>Peytcheva</i>
11:10 am- 12:00 pm	Questionnaire Pretesting Focus groups Cognitive interviews Expert review Pretests Pilot tests	<i>Peytcheva</i>

Readings:

Groves, R.M. et al. (2009). Chapters 7 and 8.

Chapter 7: Questions and Answers in Surveys

Chapter 8: Evaluating Survey Questions

Optional Readings:

Converse, J., & Presser, S. (1986), *Survey Questions: Handcrafting the Standardized Questionnaire*,

<i>Date</i>	<i>Topic</i>	<i>Instructor</i>
Newbury Park: Sage.		
Presser, S., Couper, M.P., Lessler, J.T., Martin, E.A., Martin, J., Rothgeb, J., & Singer, E. (2004).		
Methods for testing and evaluating survey questions. <i>Public Opinion Quarterly</i> , 68, 109-130.		

Day 4: June 8

9:00 am - 10:00 am	Mode of Data Collection Face-to-face Telephone Self-administered	<i>Suzer-Gurtekin</i>
10:10 am- 11:00 am	Computer Assisted Data Collection Methods of computer assisted data collection Impact on survey errors Web surveys	<i>Suzer-Gurtekin</i>
11:10 am- 12:00 pm	Interviewing Recruiting and hiring of interviewers Interviewer training Evaluation of interviewing performance Management of data collection effort	<i>Suzer-Gurtekin</i>

Readings:

Groves, R.M. et al. (2009). Chapters 5, and 9.

Chapter 5: Methods of Data Collection

Chapter 9: Survey Interviewing

Tourangeau, R., Conrad, F. & Couper, M. (2013). Introduction in *The Science of Web Surveys*, Oxford University Press: New York.

Antoun, C., Couper, M. P., & Conrad, F.G. Effects of Mobile versus PC Web on Survey Response Quality: A Crossover Experiment in a Probability Web Panel. *Public Opinion Quarterly* 2017; 81 (S1): 280-306.

West, B. T., Conrad, F. G., Kreuter, F. and Mittereder, F. (2016), Can conversational interviewing improve survey response quality without increasing interviewer effects?. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*. doi: 10.1111/rssa.12255

Optional Readings:

Brady T. West, Annelies G. Blom; Explaining Interviewer Effects: A Research Synthesis. *J Surv Stat Methodol* 2017; 5 (2): 175-211.

Couper, M. P. (2011). The future of modes of data collection. *Public Opinion Quarterly*, 75(5), 889–908.

Couper, M. (2013). Is the sky falling? New technology, changing media, and the future of surveys. *Survey Research Methods*, 7(3), 145-156.

De Leeuw, E.D. (2005). To mix or not to mix data collection modes in surveys. *Journal of Official Statistics*, 21, 233-255.

Fowler, F., & Mangione, T. (1990), *Standardized Survey Interviewing*, Newbury Park: Sage, Chapters 1-5.

Tourangeau, R., Conrad, F. & Couper, M. (2013). Chapter 1: Sampling and coverage issues for web surveys in *The Science of Web Surveys*, Oxford University Press: New York.

Day 5: June 9

9:00 am- 10:00 am	Nonresponse Contacting sample units Gaining the cooperation of sample units Monitoring the progress of data collection	<i>Suzer-Gurtekin</i>
10:10 am- 11:00 am	Post-Survey Processing; Estimation Editing data Coding Imputation Analysis of survey data	
11:10 am- 12:00 pm	Principles and Practices of Research Ethics for Surveys Research ethics Informed consent Privacy and confidentiality	

Readings:

Groves, R.M. et al. (2009). Chapters 6, 10, and 11.
Chapter 6: Nonresponse in Sample Surveys
Chapter 10: Postcollection Processing of Survey Data
Chapter 11: Principles and Practices related to Ethical Research

Optional Readings:

Valliant R. (2004), *The Effect of Multiple Weighting Steps on Variance Estimation*, Journal of Official Statistics, Vol. 20, No. 1, 1-18
West B.T., Sakshaug J.W., and Aurelien GAS. (2016), *How Big of a Problem is Analytic Error in Secondary Analyses of Survey Data?*, PLOS ONE.
<https://doi.org/10.1371/journal.pone.0158120>
Singer, E., & Couper, M.P. (2011). Ethical considerations in web surveys. In M. Das, P. Ester, & L. Kaczmirek (eds.), *Social Research and the Internet*. New York: Taylor and Francis, 133-162

Readings:

- Antoun, C., Couper, M. P., & Conrad, F.G. Effects of Mobile versus PC Web on Survey Response Quality: A Crossover Experiment in a Probability Web Panel. *Public Opinion Quarterly* 2017; 81 (S1): 280-306.
- Couper, M. P. (2011). The future of modes of data collection. *Public Opinion Quarterly*, 75(5), 889–908.
- Couper, M. (2013). Is the sky falling? New technology, changing media, and the future of surveys. *Survey Research Methods*, 7(3), 145-156.
- Couper, M.P. & Singer, E. (2013). Informed Consent for Web Paradata Use. *Survey Research Methods* (2013) Vol.7, No.1, pp. 57-67.
- De Leeuw, E.D. (2005). To mix or not to mix data collection modes in surveys. *Journal of Official Statistics*, 21, 233-255.
- Groves, R.M., & Lyberg, L.E. (2010). Total Survey Error Past, Present, and Future. *Public Opinion Quarterly*, 74(5), 849–879.
- Lyberg, L. E., and Stukel, D. M. (2017). The Roots and Evolution of the Total Survey Error Concept In P. P. Biemer, E. D. de Leeuw, S. Eckman, B. Edwards, F. Kreuter, L. E. Lyberg, C. Tucker, and B. T. West (Eds.), *Total Survey Error in Practice* (pp. 1–23). Wiley Series in Survey Methodology.
- Presser, S., Couper, M.P., Lessler, J.T., Martin, E.A., Martin, J., Rothgeb, J., & Singer, E. (2004). Methods for testing and evaluating survey questions. *Public Opinion Quarterly*, 68, 109-130.
- Singer, E., & Couper, M.P. (2011). Ethical considerations in web surveys. In M. Das, P. Ester, & L. Kaczmirek (eds.), *Social Research and the Internet*. New York: Taylor and Francis, 133-162
- Steps on Variance Estimation, *Journal of Official Statistics*, Vol. 20, No. 1, 1-18
- Tourangeau, R., Conrad, F. & Couper, M. (2013). Chapter 1: Sampling and coverage issues for web surveys in *The Science of Web Surveys*, Oxford University Press: New York.
- Tourangeau, R., Conrad, F. & Couper, M. (2013). Introduction in *The Science of Web Surveys*, Oxford University Press: New York.
- Tucker, C., & Lepkowski, J.M. (2008). Telephone survey methods: Adapting to change. In J.M. Lepkowski et al. (eds.), *Advances in Telephone Survey Methodology*. New York: Wiley, 3-26.
- Valliant R. (2004), The Effect of Multiple Weighting
- West B.T., Sakshaug J.W., and Aurelien GAS. (2016), *How Big of a Problem is Analytic Error in Secondary Analyses of Survey Data?*, PLOS ONE.
<https://doi.org/10.1371/journal.pone.0158120>
- West, B. T., Conrad, F. G., Kreuter, F. and Mittereder, F. (2016), Can conversational interviewing improve survey response quality without increasing interviewer effects?. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*. doi: 10.1111/rssa.12255
- West, B.T., Blom, A. G.. Explaining Interviewer Effects: A Research Synthesis. *Journal of Survey Statistics and Methodology* 2017; 5 (2): 175-211.