

Advanced Survey Design
02 September – 05 September 2019
Week 36

Course Director: *Dr. Peter Lugtig*
E-mail: *ms.summerschool@uu.nl*

This 4-day course in survey design takes student beyond the introductory courses offered in BA and MA programmes, and discusses the state-of-the-art of one of the most important data collection techniques: surveys. The course focuses on the methodology of how to do surveys, and the use statistical techniques to analyse and correct for some specific survey errors. It combines short 1-hour lectures with exercises on most of the topics discussed. We assume course participants are proficient in working with R. Most of the exercises can also be done with SPSS.

The course assumes basic knowledge of:

- Basic knowledge of social science research methodology
- Multivariate statistics up to the General Linear Model
- The basics of survey methodology (the basic of sampling questionnaire design, collecting and processing data)

Background readings for the course are:

- Aggarwal, C.C. (2018) *Machine learning for text*. Springer. ISBN: 978-3-319-73530-6, doi: 10.1007/978-3-319-73531-3 **(day 5)**
- Biemer, P.P., de Leeuw E., Eckman, S., Edwards, B., Kreuter, F., Lyberg, L., Tucker, N.C., West, B., eds. (017) *Total Survey Error in Practice*, Wiley, especially chapters 2 and 7 **(day 2)**
- Brunsdon, C. & Comb, L. (2019) *An introduction to R for spatial analysis and mapping (Spatial analysis and GIS)*. (2nd edition). Sage, London. ISBN-13: 978-1526428509 **(day 5)**
- Dillman, D.A., J.D. Smyth, and L.M. Christian (2009) *Internet, Mail and Mixed-Mode: The Tailored Design Method*, 3rd Edition. Wiley and Sons, chapters 4 and 5 especially **(day 2)**
- Foster, Ian, et al., eds. *Big data and social science: A practical guide to methods and tools*. CRC Press, 2016 **(day 2, 4)**
- Fowler, F.J. (1996) *Improving survey questions – design and evaluation*. London, Sage, Chapters 1-6 **(day2)**
- Groves, R.M. et al. (2009), *Survey Methodology*, 2nd edition. New York: Wiley **(days 1-3)**
- Japac, L., Kreuter, F., Berg, M., Biemer, P., Decker, P., Lampe, C., ... & Usher, A. (2015). Big data in survey research: AAPOR task force report. *Public Opinion Quarterly*, 79(4), 839-880.
- Kreuter, F. (Ed.). (2013). *Improving surveys with paradata: Analytic uses of process information* (Vol. 581). John Wiley & Sons **(day 1,2, 4)**
- De Leeuw, E. D., J. J. Hox, and D. Dillman (2008). *International Handbook of Survey Methodology*. New York, chapters 17 & 19. **(days 1-3)**
- Lohr, S. (2009). *Sampling: design and analysis*. Nelson Education **(day 1 and 3)**
- Lynn, P. (1996) Weighting for non-response. In Totman et al *et al*. Survey and statistical computing, available on: <http://iserwww.essex.ac.uk/home/plynn/downloads/Lynn%201996%20Weighting.pdf> **(day 3)**
- Presser, S., M.P. Couper, J.T. Lessler, E. Martin, J. Martin, J.M. Rothgeb, and E. Singer (2004) "Methods for Testing and Evaluating Survey Questions", *Public Opinion Quarterly*, 68 (1): 109-130. **(day 2)**

More specific reading materials will be references in the course slides, which will be available to participants at the start of the course

For information about the Social Programme, please have a look at the last page of this document or visit the [Utrecht Summer School website!](#)

Day-to-day program:

Monday, 02 September			
Time	Activity (topic and lecturer)	Description	Location
09:00-10:00	Lecture	Introduction to the Total Survey Error Paradigm	Sjoerd Groenman building, room C028
10:00-11:00	Lecture	Types of data and their relation to Total Survey Error: - Designed data - Organic data - Designed big data	
11:00-12:00	Exercise (3)	Study design and minimizing Total Survey error (in groups)	
12:00-13:00	Lunch (included)	Lunch is at the University mensa	
13:00-14:00	Lecture (4)	Choosing an appropriate sampling frame and sampling design. Registers, geodata and digital trace data.	
14:00-15:00	Lecture (4)	Sampling designs: statistical efficiency, survey costs and survey practice	
15:00-16:00	Exercise (5)	Working out a sampling design (computer exercise in SPSS or R)	

Tuesday, 03 September			
Time	Activity	Description	Location
09:00-10:00	Lecture	Advanced questionnaire design	Sjoerd Groenman building, room C020
10:00-11:00	Lecture	Mixing the modes	
11:00-12:00	Exercise	Redesigning an existing questionnaire (in pairs)	
12:00-13:00	Lunch		
13:00-14:00	Lecture	Mobile surveys	
14:00-15:00	Lecture	Surveys and Big Data	
15:00-16:00	Exercise	Exercise: Designing a mobile survey with a big data component	

Wednesday, 04 September			
Time	Activity	Description	Location
09:00-10:00	Lecture	Weighting to correct for survey nonresponse	Sjoerd Groenman building, room C028
10:00-11:00	Lecture	Paradata: what is it and how to use it?	
11:00-12:00	Exercise	Weighting (computer exercise in SPSS or R)	
12:00-13:00	Lunch		
13:00-14:00	Lecture	Sampling, coverage and nonresponse weights	
14:00-16:00	Exercise	Imputation or weighting (computer exercise)	

Thursday, 05 September			
Time	Activity	Description	Location
09:00-10:00	Lecture	Consent, ethics	Sjoerd Groenman building, room C020
10:00-11:00	Lecture	Passive data collection using mobiles (sensors)	
11:00-12:00	Exercise	Working with geo-data	
12:00-13:00	Lunch		
13:00-14:00	Lecture	Working with text or pictures	
14:00-15:30	Exercise	Working with text or pictures	
15:30-16:00	Discussion	Conclusion of the course	

Please bring your laptops to the course with either SPSS (V 20.X or higher) or R (version 3.5 or higher) installed.

Coffee, tea will be provided throughout the course