

# GESIS Summer School in Survey Methodology 2022

## Syllabus for course: “Design and Implementation of Web Surveys”

Lecturers:	Christopher Antoun	Frederick Conrad	Florian Keusch
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Date: 15-19 August 2022

Time: 11:00-13:00 | 14:00-18:00

Venue: Online via Zoom

### About the Lecturers:

*Christopher Antoun* is an Assistant Research Professor at the College of Information Studies (iSchool) and Joint Program in Survey Methodology (JPSM) at the University of Maryland. His research focuses on using smartphones to collect population data, either through text messaging, mobile questionnaires, or apps and sensors. Before coming to UMD, Chris obtained his PhD in Survey Methodology from the University of Michigan and was a postdoctoral fellow at the U.S. Census Bureau. He is currently an associate editor for the *Journal of Survey Statistics and Methodology* and a member of the advisory board for the *International Program in Survey and Data Science*.

*Frederick Conrad* is a survey methodologist who explores and evaluates new methods of collecting data for social research. His current research includes a study of video technology for survey interviews and a study of social media's potential for measuring trust in government statistics. With Tourangeau and Couper he co-authored *The Science of Web Surveys* (2013) and with Schober he co-edited *Envisioning the Survey Interview of the Future* (2008). He is a research professor in the Michigan Program in Survey and Data Science which he also directs and is a professor in the Psychology Department, both at the University of Michigan.

*Florian Keusch* is Professor of Statistics and Methodology (interim) in the Department of Sociology at the University of Mannheim and Adjunct Assistant Professor in the Joint Program in Survey Methodology (JPSM) at the University of Maryland. He currently serves on the board of the German Society for Online Research (DGOF) and is Associate Editor of *Public Opinion Research* and *Survey Research Methods*. His research focuses on nonresponse and measurement error in Web and mobile Web surveys, passive mobile data collection, and visual design effects in questionnaires.

### Selected Publications:

- Antoun, C., Couper, M.P., & Conrad, F. G. (2017). Effects of mobile versus PC web on survey response quality: A crossover experiment in a probability web panel. *Public Opinion Quarterly*, 81, 280-306.
- Antoun, C., Katz, J., Argueta, J. & Wang L. (2017). Design heuristics for effective smartphone questionnaires. *Social Science Computer Review*, 36, 557-574.
- Couper, M.P., Antoun, C., & Mavletova, A. (2017). Mobile web surveys: A total survey error perspective. In P. Biemer, S. Eckman, B. Edwards, E. de Leeuw, F. Kreuter, L. Lyberg, C. Tucker, and B. West (eds.), *Total Survey Error in Practice*. New York: Wiley, pp. 133-154.

- Conrad, F.G., Gagnon-Bartsch, J., Ferg, R., Schober, M.F., Pasek, J., Hou, E. (2019). Social media as an alternative to surveys of opinion about the economy. *Social Science Computer Review*. Online first.
- Conrad, F.G., Schober, M.F., Antoun, C., Yan, H.Y., Hupp, A.L., Johnston, M., Ehlen, P., Vickers, L., Zhang, C. (2017). Respondent mode choice in a smartphone survey. *Public Opinion Quarterly*, 81, 307-337.
- Tourangeau, R., Conrad, F.G., Couper, M.P. (2013). *The Science of Web Surveys*. Oxford: Oxford University Press.
- Keusch, F., Struminskaya, B., Antoun, C., Couper, M.P., & Kreuter, F. (2019). Willingness to participate in passive mobile data collection. *Public Opinion Quarterly*, 83, 210-235.
- Keusch, F. & Zhang, C. (2017). A review of issues in gamified survey design. *Social Science Computer Review*, 35, 147-166.
- Keusch, F. (2015). Why do people participate in Web surveys? Applying survey participation theory to Internet survey data collection. *Management Review Quarterly*, 65, 183-216.

## Course Description:

This course introduces students to the design and implementation of online survey data collection instruments. The course is both hands-on and conceptual. It begins by discussing what is unique about web surveys and when their use is most appropriate, followed by an introduction to survey errors that can affect the quality of web survey data. Small groups of students will each develop a research problem and a questionnaire to address their problem, designed for online administration. They will pretest the question wording, program the questionnaire using a web survey development platform (no programming experience is required), and assess users' (respondents') experience while interacting with the web-based instrument. Students will also develop basic plans for data collection. Finally, each group will present its problem, online questionnaire, evaluation, and plans to the rest of the class.

## Keywords:

web surveys; online data collection; survey methodology; questionnaire design

## Course Prerequisites:

- Some familiarity with survey research.
- Plans to use a web survey in a project is helpful but certainly not essential.

## Target Group:

Participants will find the course useful if:

- Anyone (whether in government, business, academia, or non-profit organizations) who wants to collect survey data online can benefit from this course.
- This includes people who are new to web surveys but also people who have used web surveys in the past but feel that they need to improve the design of their surveys.

## Course and Learning Objectives:

By the end of the course participants will:

- understand what should go into creating a web-based questionnaire.
- be able to weigh the pros and cons of different web questionnaire features.
- have implemented a functioning web survey instrument.
- be able to evaluate survey questions and their usability in an online questionnaire.

## Organizational Structure of the Course:

Each day will consist of about 4 hours of lecture and discussion on various aspects of Web survey design, and 2 hours of lab including demonstrations and hands-on experience, implementing group projects in a web survey development platform (Qualtrics or LimeSurvey). The instructors will be available for individual and group consultations on participants' projects and provide support in designing and implementing a web survey during the course.

## Software and Hardware Requirements:

Participants will develop a web survey instrument using a web survey platform. Each group can decide to use either the Qualtrics or LimeSurvey platform. Students will need to use a laptop for participating in the online lectures (via Zoom) and for the exercises using Qualtrics or LimeSurvey.

## Day-to-day Schedule and Literature:

Day	Topic(s)
1	<p><b>Introduction to web surveys (Conrad); Samples and representation (Antoun); Lab 1 (Identify research question and target population); Group presentations of research questions</b></p> <p><u>Required reading (have to be read before class):</u></p> <ul style="list-style-type: none"> <li>Couper, M. P. and Miller, P. V. (2008). Web survey methods: Introduction. <i>Public Opinion Quarterly</i>, 72, 831-835.</li> </ul> <p><u>Suggested reading (suggested, yet do not have to be read before class):</u></p> <ul style="list-style-type: none"> <li>Tourangeau, R. Conrad, F., &amp; Couper M. (2013). Chapter 2: Sampling and coverage issues for web surveys. <i>The Science of Web Surveys</i>. New York: Oxford University Press, 11-35.</li> </ul>
2	<p><b>Writing effective survey questions (Keusch); Lab 2 (Formulate survey questions); Basic building blocks of web survey questionnaires (Antoun); Interactivity in web surveys (Conrad)</b></p> <p><u>Required reading:</u></p> <ul style="list-style-type: none"> <li>Tourangeau, R. Conrad, F., &amp; Couper M. (2013). Chapter 4: Introduction to measurement and design in web surveys. <i>The Science of Web Surveys</i>. New York: Oxford University Press, 57-76.</li> </ul> <p><u>Suggested reading:</u></p> <ul style="list-style-type: none"> <li>Couper, M. P., Kennedy, C., Conrad, F. G., &amp; Tourangeau, R. (2011). Designing input fields for non-narrative open-ended responses in web surveys. <i>Journal of Official Statistics</i>, 27, 65-85.</li> <li>Tourangeau, R., Conrad, F.G., &amp; Couper, M.P. (2013). Chapter 6: Interactive features and measurement error. <i>The Science of Web Surveys</i>. New York: Oxford University Press, 99-128.</li> </ul>
3	<p><b>Group presentations of questionnaires; Visual and multimodal aspects of web survey design (Conrad); Programming the questionnaire (Antoun); Lab 3 (Program questionnaire in either Qualtrics or Lime Survey)</b></p> <p><u>Required reading:</u></p> <ul style="list-style-type: none"> <li>Toepoel, V. (2016). Chapter 9: Programming the questionnaire. <i>Doing Surveys Online</i>. London: Sage, 136-159.</li> </ul> <p><u>Suggested reading:</u></p> <ul style="list-style-type: none"> <li>Antoun, C., Katz, J., Argueta, J. &amp; Wang L. (2017). Design heuristics for effective smartphone questionnaires. <i>Social Science Computer Review</i>, 36, 557-574.</li> <li>Callegaro, M., Lozar Manfreda, K., &amp; Vehovar, V. (2015). Chapter 5.3: Web survey software. <i>Web Survey Methodology</i>. London: Sage, 215-226.</li> <li>Geisen, E. &amp; Romano Bergstrom J. (2017). Chapter 1: Usability and usability testing. <i>Usability Testing for Survey Research</i>. Cambridge: Morgan Kaufmann, 1-20.</li> <li>Tourangeau, R., Conrad, F.G., &amp; Couper, M.P. (2013). Chapter 5: The web as a visual medium (p. 77-98) <i>The Science of Web Surveys</i>. New York: Oxford University Press.</li> </ul>

4	<p><b>Lab 3 continued; Questionnaire evaluation and user experience (Conrad); Lab 4 (Evaluate questionnaire); Recruiting participants (Antoun)</b></p> <p><u>Required reading:</u></p> <ul style="list-style-type: none"> <li>▪ Callegaro, M., Lozar Manfreda, K., &amp; Vehovar, V. (2015). Chapter 2.5.5-2.5.8: Nonresponse Strategy. <i>Web Survey Methodology</i>. London: Sage, 149-159.</li> <li>▪ Callegaro, M., Lozar Manfreda, K., &amp; Vehovar, V. (2015). Chapter 3: Fielding (p 165-174). <i>Web Survey Methodology</i>. London: Sage, 165-74.</li> </ul> <p><u>Suggested reading:</u></p> <ul style="list-style-type: none"> <li>▪ Keusch, F. (2015). Why do people participate in Web surveys? Applying survey participation theory to Internet survey data collection. <i>Management Review Quarterly</i>, 65, 183-216.</li> <li>▪ Toepoel, V. (2016). Chapter 10: Fieldwork. <i>Doing Surveys Online</i>. London: Sage, 165-174.</li> </ul>
5	<p><b>Lab 5 (Develop recruitment plan); Data preparation and processing (Antoun); Paradata (Keusch); Ethical considerations (Conrad); Group presentations</b></p> <p><u>Required reading:</u></p> <ul style="list-style-type: none"> <li>▪ Toepoel, V. (2016). Chapter 11: Processing and cleaning the data. <i>Doing Surveys Online</i>. London: Sage, 175-191.</li> <li>▪ Singer, E., &amp; Couper, M.P. (2010). Ethical considerations in Internet surveys. In Das, M., Esther, P., &amp; Kaczmirek, L. (Eds.) <i>Social and Behavioral Research and the Internet: Advances in Applied Methods and Research Strategies</i>. New York: Routledge, 133-162.</li> </ul> <p><u>Suggested reading:</u></p> <ul style="list-style-type: none"> <li>▪ Callegaro, M., Lozar Manfreda, K., &amp; Vehovar, V. (2015). Chapter 4.1: Data preparation. <i>Web Survey Methodology</i>. London: Sage, 176-185.</li> <li>▪ McClain, C. A., Couper, M. P., Hupp, A. L., Keusch, F., Peterson, G., Piskowski, A. D., &amp; West, B. T. (2019). A typology of web survey paradata for assessing total survey error. <i>Social Science Computer Review</i>, 37, 196-213.</li> </ul>

### Preparatory Reading:

- Groves, R. M., Fowler Jr, F.J., Couper, M.P., Lepkowski, J.M., Singer, E., & Tourangeau, R. (2009). *Survey Methodology*. Hoboken: John Wiley & Sons.
- Krosnick, J. & Presser, S., (2010). Question and questionnaire design. In Marsden, P.V., & Wright, J.D. (Eds.). *Handbook of Survey Research*. Bingley: Emerald Group Publishing, 263-314.
- Qualtrics. (n.d.). Survey Platform Overview. <https://www.qualtrics.com/support/survey-platform/survey-module/survey-module-overview/>
- LimeSurvey Manual. Available at <https://manual.limesurvey.org/>

### Additional Recommended Literature:

None