

Questionnaire Design

University of Michigan Summer Institute in Survey Research Techniques, 2011,
video-linked to Joint Program in Survey Methods at the University of Maryland

Course: Survey Methodology 630

Time: 6 June –1 July, 10.30-12:30 daily (Monday to Friday)

(No class on 6 June due to Summer Institute orientation)

Location: Room 368 at UMich /
Room 1208 Le Frak Hall at UMD

Instructors:

Frauke Kreuter (Week 1)

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Course Description:

This course focuses on the design of questions and questionnaires used in survey research. The course will explore the theoretical and experimental literature related to question and questionnaire design as well as focusing on practical issues in the design, critique, and interpretation of survey questions that are often not taught in formal courses. There will be exercises both in and outside of class to reinforce both theory and practice, including the construction and testing of a class questionnaire.

Discussion will focus on the measurement of both factual and non-factual material. Topics include general principles of writing questions to ensure respondent understanding; techniques for measuring the occurrence of past behaviors and events; the effects of question wording, response formats, and question sequence on responses; an introduction to the psychometric perspectives in multi-item scale design; combining individual questions into a meaningful questionnaire; special guidelines for self-completion surveys (including web surveys) versus interview surveys; strategies for obtaining sensitive or personal information; and an introduction to techniques for testing survey questions.

The expectation is that readings are completed prior to attending the class for which they are assigned so that the readings can be discussed in class.

Evaluation:

57% of the final grade for the course will be based on 7 practical problem-solving exercises related to questionnaire design and given as homework assignments (worth 10, 6, 6, 12, 2, 15, and 6 points, respectively). Points will be subtracted for late assignments.

40% of the final grade for the course will be from the final exam on the last day of class. This will assess participants' mastery and critical appraisal of the required readings (textbooks and assigned articles).

3% of the final grade will be based on class participation including attendance and asking and answering questions in class.

Prerequisite:

An introductory course in survey research methods or equivalent experience.

Office Hours:

Any time. Just make an appointment.

Required Texts:

1. Fowler, F.J. Jr., (1995), *Improving Survey Questions: Design and Evaluation*, Applied Social Research Methods Series Volume 38, Thousand Oaks, CA: SAGE Publications.
2. Tourangeau, R., Rips, L.J., and Rasinski, K. (2000), *The Psychology of Survey Response*, Cambridge: Cambridge University Press.
3. DeVellis, R.F. (2003), *Scale Development: Theory and Applications*, 2nd Edition, Thousand Oaks, CA: Sage.
4. Articles on website (see section about **Course Website** below)

Course Website:

The course website (<https://ctools.umich.edu/portal>) is at the University of Michigan and is maintained by Jodi Holbrook (hjodi@isr.umich.edu), Frauke Kreuter (fkreuter@survey.umd.edu), Pamela Campanelli (dr.pamela.campanelli@thesurveycoach.com), and Chris Antoun (antoun@umich.edu).

UMD students (and UMich students who wish to use a non-UMich e-mail) will need to get a UMich Friend Account, a special kind of computer account that is used to give non-University of Michigan members access to the general University of Michigan web environment.

You can use any e-mail address you want for your Friend Account, but this same e-mail address has to be entered into the CTools system in order for you to access the course materials.

Steps:

1. Tell one of the four people above your preferred e-mail address so it can be put in CTools
2. When you receive a reply that it is in, go to <https://friend.weblogin.umich.edu/friend/> and do what it says to create a Friend Account. This is just a few simple steps.
3. You can then go to the CTools site <https://ctools.umich.edu/portal>, click on "login in" in the upper right-hand corner, and use your Friend Account login and password.
4. This will then show you a tab for Survey Methodology 630 (and any other classes where that e-mail has been entered in CTools)
5. On the site under "Assignments", you will find copies of the instructor's powerpoint slides. These will be available before each class for those who wish to print them off.
6. On the site under "Assignments", you will also find the actual homework assignments.
7. On the site under "Resources", you will find the required and optional articles to read. Note that some of the readings are password protected. The **password 'surv630cam'** is needed.
8. Be sure to contact one of the four people above if you have any problems.

Detailed Course Summary:

Date	Topic	Required Readings	Date HW Assigned	Date HW Due	Date HW Returned
Tue 6/7	Introduction - From Research Question to Questionnaire - Instrument Development - Writing Survey Questionnaires <ul style="list-style-type: none"> • What is measurement error? • What route to go when designing a questionnaire? • What does standardization mean? 	<ul style="list-style-type: none"> • Fowler (1995)-Chapter 1 • Schnell and Kreuter (2005) • Beatty (1995) 	Practical exercise 1		
Wed 6/8	Writing Survey Questions: General Principles <ul style="list-style-type: none"> • How to translate concepts into questions • How does knowing about the response process affect questions we write? • What is a good logical flow for a questionnaire? • Checklist for first draft 	<ul style="list-style-type: none"> • Schaeffer and Presser (2003) • Krosnick and Presser (2010) • Tourangeau, Rips, and Rasinski (2000), Chapters 1&2 • Fowler (1995), Chapter 4, pages 78-92, 102-103 only Optional: <ul style="list-style-type: none"> • Converse and Presser (1986), pages 9-51 • Fowler (1992) • Tourangeau and Bradburn (2010) • Belson (1981) 			
Thu 6/9	Facts and Quasi-Facts	<ul style="list-style-type: none"> • Martin, DeMaio, and Campanelli (1990) • Galesic and Tourangeau (2007) • Smith (1984) • Bailar and Rothwell (1984) 			
Fri 6/10	Recall and Memory	<ul style="list-style-type: none"> • Tourangeau (2000) • Huttenlocher, Hedges, and Bradburn (1990) Optional: <ul style="list-style-type: none"> • Tourangeau, Rips, and Rasinski (2000), Chapters 3, 4 and 5 		Practical exercise 1 10.30 am	

Date	Topic	Required Readings	Date HW Assigned	Date HW Due	Date HW Returned
Mon 6/13	<ul style="list-style-type: none"> • In Class Exercise in writing factual questions <p>Constructing Attitude and other Non-Factual Questions</p> <ul style="list-style-type: none"> • Traditional and alternative views on attitudes • Belief sampling model • What is an Attitude, Belief, Value, Behavioural Intention? • Open vs. Closed Questions • Problems with Agree/Disagree Format 	<ul style="list-style-type: none"> • Tourangeau, Rips, and Rasinski, K. (2000), Chapter 6. • Fowler (1995), Chapter 3 • Schwarz, Hippler, and Noelle-Nuemann (1994) <p>Optional:</p> <ul style="list-style-type: none"> • Converse (1963), pages 1-15. • Corsini (1994), pages 114-116. 	Practical exercise 2		Practical exercise 1
Tue 6/14	<p>Constructing Attitude and other Non-Factual Questions (continued)</p> <ul style="list-style-type: none"> • Acquiescence Bias • Middle Alternatives • No Opinion Options • How many scale points? • Adjectives vs. Numbers vs. Other types of scales • Ranking vs. Rating 	<ul style="list-style-type: none"> • Tourangeau, Rips, and Rasinski (2000), Chapter 8, pages 239-254 only: 0-10 scales, primacy, satisficing • Kalton and Schuman (1982) • Converse and Presser (1986), pages 35-39. 			
Wed 6/15	<p>Constructing Attitude and other Non-Factual Questions (continued)</p> <ul style="list-style-type: none"> • Hypothetical questions • Reason why questions • Satisfaction questions • In Class Exercise in writing non-factual Questions • Satisficing • Issues in reporting non-factual data <p>Multi-Item Scales</p> <ul style="list-style-type: none"> • Why use multi-item scales 	<ul style="list-style-type: none"> • Krosnick and Fabrigar (1997), Chapter 6 in SMPQ <p>Optional:</p> <ul style="list-style-type: none"> • Thomas and Sturgis (1998) • Krosnick (1989) <ul style="list-style-type: none"> • DeVellis (1991), Preface and Chapters 1-5, 8 	Practical exercise 3	Practical exercise 2 8.30 am	
Thu 6/16	<p>Multi-Item Scales</p> <ul style="list-style-type: none"> • Psychometric theory • Reliability and Validity • Construction of scales • In-class exercise in multi-item attitude scales 	<ul style="list-style-type: none"> • Fowler (1995), Chapter 6 <p>Optional:</p> <ul style="list-style-type: none"> • Heath and Martin (1997) 	Practical exercise 4		Practical exercise 2
Fri 6/17	<p>Mode differences</p> <ul style="list-style-type: none"> • Some differences by mode of data collection • Issues for interview surveys <p>Questionnaire as whole</p> <ul style="list-style-type: none"> • Order of questions • Length of questionnaire • Covers (for paper questionnaires) • Other necessary parts of a questionnaire that aren't respondent questions • Etc. 	<ul style="list-style-type: none"> • Tourangeau, Rips, and Rasinski (2000), Chapter 10 • Fowler (1995), Chapter 4, pages 92-102 only <p>Optional:</p> <ul style="list-style-type: none"> • Czaja and Blair (1996), pages 75-106. 	Practical exercise 5	Practical exercise 3 8.30 am	

	Topic	Required Readings	Date HW Assigned	Date HW Due	Date HW Returned
Mon 6/20	Questionnaire as a whole (continued) Special features of the layout of self-completion questionnaires to improve response rates and data quality <ul style="list-style-type: none"> Exploring the work of Dillman and colleagues Visual design suggestions 	<ul style="list-style-type: none"> Dillman (2007), pages 79-94, 135-140 only. Christian and Dillman (2004) Tourangeau, Couper, and Conrad (2004) Stitch and Knauper (2003) 		Practical exercise 5 5.00 pm	Practical exercise 3
Tue 6/21	Special features of self-completion (continued) <ul style="list-style-type: none"> In-class exercise in visual design Before and After examples Web surveys In-class exercise deciding the order of the items in our class questionnaire	<ul style="list-style-type: none"> Dillman (2007), pages 94-135 only Dillman, Smyth and Christian (2009), pages 89-106 Optional: <ul style="list-style-type: none"> Smyth, Dillman, Christian, and Stern (2004) 	Practical exercise 6	Practical exercise 4 8.30 am	No feedback given on 5, receive 2 points for submitting Receive set of all survey questions for ordering exercise
Wed 6/22	Special features of self-completion (continued) <ul style="list-style-type: none"> Web surveys (continued) Testing Survey Questions <ul style="list-style-type: none"> Traditional methods Overview of alternatives <ul style="list-style-type: none"> Expert review Systematic forms appraisal Respondent debriefing & vignettes 	<ul style="list-style-type: none"> Couper, Traugott, Lamias (2001) Optional: <ul style="list-style-type: none"> Dillman (2007), Chapter 11 Peytchev, et al (2006) <ul style="list-style-type: none"> Fowler (1995), Chapter 5 Optional: <ul style="list-style-type: none"> Fowler and Cannell (1996) DeMaio and Rothgeb (1996) Kinsey and Jewell (1998) 			
Thu 6/23	Testing Survey Questions (continued) <ul style="list-style-type: none"> Focus groups Behavior coding Cognitive laboratory methods Comparing and combining methods 	<ul style="list-style-type: none"> Presser and Blair (1994) Optional: <ul style="list-style-type: none"> Willis (2004) Forsyth, Rothgeb, and Willis (2004) 			
Fri 6/24	Additional issues for factual and non-factual questions <ul style="list-style-type: none"> Vignettes for measuring decision making Magnitude estimation Loaded questions and question balance Telescoping revisited SIPP Seam Effects Event history calendars in panel surveys Context effects 	<ul style="list-style-type: none"> Tourangeau, Rips, and Rasinski (2000), Chapter 7 and Chapter 4 – pages 121-135. Belli (1998) Optional: <ul style="list-style-type: none"> Alexander and Becker (1978) Rips, Conrad, Fricker (2003) Belli, Shay and Stafford (2001) Belli et al. (2004) Belli et al (2007) Beaule et al (2007) 	Practical exercise 7	Practical exercise 6 10.30 am	Practical exercise 4 Receive final class q'naire for use in exercise 7 Receive Exam Questions

Date	Topic	Required Readings	Date HW Assigned	Date HW Due	Date HW Returned
Mon 6/27	Cross-Cultural Surveys and Translations <ul style="list-style-type: none"> • Designing questionnaires for cross-cultural implementation • Approaches to translating questionnaires • Assessing translation quality 	<ul style="list-style-type: none"> • Harkness (2003), pages 35-56 • Carrasco (2003) 		Practical exercise 7 Data 6.30 pm	Practical exercise 6 No feedback given for exercise 7. Receive 6 points for submitting all parts
Tue 6/28	Asking Sensitive Questions <ul style="list-style-type: none"> • Why should respondents distort their answers? • Issues in measuring distortion • Mode of data collection differences • Solutions: <ul style="list-style-type: none"> ○ At the data collection level ○ At the questionnaire level ○ At the question level ○ Unusual techniques ○ Issues around randomised response ○ Item count technique ○ Bogus Pipeline 	<ul style="list-style-type: none"> • Fowler (1995), Chapter 2, pages 28-44 only • Tourangeau, Rips, and Rasinski (2000), Chapter 9 • Marquis, Duan, Marquis, and Polich (1981), pages 2-8 only • Groves (1989), pages 299-304 Optional: <ul style="list-style-type: none"> • Biemer, Jordan, Hubbard & Wright (2005) 		Practical exercise 7 Comments 8.30 am	
Wed 6/29	Evaluation of multi-item scales Questions about the exam	<ul style="list-style-type: none"> • DeVellis (1991)-Preface and Chapters 6-7 			
Thu 6/30	Pretest discussion Discussion of multi-item scales from class questionnaire Any remaining questions about the exam				Receive, collated comments, final dataset, & multi-item scale results
Fri 7/1	Final Exam				

Required Articles:

1. Schnell, R. and F. Kreuter. (2005), Separating Interviewer and Sampling-Point Effects. *Journal of Official Statistics*, 21: 389-410.
2. Beatty, P. (1995), Understanding the Standardized/Non-Standardized Interviewing Controversy, *Journal of Official Statistics*, 11(2), 147-160.
3. Schaeffer, N.C., and Presser, S. (2003), The Science of Asking Questions, *Annual Review of Sociology*, 29: 65-88.
4. Krosnick, J. A. and Presser, S. (2010), Questionnaire design. In J. D. Wright & P.V. Marsden (Eds.), *Handbook of Survey Research (Second Edition)*. San Diego, CA: Elsevier.
5. Martin, E., DeMaio, T. and Campanelli, P. (1990), Context Effects for Census Measures of Race and Hispanic Origin, *Public Opinion Quarterly*, 54: 551-566.
6. Galesic, M., and Tourangeau, R. (2007), What is sexual harassment? It depends on who asks! Framing effects on survey responses, *Applied Cognitive Psychology*, 21:189-202.
7. Smith, T. (1984), The Subjectivity of Ethnicity, in C.F. Turner and E. Martin, *Surveying Subjective Phenomena, Volume 2*, New York: Russell Sage Foundation. - Pages 117-128.
8. Bailar, B.A. and Rothwell, N.D. (1984), Measuring Employment and Unemployment, in C.F. Turner and E. Martin, *Surveying Subjective Phenomena, Volume 2*, New York: Russell Sage Foundation. - Pages 129-142.
9. Tourangeau, R. (2000), "Remembering What Happened: Memory Errors and Survey Reports." pp. 29-48 in Arthur A. Stone et al. (eds.). *The Science of Self-Report: Implications for Research and Practice*, New Jersey: Lawrence Erlbaum.
10. Huttenlocher, J., Hedges, L.V. and Bradburn, N.M.. (1990), Reports of elapsed time: bounding and rounding processes in estimation, *Journal of Experimental Psychology Learning Memory and Cognition*, 16: 196-213.
11. Schwarz, N., Hippler, H.J., and Noelle-Nuemann, E. (1994), Retrospective Reports: The Impact of Response Formats in N. Schwarz and S. Sudman (Eds.), *Autobiographical Memory and the Validity of Retrospective Reports*, New York: Springer-Verlag. – Pages 187-199.
12. Kalton, G. and Schuman, H. (1982), The Effect of the Question on Survey Responses: A Review, *The Journal of the Royal Statistical Society, Series A (General)*, 145(1), 42-57.
13. Converse, J. and Presser, S. (1986), *Survey Questions: Handcrafting the Standardised Questionnaire*, Sage, pages 35-39.
14. Krosnick, J.A., and Fabrigar, L.R. (1997), Designing Rating Scales for Effective Measurement in Surveys, in L. Lyberg, P. Biemer, M. Collins, E. de Leeuw, C. Dippo, N Schwarz, and D. Trewin (eds), *Survey Measurement and Process Quality*, New York: Wiley. – Chapter 6, pages 141-164.
15. Dillman, D. (2007), *Mail and Internet Surveys: The Tailored Design Method*, 2nd Edition, New York: Wiley. – Chapter 3, pages 79-140.
16. Dillman, D., Smyth, J., and Christian, L.M., (2009), *Internet, Mail and Mixed-Mode Surveys: The Tailored Design Method*, 3rd edition, Hoboken, NJ: Wiley.

17. Christian, L.M. and Dillman, D.A. (2004), The Influence of Graphical and Symbolic Language Manipulations on Responses to Self-Administered Questions, *Public Opinion Quarterly*, 68(1): 57-80.
18. Tourangeau, R., Couper, M., and Conrad, F. (2004), Spacing, Position, and Order: Interpretive Heuristics for Visual Features of Survey Questions, *Public Opinion Quarterly*, 68(3): 368-393.
19. Stitch, C. and Knauper, B. (2003), Measuring Rare Events, in B. Radcliff and S. Best (eds), *Polling America: An Encyclopedia of Public Opinion*, Westport, CT: Greenwood Publishing.
20. Couper, M.P., Traugott, M.W., Lamias, M.J., (2001), Web Survey Design and Administration, *Public Opinion Quarterly*, 65, 230-253.
21. Presser, S., and Blair, J. (1994), Survey Pretesting: Do Different Methods Produce Different Results?, *Sociological Methodology*, 24, 73-104.
22. Belli, R. F (1998), The structure of autobiographical memory and the event history calendar: Potential improvements in the quality of retrospective reports in surveys. *Memory*, 6, 383-406.
23. Harkness, J., (2003), Questionnaire Translation in Comparative Research, in Harkness, et al, (eds), *Cross-Cultural Survey Methods*, New York: Wiley. - Pages 35 – 56.
24. Carrasco, L. (2003), Collecting Quality Census Data from Linguistic Minorities, paper presented at the Meetings of the American Association for Applied Linguistics, Arlington, VA.
25. Marquis, K.H., Duan, N., Marquis, M.S., and Polich, J.M. (1981), Response Errors in Sensitive Topic Surveys, CA: The Rand Corporation. - Pages 2-8 only.
26. Groves, R. (1989), *Survey Errors and Survey Costs*, Wiley – Pages 299-304 only.

Optional Reading:

1. Converse, J., and Presser, S. (1986), *Survey Questions: Handcrafting the Standardized Questionnaire*, Sage Series No 63, Thousand Oaks, CA: Sage, pp. 9-51.
2. Fowler, F.J., Jr. (1992), How Unclear Terms Affect Survey Data, *Public Opinion Quarterly*, 56(2), 218-231.
3. Tourangeau R. & Bradbrun N. (2010), The Psychology of Survey Response. In J. D. Wright & P.V. Marsden (Eds.), *Handbook of Survey Research (Second Edition)*. San Diego, CA: Elsevier.
4. Belson, W. (1981), *The Design and Understanding of Survey Questions*, Aldershot, Hants: Gower. Pages 350-397.
5. Converse, P. (1963), Attitudes and Non-Attitudes: Continuation of a Dialogue, Paper presented at the 17th International Congress of Psychology in Washington, DC, August, 1963, Pages 1-15 only
6. Corsini, R.J. (Ed.) (1994), Attitudes, In *Encyclopedia of Psychology*, 2nd Edition, New York: Wiley. – Pages 114-116.
7. Thomas, R. and Sturgis, P. (1998), *Measuring Customer Satisfaction*, London: National Centre for Social Research, Project Report 1449.
8. Krosnick, J.A. (1989), THE POLLS – A Review: Question Wording and Reports of Survey Results: The Case of Louis Harris and Associates and Aetna Life and Casualty, *Public Opinion Quarterly*, 53:107-113.

9. Heath, A. and Martin, J. (1997), Why Are There so Few Formal Measuring Instruments in Social and Political Research? in L. Lyberg, P. Biemer, M. Collins, E. de Leeuw, C. Dippo, N Schwarz, and D. Trewin (eds), *Survey Measurement and Process Quality*, New York: Wiley. – Chapter 3, pages 71-86.
10. Czaja, R. and Blair, J. (2005), Questionnaire Design: Organizing the Questions, in *Designing Surveys: A Guide to Decisions and Procedures*, Thousand Oaks California: Pine Forge Press. – Chapter 5.
11. Smyth, J.D., Dillman, D.A., Christian, L.M. and Stern, M.J. (2004), Effects of Using Visual Design Principles to Group: Response Options in Web Surveys, revision of paper presented at the 2004 Annual Meeting of the American Association for Public Opinion Research, Phoenix, AZ, May 13, 2004.
12. Dillman, D., Gertseva, A., and Mahon-Haft, T. (2005), Achieving Usability in Establishment Surveys Through the Application of Visual Design Principles, *Journal of Official Statistics*, 21:183-214.
13. Dillman, D. (2007), Chapter 11 in *Mail and Internet Surveys: The Tailored Design Method*, New York: Wiley.
14. Peytchev, A., Couper, M.P., McCabe, S.E., Crawford, S.D. (2006), Web Survey Design: Paging Versus Scrolling, *Public Opinion Quarterly*, 70(4), 596-607
15. Fowler, F. Jr., and Cannell, C.F. (1996), Using Behavioral Coding to Identify Cognitive Problems with Survey Questions, in: N. Schwarz and S. Sudman, S.(eds), *Answering Questions: Methodology for Determining Cognitive and Communicative Processes in Survey Research*, San Francisco: Jossey-Bass. – Pages 15-36.
16. DeMaio, T.J. and Rothgeb, J.M.. (1996), Cognitive Interviewing Techniques in the Lab and in the Field, Chapter 8 in: N. Schwarz and S. Sudman, S.(eds), *Answering Questions: Methodology for Determining Cognitive and Communicative Processes in Survey Research*, San Francisco: Jossey-Bass. – Pages 177-195.
17. Kinsey, S. and Jewell, D. (1998), A Systematic Approach to Instrument Development in CAI, in Couper, M., Baker, R., Bethlehem, J., Clark, C., Martin, J., Nicholls, W., and O'Reilly, J. (eds), *Computer Assisted Survey Information Collection*, New York: Wiley, Chapter 6, pages 105 -123.
18. Willis, G. (2004), *Cognitive Interviewing Revisited: A Useful Technique, in Theory?*, in Presser et al (eds), *Methods for Testing and Evaluating Survey Questionnaires*, Hoboken, NJ: Wiley.
19. Forsyth, B., Rothgeb, J., Willis, G. (2004), *Does question pretesting make a difference? An empirical test*, in Presser et al (eds), *Methods for Testing and Evaluating Survey Questionnaires*, Hoboken, NJ: Wiley.
20. Alexander, C. and Becker, H. (1978), The Use of Vignettes in Survey Research, *Public Opinion Quarterly*, 42: 93-104.
21. Rips, L.J., Conrad, F.G., and Fricker, S.S. (2003), Seam Effects in Panel Surveys, *Public Opinion Quarterly*, 47(4), 522-554.
22. Belli, R., Shay, W., and Stafford, P. (2001), Event History Calendars and Question List Surveys: A Direct Comparison of Interviewing Methods, *Public Opinion Quarterly*, 65: 45-74.
23. Belli, R., Lee, E., Stafford, F., and Chou, C. (2004), Calendar and Question-List Survey Methods: Association Between Interviewer Behaviors and Data Quality, *Journal of Official Statistics*, 20: 185-218.
24. Belli, R.F., and Smith L.M., and Andreski, P.M., and Agrawal, S. (2007), Methodological Comparisons Between CATI Event History Calendar and Standardized Conventional Questionnaire Instruments, *Public Opinion Quarterly*, 71(4), 603-622.

25. Beale, A., and Leissou, E., and Lui, Y. (2007). Experiences using an Event History Calendar in the Panel Study of Income Dynamics. Panel Study of Income Dynamics. Technical Paper Series. 07-02.
26. Biemer, P., Jordan, B. K., Hubbard, M. and Wright, D. (2005), A Test of the Item Count Methodology for Estimating Cocaine Use Prevalence, in J. Kennet and J. Gfroerer (eds), *Evaluating and Improving Methods Used in the National Survey on Drug Use and Health*, Rockville, MD: Substance Abuse and Mental Health Service Administration, Office of Applied Studies.