

**ResEv570X – Surveys in Educational Research**  
**Summer 2009**  
**Version 2**

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Understanding how to design and administer a survey (in either a K-12, higher education, or other setting) is the focus of this course. Students are expected to develop instrumentation used in educational survey research, to engage in the design of a survey research study, and to critique educational survey studies and findings.

By the end of this course you should be able to:

1. Understand, discuss and apply the concept of total survey error
2. Create a sampling frame and sample for a survey
3. Conduct web and mail surveys
4. Decrease survey nonresponse
5. Develop, evaluate, and ask survey questions
6. Assess survey reliability and validity
7. Conduct post-collection survey data processing
8. Conduct survey research with integrity

Please note that I will be using your email address from the university system to contact you. If you do not use your university email address, please set up your account so that it forwards email to the account you do use.

## **Readings**

We will use three main books for the course:

Fowler, F. J. (1995). *Improving Survey Questions: Design and Evaluation*. Thousand Oaks: Sage Publications.

Groves, R. M., Fowler, F. J. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2004). *Survey Methodology*. Hoboken, NJ: Wiley-Interscience.

Tourangeau, R., Rips, L.J., & Rasinski, K.(2000). *The Psychology of Survey Response*. New York: Cambridge University Press (chapters will also be available on WebCT).

In addition to the required texts listed above, you will read additional book chapters, articles, and other material. All additional readings will be available through WebCT and are noted with an \*; in a few cases I may hand out copies in class.

## Evaluation

You will be evaluated on the following items:

1. *Class participation (10%)* – This course is conducted as a lecture/seminar class; therefore, **you are expected to attend and to be actively involved in the class.** You are expected to participate in and lead class discussions in a manner that demonstrates thoughtful reflection and understanding of the subject matter, as well as respect for your colleagues in the class. To do so, you must complete the readings that are assigned for each session of the class prior to attending that class session. Active participation also means that each participant is willing to listen to other points of view and to change his or her mind. This means you must listen to others, respond thoughtfully, demonstrate an understanding of the issues, and show a willingness to learn and grow.

In addition, part of your course requirement is the completion of the ISU Web Training for Human Subjects Research, Social and Behavioral Sciences Module, if you have not already completed it. You must complete the training and pass the quiz by the last day of class.

If I believe that some students are not doing the assigned reading, I reserve the right to conduct pop quizzes on the readings, and changing the assessment so that up to 10% of your grade will be based on the results of the pop quizzes.

2. *Short assignments (40%)* – You will be given four short assignment assignments during the course that cover various topics in the course. The answers to these assignments will range from 5-10 double-spaced pages, depending on the topic.

You may use your notes and assigned readings to do the assignments, but you may not consult with other people or sources (e.g., the Internet). You may not use assignments from previous sections of this class.

3. *Group project (50%)* – By the second course meeting, we will divide the class into groups of two or three according to research interests. You will work together on a survey research project that addresses a particular problem and answers a research question or research questions in the field of education, or your particular field of study. As a group, you will develop a short survey and write a paper (no longer than twenty, double-spaced pages) that explains the research problem, lists the research question(s) you hope to answer, delineates your sample design, describes your survey (including ways you plan to evaluate it prior to data collection), and outlines your implementation plan. You will not collect data for this project. Occasionally during class you will have the opportunity to work on parts of the project.

If you plan to use the project as a way to develop a survey for your dissertation and thus want to work alone, this is fine with me. However, a solo project must be part of your dissertation, and not simply a desire to work alone.

Please note that your paper should conform to the American Psychological Association style guidelines (5<sup>th</sup> ed.). See the appendix to the syllabus for details about the project.

Given the compressed schedule for the summer, the paper will be due July 13<sup>th</sup> rather than the last day of class.

### **Academic misconduct**

Academic misconduct in any form is in violation of Iowa State University Student Disciplinary Regulations and will not be tolerated. This includes, but is not limited to: copying or sharing answers on assignments, plagiarism, and having someone else do your academic work. Depending on the act, a student could receive an F grade on the test/assignment, F grade for the course, and could be suspended or expelled from the University. See the Conduct Code at [www.dso.iastate.edu/ja](http://www.dso.iastate.edu/ja) for more details and a full explanation of the Academic Misconduct policies.

Forms of academic dishonesty:

Obtaining unauthorized information. Information is obtained dishonestly, for example, by copying graded homework assignments from another student, by working with another student on a take-home test or homework when not specifically permitted to do so by the instructor, or by looking at your notes or other written work during an examination when not specifically permitted to do so.

Tendering of information. Students may not give or sell their work to another person who plans to submit it as his or her own. This includes giving their work to another student to be copied, giving someone answers to exam questions during the exam, taking an exam and discussing its contents with students who will be taking the same exam, or giving or selling a term paper to another student.

Misrepresentation. Students misrepresent their work by handing in the work of someone else. The following are examples: purchasing a paper from a term paper service; reproducing another person's paper (even with modifications) and submitting it as their own; having another student do their computer program or having someone else take their exam.

Plagiarism. "Unacknowledged use of the information, ideas, or phrasing of other writers is an offense comparable with theft and fraud, and it is so recognized by the copyright and patent laws. Literary offenses of this kind are known as plagiarism."

### **Disabilities**

Iowa State University complies with the American with Disabilities Act and Section 504 of the Rehabilitation Act. Any student who may require an accommodation under such provisions

should contact me as soon as possible and no later than the end of the first week of class or as soon as you become aware. No retroactive accommodations will be provided in this class.

## **Course schedule**

I have organized the course schedule around the main concepts of survey methodology. We proceed generally, considering concepts of error in survey research, sampling, different modes of survey data collection, and nonresponse. We then examine, writing and evaluating questions and constructing the survey instrument. We conclude with a discussion of post-collection data processing and ethics in survey research. Please be aware that the field is relatively new and is changing rapidly, so some of the readings may overlap a bit, as any text is almost immediately out of date.

While I attempted to provide a detailed outline of the course, it is my experience that every class is unique. In addition, this is the first time I have taught this course during the compressed summer schedule, so I am a little unsure about the pace. I may alter the schedule if I find that we need to spend more or less time on a particular topic. I also may bring in additional readings if I feel they are needed. Any changes to the course schedule or readings will be discussed in class.

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### **May 11 – Introductions, review syllabus, introduction to survey methodology, total survey error, and coverage error**

Groves – chapters 1 (skip section 1.3), 2, and 3

\*Squire, P. (1988). Why the 1936 Literary Digest poll failed. *Public Opinion Quarterly*, 52: 125-133.

\*Kaple, D. et al. (1998). Comparing sample frames for research on arts organizations: results of a study in three metropolitan areas. *Journal of Arts Management, Law and Society*, 28(1): 41-67.

\*Steuve et al. (2001). Time-space sampling in minority communities: Results with young Latino men who have sex with men. *American Journal of Public Health*, 91(6): 922-926.

\*Porter, S.R. (2008). Rare populations. In P.J. Lavrakas (Ed.) *Encyclopedia of survey research methods* (Vol. 2). Thousand Oaks: Sage Publications.

### **Hand out Assignment 1 (coverage error), due next class session**

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### **May 13 – Sample design, review of sampling error, survey modes**

Groves – chapters 4 and 5

\*Urdan, T.C. (2001). *Statistics in plain English*. Mahwah, NJ: Lawrence Erlbaum. Chapter 6, Standard errors.

\*Thomas, S. L., & Heck, R. H. (2001). Analysis of large-scale secondary data in higher education research: Potential perils associated with complex sampling designs. *Research in Higher Education*, 42(5), 517-540.

\*Best, S.J., & Krueger, B.S. (2004). *Internet data collection*. Thousand Oaks: Sage Publications. Chapter 4, Administering instruments on the Internet.

**Optional:**

\*Kypri, K. et al. (2004). An Internet-based survey method for college student drinking research. *Drug and Alcohol Dependence*, 76: 45-53.

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**May 15 – Response rates and survey nonresponse**

Groves – chapter 6

\*Groves et al. (1992). Understanding the decision to participate in a survey. *Public Opinion Quarterly*, 56(4), 475-495.

\*Groves, R.M., & Peytcheva, E. (2008). The impact of nonresponse rates on nonresponse bias. *Public Opinion Quarterly*, 72(2): 167-189.

\*Peytchev, A. (2009). Survey breakoff. *Public Opinion Quarterly*, 73(1): 74-97.

\*Singer, E. (2002). The use of incentives to reduce nonresponse in household surveys. In Groves et al. (Eds.). *Survey Nonresponse*. New York: Wiley-Interscience.

\*AAPOR – Response rate definitions (just skim)

**Optional:**

\*Johnson et al. (2002). Culture and survey nonresponse. In Groves et al. (Eds.). *Survey Nonresponse*. New York: Wiley-Interscience.

\*Porter, S.R. & Whitcomb, M.E. (2005). Non-response in student surveys: The role of demographics, engagement and personality. *Research in Higher Education*, 46(2), 127-152.

\*Heerwegh, D. (2005). Effects of personal salutations in e-mail invitations to participate in a web survey. *Public Opinion Quarterly*, 69: 588-598.

**Hand out Assignment 2 (sampling and nonresponse error), due next class session**

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**May 18 – Developing questions about facts**

Groves – chapter 7 (sections 7.1-7.2 only)

Fowler – chapter 2

Tourangeau – chapters 3 and 5

\*Garry et al. (2002). Examining memory for heterosexual college students' sexual experiences using an electronic mail diary. *Health Psychology*, 21(6): 629-634.

**Optional:**

\*Belli, R.F. et al. (2007). Methodological comparisons between CATI event history calendar and standardized conventional questionnaire instruments. *Public Opinion Quarterly*, 71(4): 603-622.

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**May 20 – Developing questions about attitudes**

Fowler – chapter 3  
Tourangeau – chapters 6 and 7

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### **May 22 – Developing questions - miscellaneous**

Fowler – chapter 4 and skim Appendices A-C  
Tourangeau – chapter 8

\*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.

\*Tourangeau, R., et al. (2004). Spacing, position, and order: Interpretive heuristics for visual features of survey questions. *Public Opinion Quarterly*, 68(3): 368-393.

#### **Optional:**

\*Choi, B.C.K. et al. (2005). *A catalog of biases in questionnaires*. Preventing Chronic Disease, 2(1): 1-13

\*Smyth, J.D. (2006). Comparing check-all and forced-choice question formats in web surveys. *Public Opinion Quarterly*, 70(1): 66-77.

\*Christian, L.M. et al. (2007). Helping respondents get it right the first time: The influence of words, symbols, and graphics in web surveys. *Public Opinion Quarterly*, 71(1): 113-125.

### **Hand out Assignment 3 (critique of survey questions), due next class session**

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### **May 25 – No class (university holiday)**

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### **May 27 – Evaluating survey questions**

Groves – chapter 8 (only last sections on validity)

Fowler – chapters 5 & 6

\*Willis, G.B. (2005). *Cognitive Interviewing*. Thousand Oaks: Sage Publications - chapters 4, 5, 8 and 10 (don't worry, these are short chapters).

\*Kuncel, N.R. et al. (2005). The validity of self-reported grade point averages, class ranks, and test scores: A meta-analysis and review of the literature. *Review of Educational Research*, 75(1): 63-82.

#### **Optional:**

\*Beatty, P.C. & Willis, G.B. (2007). Research synthesis: The practice of cognitive interviewing. *Public Opinion Quarterly*, 71(2): 287-311.

\*Conrad, F.G, & Blair, J. (2009). Sources of error in cognitive interviews. *Public Opinion Quarterly*, 73(1): 32-55.

\*Trusheim, D. (1994). How valid is self-reported financial aid information? *Research in Higher Education*, 35(3) 335-348.

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## **May 29 – Post-collection processing of survey data:**

Groves – chapter 10

\*Croninger, R.G and Douglas, K.M. (2005). Missing data and institutional research. In Umbach, P.D., *Survey research: emerging issues*, New Directions for Institutional Research no. 127., pp 33-49.

\*McKnight, P.E. et al. (2007). *Missing Data: A Gentle Introduction*. New York: Guilford Press. Chapters 1, 2 and 4.

\*Kalton, G. & Flores-Cervantes, I. (2003). Weighting methods. *Journal of Official Statistics*, 19(2): 81-97.

## ***Hand out Assignment 4 (post-collection processing), due next class session***

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### **June 1 – Ethical issues**

Groves – chapter 11

\*AAPOR – Questions about IRBs

\*AAPOR – Statement on IRBs

\*Carpenter, D. Institutional review boards, regulatory incentives, and some modest proposals for reform. *Northwestern University Law Review*, Vol. 101, No. 2.

Guest lecturer from Office of Research Assurances

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## **July 13 – Group project paper due by 5 P.M., in my mailbox or sent to me electronically.**

## ResEv 570X – Group Project

By the second class session you or your group will need to decide on a survey research project that addresses a particular problem and answers a research question(s). Please understand that this is your opportunity to demonstrate to me what you have learned in this course, so please act accordingly.

You will not implement the survey for this project. Each person/group will develop a short questionnaire and write a mini-proposal (no longer than twenty, double-spaced pages, 12 pt. font, formatted using APA, 5<sup>th</sup> edition) describing the survey. The pages lengths listed are only approximations to give you some idea of where you should be focusing your efforts. You should construct your proposal to include the following:

1. **Introduction.** In this section, you will delineate the research problem, describe the purpose of your survey, and list the research question(s) you plan to address. [1-2 pages]
2. **Method.** Discuss, in detail, your methods.
  - a. Describe your survey and the constructs you expect to measure.
  - b. Describe your:
    - i. Target population – who are you studying?
    - ii. Sampling frame – how will you identify the people who have a chance to be included in the survey?
    - iii. Sample design – how will you select members of your sample, and how many will you select?
    - iv. Survey mode – how will you contact members of your sample, how will you ask your questions and collect your answers, and how much effort will be devoted to collecting data from those reluctant to respond?
  - c. Explain how you plan to evaluate your instrument prior to data collection.
  - d. Note any ethical issues and your approach to dealing with them.[10-15 pages]
3. **Postcollection processing of data.** Briefly describe how you plan to enter, code, and check your data after collection. [1-2 pages]
4. **Limitations.** No survey is free of error. Describe issues of error that your design is not able to overcome or areas where you expect error will be introduced. [1-2 pages]
5. **Cover letter/email/interviewer protocol.** Include a copy of the communication that will accompany your survey as an appendix. If using a prenotification, please provide a copy of both the prenotification and the first communication with the survey. Each communication should be no more than 1 page and can be single-spaced.
6. **Survey.** Include a copy of your instrument as an appendix. This should be no more than 4 pages and can be single-spaced.

7. If you are developing this proposal in preparation for a dissertation or work-related project, I highly recommend you spend some time developing a detailed budget. However, this is not a required part of the project.

One question that has come up in previous classes is whether you can copy questions from other surveys. This is a common practice in survey research; for example, all federal surveys allow use of their questions by other researchers. However, some surveys are copyrighted, which means you may only make limited use of their questions under the fair use doctrine.

For this project, you should use the 10/10 rule. No more than 10% of your survey can be taken from any one source, and you should not use more than 10% of someone else's survey.