

M88-560-01 Survey Methods: Design and Evaluation

Fall 2018

Course Master:

Amy McQueen, PhD

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Office hours by appointment



Guest Instructor:

Beth Dodson, PhD

Research Assistant Professor, School of Social Work
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Course Description:

This course will provide a comprehensive introduction to survey methods and psychometrics. It will cover theory as well as practical application. Class time and course assignments will involve many practical hands-on experiences in designing and evaluating survey measures, culminating in a proposal for validating a new scale of the student's own creation. Each student will develop a survey incorporating standard and new measures, which will be administered to others to practice recruitment, data collection, data entry, and codebook design.

Recommended prerequisites: linear regression and research methods

Course Materials:

Students will not be asked to buy a textbook for this course. Readings from book chapters and articles will be assigned to supplement the lecture each week. Electronic copies will be shared via Dropbox. For students interested in owning useful reference textbooks, the following books are recommended:

- Nunnally JC, Bernstein IH. Psychometric Theory. New York: McGraw-Hill 1994.
- Aday LA, Cornelius LJ. Designing and conducting health surveys: A comprehensive guide. San Francisco, CA: Jossey-Bass 2006.
- Groves RM, Fowler FJ, Couper MP, et al. Survey Methodology. Hoboken, NJ: Wiley 2009.
- Dillman DA, Smyth JD, Christian LM. Internet, mail, and mixed-mode surveys: Tailored design method. Hoboken, NJ: John Wiley & Sons, Inc. 2009.

AHBR courses use **SPSS software**. Students can use computers with SPSS at the CRTC in the Wohl Building. SPSS Licenses can be purchased for 6 or 12 months online from various retailers or from the same site Wash U staff can buy other software at a discount:

https://estore.onthehub.com/WebStore/ProductsByMajorVersionList.aspx?cmi_mnuMain=2ff73789-74c7-e011-ae14-f04da23e67f6&pc=ddc848d8-b4fe-e111-bd05-f04da23e67f6

30 day trial licenses of SPSS also available online: <https://www.apponfly.com/en/ibm-spss-statistics-standard>

Learning Objectives:

Upon course completion, students will be able to:

- Recognize the complexity of survey research and measurement evaluation
- Identify and evaluate existing survey measures

- Describe factors involved in the organization and length of survey measures
- Select and justify the most appropriate survey mode, and develop procedures for survey administration
- Recognize the various sources that may contribute to total survey error and methods for reducing them
- Identify reasons and methods for creating and evaluating new survey measures
- Recognize the different reasons for, and potential problems with, using various response scale options
- Propose studies to evaluate the reliability and validity of a measure
- Create codebooks for variables created from quantitative survey measures and qualitative data coding

Grading:

5% Class participation; 30% Graded Exercises; 65% Written Assignments

Class participation. Students are responsible for reading prior to class and asking questions as needed in person or by email. Students are expected to contribute to in-class exercises and discussions including group work. The instructor should be notified of all absences in advance when possible. Students who miss more than 3 lectures may receive a deduction in their final grade. Individual assignments may benefit from group interaction, but must reflect the student's own mastery of the material. Thus, individuals in a group may receive different grades for their own written work.

Grades/sub-grades	4-point scale
A+ (98% to 100%)	4.00
A (93% to 97%)	4.00
A- (90% to 92%)	3.7
B+ (88% to 89%)	3.3
B (83% to 87%)	3.00
B- (80% to 82%)	2.7
C+ (77% to 79%)	2.3
C (73% to 77%)	2.00
C- (70% to 72%)	1.7

Assignments. The goal of these assignments is to allow students some practice and personalization with several key tasks.

Writing Assignments (100 points each)	Due Date (by 5pm!)
Assignment 1: Written critique of a validated multi-item measure of a latent construct	10/19
Assignment 2: Turn in formatted survey and describe in written text	10/26
Assignment 3: Turn in labeled SPSS database including data entered for 5+ participants, and codebook with scoring instructions	11/26
Assignment 4: Propose a new scale and a validation study	12/10

Assignments are designed to build upon each other. **For Assignment 1**, each student will evaluate the reliability and validity of an existing multi-item measure from the literature. **For Assignment 2**, students will select and format 5+ standard sociodemographic measures from public surveys, 1 multi-item scale developed in class, and at least 1 additional multi-item scale of their choice from the published literature. **For Assignment 3**, students will administer their formatted survey to a convenience sample of people (5+) and enter survey responses into a labeled SPSS dataset and create a codebook including scoring information for each variable in the dataset. **For Assignment 4**, students will propose a new multi-item scale of their own definition and design, and propose methods for evaluating its reliability and validity.

Graded Exercises. The goal of these assignments is to allow students to practice skills learned in class and to (independently) demonstrate what they learned from group activities.

Graded Exercises (25 points each)	Due Date (by noon)
A. Qualitative interview guide, protocol, & codebook for measurement development	11/9
B. Written summary of group presentation on survey mode	11/16
C. Reflection on keys to successful survey administration to 5+ people	11/26
D. Individual oral presentation on real-world survey methods example	TBD

Assignments and Exercises should be typed and submitted as word documents or SPSS .sav files. Files should be saved with the student's last name and brief assignment name (e.g., Smith Survey Mode Exercise A). Files should be attached to an email sent to the instructor at amcqueen@wustl.edu by 5pm on the due date. Dr. McQueen will insert comments in track changes in word docs and email them back with their grade.

Individual presentation. Each student will present a real-world survey methods example to the class to prompt discussion. Students should include 2 potential discussion questions in their presentation. Students should solicit approval and suggestions from the instructor for their selected topic in advance of their scheduled presentation date. Students are encouraged to draw on their own personal experiences or exposure to research.

Course Policies:

Plagiarism reflects unprofessional and unethical behavior and such use will result in an immediate failure for the course. Plagiarism, as defined for this course, results if you take 5 or more consecutive words from a written source (including web pages) without proper citation. You must place the phrase in quotation marks and cite the author, year of publication, and page (or web publication). **Keep in mind, rewording or rephrasing someone else’s writing or ideas should also include a reference. Not only is proper referencing ethical, but a regular part of our professional practice.**

Deadlines. There are no alternate assignments that will be given in place of the required assignments described above. Penalties for late work include 10 points deducted from the final grade per day late. Students are advised to communicate with the instructor before an assignment is due to plead their case for an extension or temporary “incomplete” grade. *This syllabus is subject to change at the discretion of the professor to accommodate instructional and or student needs. It is the student's responsibility to keep abreast of such changes.*

Drop Dates. If the occasion should arise that you want or need to drop this class, please talk to the course instructor or Laura Peer, AHBR Project Manager (lpeer@wustl.edu) first. You can drop the course for any reason during the semester, however you may only receive a partial or no tuition reimbursement after mid-September or depending upon how far into the semester you drop the course. Late withdrawals will appear on your transcript as a withdrawal. See the academic calendar for specific dates: https://crtc.wustl.edu/wp-content/uploads/2018-19_Academic_Calender_AHBR.pdf

University Resources:

Writing Assistance. For additional help on your writing, consult the expert staff of the Writing Center in Olin Library on the Danforth campus (first floor): <https://writingcenter.wustl.edu>

Disability Resources. Washington University is committed to providing accommodations and/or services to students with documented disabilities. Students who are seeking support for a disability or a suspected disability should contact Disability Resources at 314-935-4153. Disability Resources assists students with disabilities by providing guidance and accommodations to ensure equal access to our campus, both physically and academically. To learn more about its services, initiate the process of formal documentation and/or to arrange for accommodations, please inform the course master at the start of the course and contact: <http://cornerstone.wustl.edu/disability-resources/>

In addition to learning disabilities, students who have physical or mental health conditions that may require accommodation for students to adequately demonstrate their mastery of course material, should inform the course master at the start of the course and contact Disability Resources.

Mental Health Resources. Mental Health Services’ professional staff members work with students to resolve personal and interpersonal difficulties, many of which can affect the academic experience. These include conflicts with worry about friends or family, concerns about eating or drinking patterns, and feelings of anxiety and depression. Contact: <http://shs.wustl.edu/MentalHealth>.

Reporting Policies. Please also review the CRTC website for policies regarding sexual assault reporting and reporting concerns about bias, prejudice or discrimination: <https://crtc.wustl.edu/courses/class-list/academic-policies/reporting-policies/>

Class Schedule

Week	Topic	Description	Class Activity	Assignment	Reading for class
1 8/27	Introduction	Overview of class, field, conceptual models	Identify important factors to survey & sources of existing measures	<i>Post existing survey or scale to review in class</i>	
2 9/3	Labor Day Holiday – No Class				
3 9/10	Latent constructs	Examples of latent constructs & multi-item measures, measurement articles Discuss distributions/stats	Brainstorm latent constructs of interest	<i>Start looking for an article evaluating a measure of a latent construct</i>	
4 9/17	Item Response Theory, classical test theory, generalizability theory, factor analysis	Introduce measurement theories and selected analytic methods; computer adaptive testing (PROMIS)	EFA/CFA demonstration;		Costello article
5 9/24	Measurement reliability	Non-objective measures Reliability (models, methods, measures)	Lecture	1. Written evaluation of reliability and validity of a published <u>scale</u> (student's choice) (Due 10/19)	Aday Reliability p.54-62 Kimberlin article
6 10/1	Measurement validity	Validity (theory, methods, influences, measures) Cross-cultural equivalence	Lecture		Kimberlin article
7 10/8	Measurement reliability and validity discussion	Solidify understanding of reliability and validity	Groups present articles - evaluate reliability & validity of a published measure		
8 10/15	Identify, Evaluate and Select existing items for a survey (standard items and scales); Scales of measurement	Non-scales; national surveys; databases of measures Fixed vs open ended; Response options; Reverse scored items Survey formatting decisions	Discuss/Review existing measures	2. Create/format survey items using 5+ standard measures to describe participant & 2+ scales, and describe in written form. (Due 10/26)	Totten article Aday Chp 12 Survey Format

Week	Topic	Description	Class Activity	Assignment	Reading for class
9 10/22	Methods for adapting existing measures, pre-testing & other evaluation methods **Beth Dodson**	Lit review; Delphi panel; cognitive interviews; think aloud; observation; process evaluation	Class exercise to adapt existing items to create a new measure. Discuss methods for pre-testing new scale.	Add new scale to survey (HW#2)	Moorman article-skim Blair Chp 10 Pretesting Sofaer article Optional: Blair Methodology Appendix 3 Smith article-focus on first 3 pages Collins article
10 10/29	Creating new measures. Qualitative methods **Beth Dodson**	Using qualitative data (historical data, interviews, focus groups) to generate content or specify wording	Vote on final set of items for an adapted scale	<i>A. Create sample interview questions, coding protocol, and codebook (Due 11/9)</i>	Sofaer article
11 11/5	Data collection Survey mode	Mode of administration - pros/cons across multiple considerations	Group work - prepare pros/cons of one mode each and present to class	<i>B. Individual summary of in-class MODE assignment in written form (Due 11/16)</i>	Groves Chp 5 Survey Mode
12 11/12	Online vs. Field procedures Interviews/Interviewers **Beth Dodson**	Field administration; interview dynamics; quality control methods	Sample interviews	<i>C. Administer survey to 5 others and write brief reflection on interviewing (Due 11/26)</i>	Aday Chp 13 Implementation
13 11/19	Data management and quantitative analysis	Aggregate measures, scoring, dealing with missing data, implications for analyses Creating codebooks	Code surveys SPSS demonstration	3. Create formatted SPSS dataset and codebook for full survey (Due 11/26)	Aday Chp 14 Analysis prep
14 11/26	Post Thanksgiving Holiday – No Class, but Assignments due today				
15 12/3	Review + remaining topics Observation/Abstraction forms				Optional Aday Chp 6 Sampling Groves Chp 6 Non-response, 11 Ethics
16 12/10	Exam week - No class			4. Final assignment due - Describe new scale and evaluation plan	

Italicized assignments reflect graded exercises or class participation.