

Survey Research Design

INFO 4603/5603 · Fall 2023

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Email is the University of
Colorado's official form of
communication.

Course communication policies:

- Instructor and students will use the **email interface within Canvas**.
- Instructor and students will reply to emails from each other within 24 hours. Please check your email at least once a day.
- We will use instant messaging (e.g., Slack, Discord) to enable group collaboration and help.



Office Hours: TBD and by
appointment

Course Rationale

Surveys are one of the most common ways of finding out about people's opinions and (perceived) behaviors. Surveys employ questionnaires that ask respondents to choose standardized responses and/or provide open-ended comments. The resulting standardized data are treated like numbers and analyzed using statistical techniques. Open-ended data are categorized using techniques like thematic analysis and often counted. Surveys can be used for population studies and are also the basis of experimental studies in which responses are compared across groups. Surveys can be inexpensive, flexible, used to make generalizations about large groups of people, and because they ask standardized questions, very reliable. On the other hand, surveys are based on self-report, fail to take into account context, and hide behind a veneer of objectivity. Survey standardization can cause researchers, evaluators, and analysts to miss important nuances among respondents. The results of survey-based studies influence a wide range of non-trivial decisions, including public and organizational policy, health care decisions, program development, and technology design. Users and consumers of survey methods should have a deep understanding of "best practices" in survey design, administration, analysis, and reporting as well as a critical view toward what we can and cannot learn from them.

Approach

This course will take a studio approach to studying and practicing survey research methods. Studio learning includes learning *about* (e.g., reading, demonstration, discussion); learning *how* (practicing/applying what was learned); *critiquing* products and *reflecting*; and *display* and *celebration* of work. Students will develop, design, and implement a survey through participation in a collaborative project.*

**Students who want to work independently should discuss with Lecia.*

Course Objectives

Through reading, discussion, and hands-on experience with an authentic research project, students will acquire a deep understanding of the theoretical underpinnings of survey research, improving their ability to appreciate and assess the quality, validity, and credibility of their own and others' survey research. Students will:

- Extend their competency with research-based techniques for planning, designing, and administering a survey.
- Understand how survey design affects quality of data and become more critical consumers of survey-based data.
- Understand the relationship between qualitative data and survey data.
- Be able to manage a survey research project.
- Effectively employ Qualtrics survey software to design a high quality survey.

Course Format and Procedures

This course uses an active, studio-based learning approach, not an information transfer approach (i.e., not lecture). Active learning occurs through one's own engagement and interaction with materials, fellow students, and the instructor. A studio approach to learning research design assumes that students are full participants in an authentic research experience, receive opportunities and resources to learn the techniques for accomplishing learning goals, and give and receive guidance to/from the professor and fellow students.

In INFO4603/5603, students are expected to closely read and annotate assigned materials before class, using Hypothesis within Canvas. In class, students will discuss concepts, solve problems, revise and critique products, and apply concepts in collaboration with each other and the instructor.

Attendance

Class is held once a week and will include time for learning, working, critiquing, and reflecting. Absences will be detrimental to success in the course and more importantly, successfully designing a high-quality project with your group. Missing a single class means missing a full week of instruction. Please make the effort to attend every class.

Required Text, Readings, and Resources

All readings are available in the [Canvas course](#)

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (Fourth edition). Hoboken, N.J: John Wiley & Sons, Inc.

Other materials to be announced

Qualtrics: <https://oit.colorado.edu/services/business-services/qualtrics>

How to access Qualtrics Training: <https://oit.colorado.edu/tutorial/qualtrics-access-training-webinars>

Formal Assignments

Human Subjects Certification: All students must submit a copy of their certificate showing they have completed the CITI training BY SEPTEMBER 11, 2023, 11:59 pm.

Research Project: This assignment is the centerpiece of the course and all practical topics are structured around it. It is intended to give you hands-on experience with planning and conducting a survey study. It will be conducted throughout the term and will provide a realistic example for some of the concepts covered in the course so that if called upon, you will have experience using them. Students will work on the five components of the project individually and combine efforts as part of a team. Throughout the term, students will work on different parts of a report, so that at the end of the semester, all that is left to do is to put those parts together. You will receive a separate document with more details. The assignment has five components:

- 1) **Developing Survey Content.** You will review and categorize qualitative data related to a research question and a research audience for which Lecia or a classmate has IRB approval to study OR a study of your own for which you seek IRB approval OR a study that you cannot publish. Qualitative analysis of interview data will lead to hypotheses, additional questions, refinements, and the development of survey questions. You will review relevant literature to understand what work has already been done and how your study addresses gaps in knowledge.
- 2) **Developing a Sample.** Chances are that we will have to use social media and a snowball sample.
- 3) **Designing and Administering a Survey.** You will use "best practices" to design a survey that preemptively reduces survey mortality. The survey will be administered online, using Qualtrics. You will use "best practices" to administer the survey you develop, designing for maximizing sample size.
- 4) **Analyzing Survey Data.** You will use Qualtrics output to analyze the data; you will present descriptive statistics and if relevant to your research question and supported by your sample, inferential statistics.
- 5) **Reporting the Study.** You will combine the write-ups of sections of the study using a "standard" set of report categories. This part of your work is scaffolded with resources provided in the course.

Grade Components

- Participation in Class Discussions and Activities (20%)
 - Discuss concepts with other students and professor
 - Collaborate with and support your fellow students and the professor in learning
 - Practice competencies to prepare for research project component work in and out of class
- Reading and Annotation (20%)
 - Due by 10 am Mondays, intended to ensure that you read and comprehend the material and use it to develop your surveys
 - No makeups without documented extenuating circumstances (i.e., serious illness; family emergency; unavoidable existing commitments to a university-authorized activity)
- Research Project (60%)
 - Individual pre-class preparation of project components
 - In-class preparation of project components, often as team
 - Submission of write-ups demonstrating understanding and competence of processes and results, on schedule
 - Project presentation at Information Science Showcase
 - Final product (different for 4603 and 5603)
 - Evaluation of self and team members

Course schedule: Subject to change

Date/Topic	Readings	Assignments DUE	Class Activities
Module 1: Introduction, Principles, and Getting Ready to Construct Surveys			
August 28 Introduction to the course, to each other, and to survey research Planning for projects			Discussion Swapping project ideas
September 5 (not a class day)		Submit research question	
September 7 (not a class day)		Rank research questions for assignment to group project	
September 11 Survey research overview Project overview and decisions	Dillman Ch. 1 Syllabus Research Project Assignment Groupwork evaluation	Reading annotation by 10 am Submit CITI certificate	Discuss readings, project requirements Group meeting: Understanding groupwork, constraints; setting ground rules; establish Google collaboration in Canvas; discussing project and scholarship
September 18 Using literature review to develop research question, survey content	Sage Literature review and Developing a Research Question	Reading annotation by 10 am Submit refined research question (individual)	Discuss readings Group meeting: Refine research question (submit by end of class); Identify/divide scholarship to review (submit by end of class)

Date/Topic	Readings	Assignments DUE	Class Activities
September 25 Using literature and qualitative data to develop survey content	Thematic analysis	Reading annotation by 10 am Review assigned literature (individual) Identify and upload qualitative data (individual)	Discuss readings Group meeting: Discuss lit review; refine RQ as needed; Explore qualitative data: discuss, practice
Module 2: Designing for Maximum Response			
October 2 Reducing reluctance	Dillman Ch. 2	Reading annotation by 10 am Qualitative themes & definitions (individual)	Discuss reading Group meeting: Finalize themes, definitions (submit); Discuss survey categories (<i>NOT survey items</i>) based on qualitative data and lit review findings
October 9 Qualtrics Training Inviting response	CoreXM Modules TBA Dillman Ch. 9 (328-342)	Reading annotation by 10 am Propose survey categories (<i>NOT survey items</i>) (individual)	Discuss reading, Qualtrics Group meeting: Finalize survey categories and connect to RQ (submit by end of class)
Module 3: Improving Validity with Good Questions, Order, and Testing			
October 16 Fundamentals of good questions	Dillman Ch. 4	Reading annotations by 10 am Submit survey items informed by Ch. 4 (individual)	Discuss reading Group meeting: share survey items, consider meaning, submit survey map
October 23 Open- and closed-ended questions	Dillman Ch. 5	Reading annotations by 10 am Refine survey items informed by Ch. 5 (individual)	Discuss reading Group meeting: discuss wording, response categories, submit revised survey map
October 30 Draft survey Order effects Testing Qualtrics training	Dillman Ch. 7 Ch. 9 pp. 342-345 CoreXM TBA	Reading annotations by 10 am Submit draft 1 survey informed by Ch. 7 (team) Write-up 1 (team) (11:59 pm)	Discuss readings Group meeting: question order and effects; submit revised survey draft; develop piloting plan and how to locate subjects (submit by end of class)
Module 4: Sampling Error and Other Concerns			
November 6 Sampling overview and frames Probability and non-probability sampling Invitations	Review Dillman Ch. 2, 9 Dillman Ch. 3	Reading annotations by 10 am Survey draft 2 in Qualtrics (team) (before class)	Discuss reading Group meeting: Discuss sample development; Submit sampling frame by end of class (use Fig 3.1 as model)
Module 5: Designing for Visual and Aural Administration			

Date/Topic	Readings	Assignments DUE	Class Activities
November 13 Monitoring	Ch. 9 pp. 345-350	Write-up 2 (group) Results of pilot (individual)	Discuss readings Group meeting: Refine invitation scripts and submit; combine results of pilot and refine survey; Develop launch and monitoring plan and submit
November 18 (not a class day)		Submit final invitation scripts based on feedback (initial contact and two reminders) (group)	
November 20 – NO CLASS			
Module 6: Survey Implementation			
November 27 Visual design concepts and guidelines	Ch. 6	Reading annotations by 10 am	Discuss readings Group meeting: Review survey for feedback from Lecia, evaluate for visual design, then finalize and submit link
November 28 (not a class day) Launch survey!		Monitor!	Make changes quickly!
Module 7: Analysis and Reporting			
December 4 Data preparation Descriptive and inferential statistics refresher Qualtrics Training	CoreXM Modules TBA Data and statistics TBA	Write-up 3 (group) Submit data preparation and analysis plan (individual)	Discuss reading Group meeting: Send reminders, other sample increasing ideas; Data analysis discussion, decisions; submit final data plan
December 11 Getting, describing results		Write-up 4 (group)	Group meeting: Write-up 5 (by 11:59 pm)
December 13 (Wednesday)	Information Science Showcase	Poster or Infographic	
December 20 Answer research question		DUE: Final product by 4 pm	

Course Policies

Classroom Behavior

Students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote, or online. Failure to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation, or political philosophy.

For more information, see the [classroom behavior policy](#), the [Student Code of Conduct](#), and the [Office of Institutional Equity and Compliance](#).

Requirements for Infectious Diseases

Members of the CU Boulder community and visitors to campus must follow university, department, and building health and safety requirements and all public health orders to reduce the risk of spreading infectious diseases.

The CU Boulder campus is currently mask optional. However, if masks are again required in classrooms, students who fail to adhere to masking requirements will be asked to leave class. Students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct & Conflict Resolution. Students who require accommodation because a disability prevents them from fulfilling safety measures related to infectious disease will be asked to follow the steps in the “Accommodation for Disabilities” statement on this syllabus.

For those who feel ill and think you might have COVID-19 or if you have tested positive for COVID-19, please stay home and follow the [further guidance of the Public Health Office](#). For those who have been in close contact with someone who has COVID-19 but do not have any symptoms and have not tested positive for COVID-19, you do not need to stay home.

Accommodation for Disabilities, Temporary Medical Conditions, and Medical Isolation

[Disability Services](#) determines accommodations based on documented disabilities in the academic environment. If you qualify for accommodations because of a disability, submit your accommodation letter from Disability Services to your faculty member in a timely manner so your needs can be addressed. Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance.

If you have a temporary medical condition or required medical isolation for which you require accommodation, you must notify Dr. Barker immediately and collaborate to develop any make-up plan for individual and group-based assignments. Also see [Temporary Medical Conditions](#) on the Disability Services website.

Preferred Student Names and Pronouns

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [Honor Code](#). Violations of the Honor Code may include but are not limited to: plagiarism (including use of paper writing services or technology [such as essay bots]), cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty.

All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution: honor@colorado.edu, 303-492-5550. Students found responsible for violating the [Honor Code](#) will be assigned resolution outcomes from the Student Conduct & Conflict Resolution as well as be subject to academic sanctions from the faculty member. Visit [Honor Code](#) for more information on the academic integrity policy.

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

CU Boulder is committed to fostering an inclusive and welcoming learning, working, and living environment. University policy prohibits [protected-class](#) discrimination and harassment, sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, and related retaliation by or against members of our community on- and off-campus. These behaviors harm individuals and our community. The Office of Institutional Equity and

Compliance (OIEC) addresses these concerns, and individuals who believe they have been subjected to misconduct can contact OIEC at 303-492-2127 or email cureport@colorado.edu. Information about university policies, [reporting options](#), and support resources can be found on the [OIEC website](#).

Please know that faculty and graduate instructors have a responsibility to inform OIEC when they are made aware of incidents related to these policies regardless of when or where something occurred. This is to ensure that individuals impacted receive an outreach from OIEC about their options for addressing a concern and the support resources available. To learn more about reporting and support resources for a variety of issues, visit [Don't Ignore It](#).

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. **In this class, please communicate with Professor Barker at the beginning of the semester.** See the [campus policy regarding religious observances](#) for full details.

A Commitment and Invitation from Our College

CMCI strives to be a community whose excellence depends on diversity, equity, and inclusion. We aim to understand and challenge systems of privilege and disadvantage in higher education, such as those based on class, race, ethnicity, gender, sexuality, and dis/ability. We seek to reach across social and political divides and to make space for voices historically underrepresented in higher education and marginalized in society. In other words, diversity is not just a future reality for which we try to prepare students. It is a priority we want to put into practice here, now, and together, in order to foster places of learning where all members can thrive. Our question for you is, how are we doing? Please contact the CMCI diversity team (email dei-cmci@colorado.edu or see <https://www.colorado.edu/cmci/about-college/diversity-equity-and-inclusion/our-team>) ...

- if you need support or other resources but don't know where to turn
- if any aspect of your educational experience with CMCI does not reflect the commitment expressed here, or if you want to share a positive instance of this commitment in action
- if you have any questions, concerns, or ideas related to diversity

We want to hear from you so that we can do better, and to support you however we can!