

Social Science Research Design Considerations

Office of Institutional Research
Tyler Portis

Meg Nyce
Jimmy Huynh
Larry Long
Alexander Yin



The University of Vermont



Social Science Research Design

1. Develop your Research Question(s)
2. Select Research Approach
3. Determine Recruitment / Sampling Strategy
4. Develop Instruments & Protocol
5. Consider Ethical Implications & Biases
6. Collect Data
7. Analyze and Communicate Results

Social Science Research Design



Developing Research Questions

- The research question is the first step and needs to be developed at the beginning of the process. The data you collect should be directly related to your research question.
- Research questions should be clear, focused, and interesting.
- Your research question will dictate your research approach (i.e. focus groups, surveys, article analysis).
- [6 Golden Rules for Research Objectives](https://www.lipmanhearne.com/how-to-define-good-research-objectives/) (https://www.lipmanhearne.com/how-to-define-good-research-objectives/)

Examples

- What is the **experience** of Honors College students? (interviews, focus groups)
- What is the **difference** in personal development skills of intramural sports participants and non-participants? (survey)
- What is the **relationship** between sex and high-risk drinking? (survey, interview, focus group)

Interviews vs Focus Group vs Surveys

	Interviews	Focus Groups	Surveys
Pros	<ul style="list-style-type: none"> • Provide structure through guided facilitation and one-on-one time • Removes potential bias from other participants that may occur within a focus group • Are flexible in method (i.e. telephone, in-person, online) 	<ul style="list-style-type: none"> • Provide qualitative data • Give flexibility to dive deeper into participant responses 	<ul style="list-style-type: none"> • Provide quantitative data • May provide more candid responses since respondents complete survey in a more private, anonymous setting • Reach more people simultaneously
Cons	<ul style="list-style-type: none"> • Can be susceptible to open-endedness (and lack of generalizability in analysis) • Require careful consideration and training of observers to avoid biasing participants • Are time consuming 	<ul style="list-style-type: none"> • Lack of anonymity within group may cause participants to not speak up on issues • May provide skewed data due to outspoken participants who dominate group discussion • Require more investment of time and effort in planning, recruiting, and facilitating groups 	<ul style="list-style-type: none"> • Cannot ask follow-up questions to responses • Do not always give respondents a way to make comments on matters not directly asked • Can yield low response rates (i.e. survey fatigue) - thus requires proper planning to recruit participants

Determine Recruitment / Sampling Strategy

Things to consider once you've selected a research approach (things you have to consider for IRB):

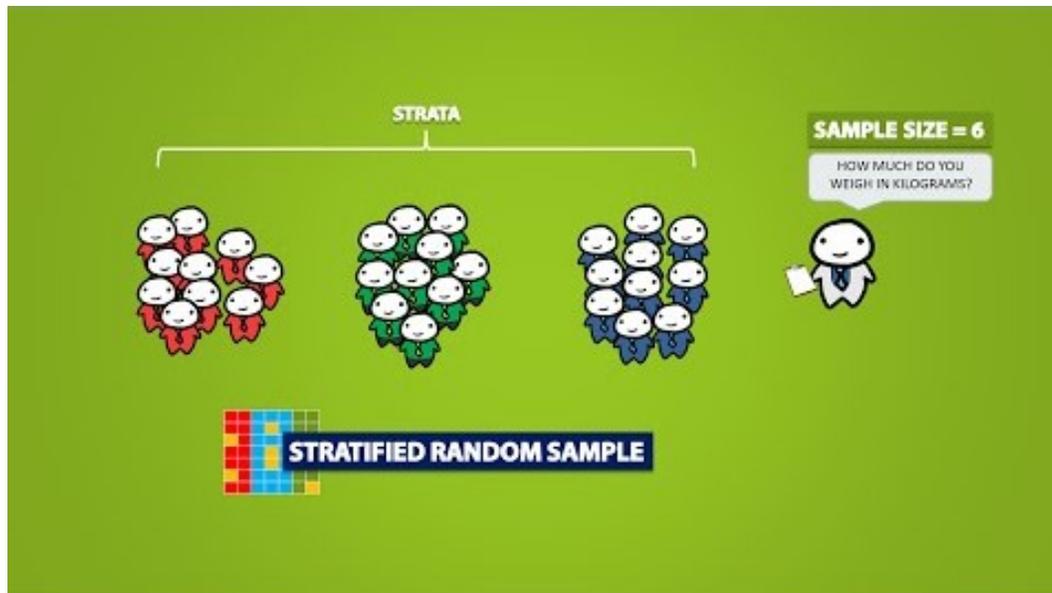
- How will you recruit people / get people to participate?
- How will you get emails if you need to survey people?
- How are you going to protect confidentiality / anonymity?
- Do you need multiple people to run a focus group? And how will you eliminate / minimize bias?
- How much money are you willing to spend to recruit people?
- How / where will you store your data?

Why send survey to only a sample size instead of population?

- Population refers to all members in a group of interest in a study
- Sample refers to a smaller subset of the population that the study will be implemented on
- Sampling:
 - Reduces cost of data collection (Population studies require one to get a response from everyone in the defined population)
 - Must be careful of bias (i.e. are the people responding to the survey representative of the population?)
- This video provides more information about population and samples
 - <https://youtu.be/eIZD1BFfw8E>

Sample Types & Sizes

Sample Types



<https://youtu.be/pTuj57uXWIk>

Sample Sizes

Calculate Sample Size

Click the button to get an online resource to calculate sample size. Note, not everyone will respond to your survey, so you may need to adjust your sample size to account for response rates.



Good Survey Design/Questions – Likert Questions

Share Your Feedback

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I believe this product is made of high quality materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
I would recommend this product to someone else	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Submit

Likert questions enable for respondent to rate their opinion about something as opposed to eliminating it to a black and white answer

Good Survey Design/Questions – Skip Logic



Skip logic is when the designed survey skips survey questions that do not apply to the respondent. If we have a set of questions about living on campus, we want students who live off-campus to not have to answer them.

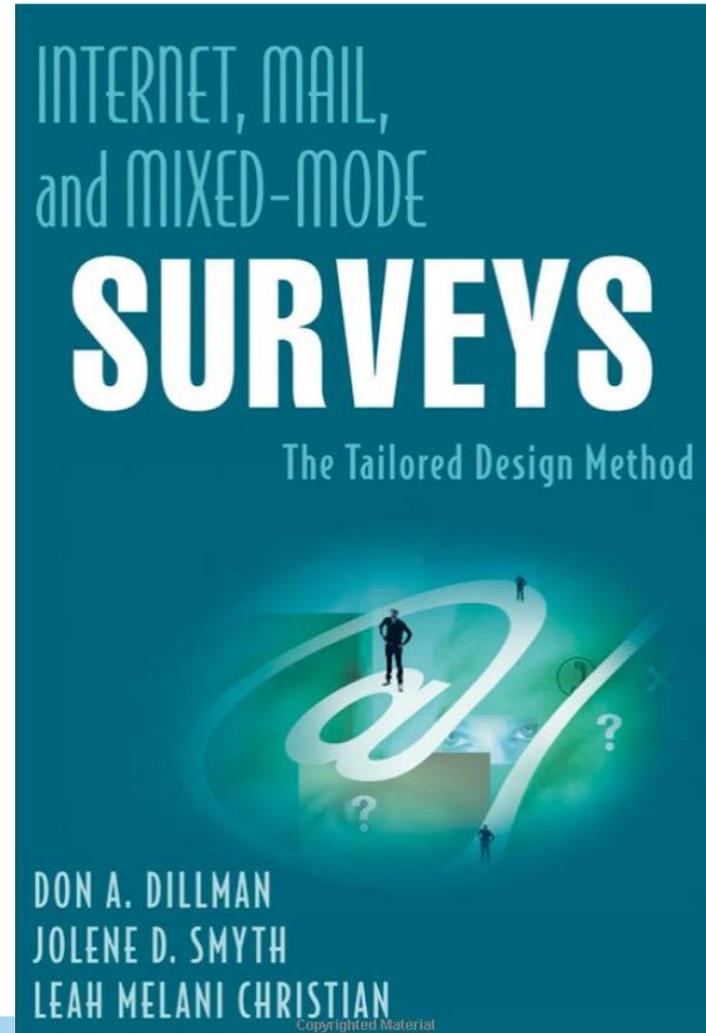
Good Survey Design/Questions – Avoid Leading Questions

Leading Question	Alternative Wording	Reason for Change
“In general, how healthy are you?”	“In general, how would you rate your health?”	A health rating is neutral since it doesn’t lean in one direction (“healthy” vs. “unhealthy”).
“To what extent do you agree with each of the following statements?”	“To what extent do you agree or disagree with each of the following statements?”	Stating both sides of the agreement scale is preferable to including the positive side only.
“We encourage employees to enhance their skills. Would you be interested in receiving training?”	“Please rate your interest in receiving training?”	Avoid coercive language.

A leading question is a question that suggests the answer the research is looking to have confirmed. Avoid these questions as they can create untrustworthy data.

Image source: <https://aea365.org/blog/objection-thats-a-leading-survey-question-by-carla-hillerns-by-carla-hillerns/>.

Survey Research Resource (Considered the Source for Survey Research)



Preparing for Observations, Interviews, and Focus Groups

- Make sure you have the proper supplies (i.e. notepad, pens, tape recorder, consent forms, interview protocol)
- Plan your interview questions and determine the structure of your interview
- Determine if your interview is fully-structured or semi-structured
 - Fully-structured interviews are strict and follow a script
 - Semi-structured interviews allow for follow-up questions or additional prompts but still follow some form of structure
- When writing interview questions, go for questions that elicit a thorough response (i.e. avoid yes/no responses)

Consider Ethical Implications & Bias

- Protect the confidentiality of your participants (i.e. use pseudonyms for qualitative studies and aggregate data for quantitative studies)
- Craft your questions and data collection structure in a way that participants can answer honestly and openly
 - If your topic is bankruptcy, consider how you will get your participants to feel comfortable answering your questions.
- Collect your data in a way that is secure and does not identify your participants
- Consider if you are required to have a counselor at hand depending on your interview questions or topic
- Be consistent with how you collect your data to avoid bias.
 - If you have two interviewers, how are you taking notes for each answer? Are you transcribing or interpreting answers?

Strategies to Increase Response Rates

- Make your audience feel special by expressing genuine appreciation for their participation.
 - “We want to know what you think.”
- Provide incentives when possible
 - Gift cards, entry into raffles, and other prizes are effective in getting respondents to complete surveys.
- Make your survey as short as possible

Collecting Data

- Follow your established protocol for collecting data.



Analyzing Survey Data

- Before viewing results, go back to your major research objectives and write an outline for your analysis to answer those questions.
- Clean and transform the data as necessary
- Use data technology like Microsoft Excel, SPSS, or SAS to answer the questions you have.
 - E.g. Calculate means, cross-tabulate data, and conduct t-tests based on your research question
- Draw conclusions about the data.
- More information on analyzing results can be found at <https://getthematic.com/insights/analyze-survey-data-survey-analysis/>.

Analyzing Interview / Focus Group Data

- Before viewing results, go back to your major research objectives and write an outline for your analysis to answer those questions.
- Transcribe the interview responses
- Identify themes within the responses (Code responses in software such as NVIVO, Deduce, etc.)
- Draw conclusions about the data.
- Cross-check (triangulate) your findings with other sources (i.e. existing research, faculty advisors, etc.)

Institutional Review Board (IRB) Approval

IRB approval is needed for research studies. For these purposes, research is defined as "a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

Use UVM's [Self-Determination Tool](#) to assist in determining if the project requires IRB review. If you need approval, the website will direct you on how to complete the necessary IRB paperwork.

Note about IRB Approval:

- IRB is about protecting the rights of human participants; however even if you have an institution's IRB approval, it does not mean that the institution will support the research.
- If you are requesting institutional data that is not publicly accessible (e.g., emails for surveys), you should contact the Office of Institutional Research (<https://www.uvm.edu/oir/contact-us>) for consultation.