

Survey Design



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Session Outcomes

1. Recognize the four sources of survey error.
2. Identify strategies to minimize survey error.
3. Recognize the four sources of survey response error.
4. Locate resources to support writing good survey questions.
5. Utilize the basic functions in Qualtrics.



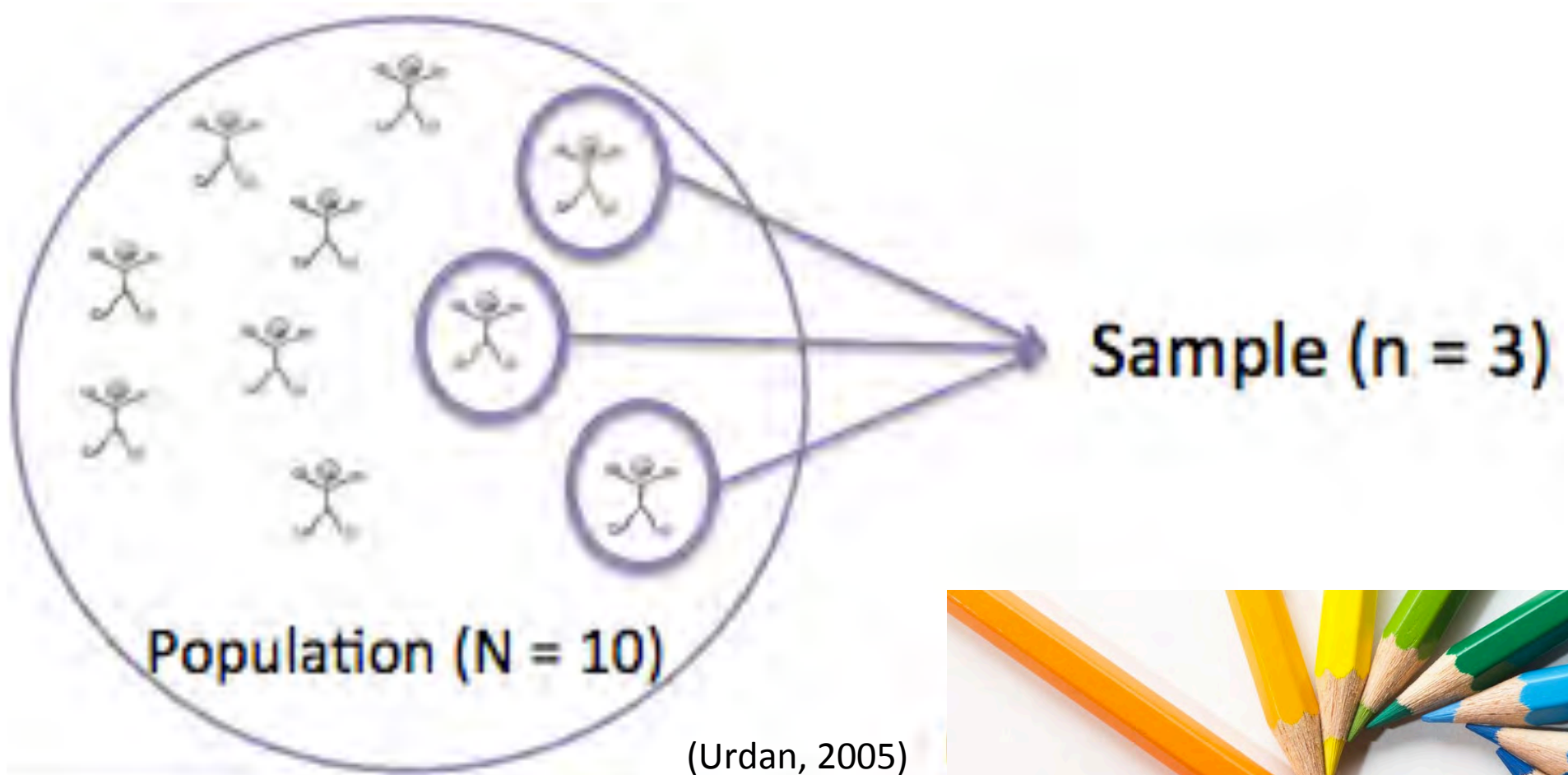
Survey Design Workshop Evaluation

1. Find a partner
2. Take the survey
 1. One person - Qualtrics
 2. One person - hardcopy

Design



Sample and Population



Four Sources of Survey Error

Coverage

Occurs when each member of the population of interest does not have an equal or known chance of being selected for the sample

Sampling

Occurs when the sample drawn for the survey does not represent the population of interest at the desired level of precision

Sampling Frame (list)

- Is everyone included?
- Are there duplicates?
- Does it include extraneous units?
- How is the list maintained?
- The larger the sample, the lower the sampling error
- Use probability sampling to get a representative sample

Minimizing Survey Error

Consider all four simultaneously

- Write good survey questions to help the respondent provide the information you are seeking
- High response rate
- Use probability sampling

Measurement

Occurs when a respondent's answer is incorrect or imprecise

Nonresponse

Occurs when non-respondents are different than respondents in a way that is relevant to the study

Based on (Dilman, Smyth, Christian, 2009)

Social Exchange Theory

Motivating
people to
respond

Increasing Benefits and Establishing Trust

- Provide information about the survey
- Ask for help or advice
- Say thank you and show positive regard
- Give tangible rewards
- Make the survey interesting
- Make the task appear important
- Ensure confidentiality

Decreasing Costs

- Make it convenient to respond
- Avoid subordinating language
- Keep it short and easy to complete
- Minimize requests for personal or sensitive information

Based on (Dilman, Smyth, Christian, 2009)

Four Possible Sources of Survey Response Error

Memory – no memory or inaccurate memory of the event

Influences:

- Passage of time
- Saliency
 - Usualness
 - Economic or social benefits and costs
 - Continuing consequences
- Number of similar events
- Positive v. negative events

Tips:

- Longer questions
- “Recall accurately and take your time in responding”
- Provide encouragement

Motivation – reluctant to answer truthfully: due to potential negative consequences or wanting to look good

- Would respondents feel there is a “right” or “wrong” answer?

Tips:

- Use open questions
- Use longer questions
- Use familiar words
- Load the question:
 - Give reasons for undesirable behavior
 - Everybody does it
 - Assume the behavior
 - Use authority to justify behavior
- Choose appropriate time frame
- Provide anonymity

Tips:

- Make sure the question applies to the respondent
- Make sure the question is technically accurate

Knowledge – may not know the answer

Communication – may not understand what the researcher expects and responds based on own understanding

Tips:

- Ask one question at a time
- Use simple and familiar words
- Use specific and concrete words to clearly specify the concepts
- Use as few words as possible to pose the question
- Use complete sentences with simple sentence structure
- Avoid double negatives
- Be sure the question specifies the response task

Based on (Dilman, Smyth, Christian, 2009)

Garbage in, garbage out





Tips

- 1. Start with your assessment question**
- 2. Include an introduction that includes**
 - 1. Who is included in the survey**
 - 2. The purpose of the survey**
 - 3. What will be done with the data**
 - 4. Anonymous or confidential**
- 3. Consider what the data will look like after you've collected it, do you have the right question format?**
- 4. Think parsimonious, minimize extraneous questions**



Tips

- 5. Embed demographic data where possible, or put demographic questions at the end of the survey**
- 6. Have a few people pilot your survey to...**
 - 1. Identify unclear language**
 - 2. Estimate the length of time to complete the survey**
 - 3. Test logics**
- 7. Ensure your scale coding is correct**



References

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys*. Hoboken, NJ: John Wiley & Sons, Inc.

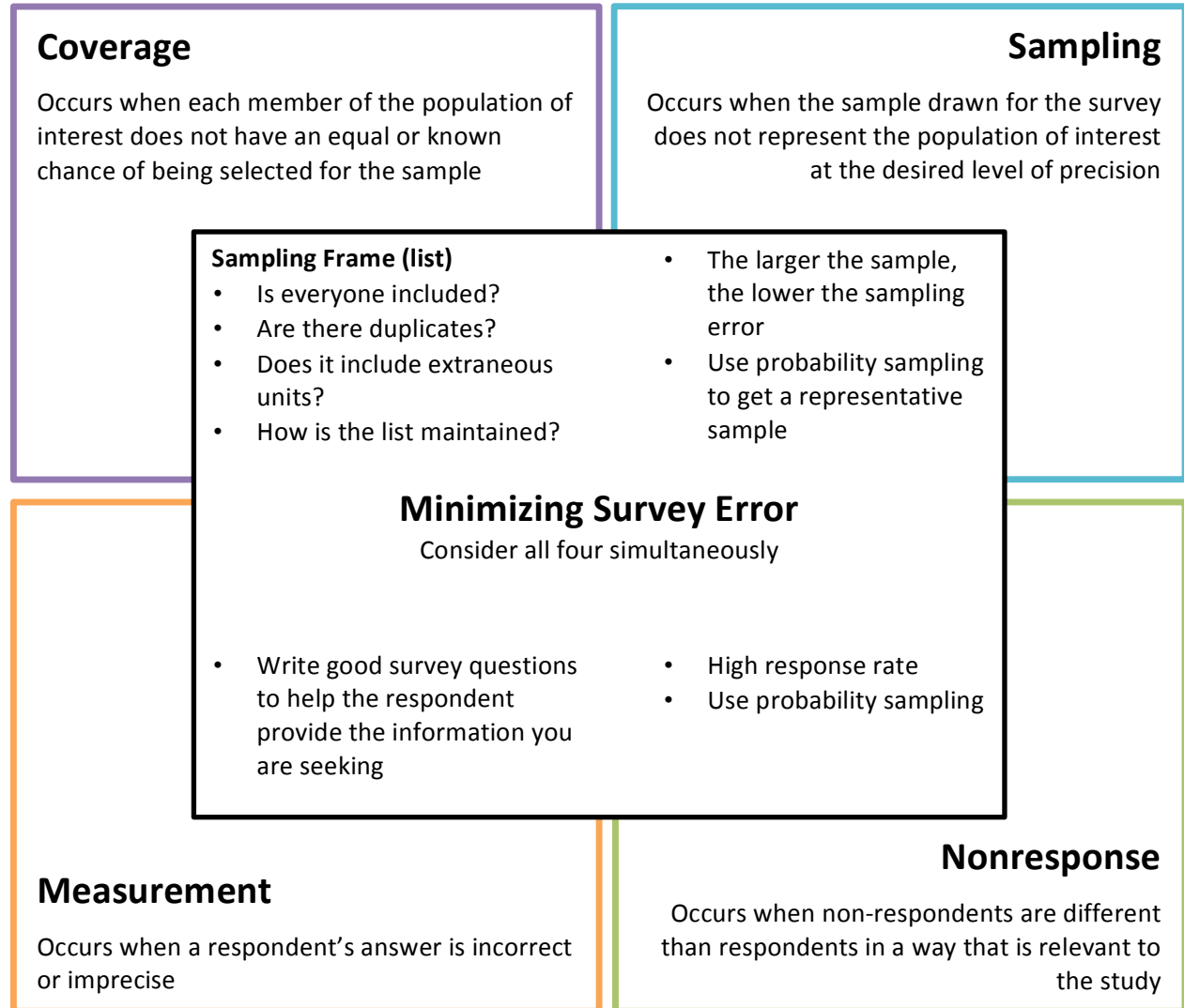
Urdan, T. C. (2005). *Statistics in plain english*. Mahway, NJ. Lawrence Erlbaum Associates.

SURVEY BASICS

Research Questions

Research questions clearly articulate what you intend to investigate and are the starting point for any research or assessment.

Four Sources of Survey Error



Glossary

- **Sample** – all units of the population that are drawn for inclusion in the survey
- **Sample frame** – the list from which a sample is to be drawn in order to represent the survey population
- **Probability sampling** – sampling method where all units in the population have an equal or known chance of being selected for the survey, produces the best chance for a sample that is representative of the population
- **Survey population** – all of the units (individuals, households, organizations) to which one desires to generalize the survey results

WRITING SURVEY QUESTIONS

Social Exchange Theory

Motivating people to respond

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- Use longer questions
- Use familiar words
- Load the question:
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 - Everybody does it
 - Assume the behavior
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- Provide anonymity

Communication – may not understand what the researcher expects and responds based on own understanding

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Examples

Use longer questions	Instructions to take your time and answer accurately
Thinking back to your first year of college, remember what it was like to arrive on campus for orientation. What were some of the cues that helped you feel welcomed here? For example, you might remember welcome signs, people greeting you as you arrived, people helping you move in to your residence hall room, elements of the orientation program, etc.)	In order for your answers to be most helpful to improve the preceptorial program, it is important that you try to be as accurate as you can. Please take your time to consider your answers and respond completely.

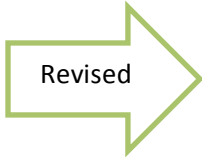
Load the question	
Assume the behavior: How many alcoholic beverages did you have in the past week?	Everybody does it: Many people drink alcohol in college, how many alcoholic beverages did you have in the past week?
<ul style="list-style-type: none"> • I didn't have any in the past week • 1-7 in the past week • 8-14 in the past week • 15-21 in the past week • 22-28 in the past week • 29 or more per week 	<ul style="list-style-type: none"> • I didn't have any in the past week • 1-7 in the past week • 8-14 in the past week • 15-21 in the past week • 22-28 in the past week • 29 or more per week
Use authority to justify the behavior: Over 30% of USD students report stress as one factor negatively affecting their academic performance. How many times in the last semester has stress negatively affected your academic performance?	Give reasons for undesirable behavior: Many students don't report sexual assault because they don't want anyone to know, they aren't sure if they were assaulted, they are afraid others won't believe them, and many other reasons. Have you been sexually assaulted since you've been at USD?
<ul style="list-style-type: none"> • Never • 1-3 times in the last semester • 4-6 times in the last semester • 7-9 times in the last semester • More than 10 times in the last semester 	<ul style="list-style-type: none"> • Yes • No • I am not sure

Be as specific and concrete as possible	
What is your class year?	Based on the number of units you completed as of the end of the fall 2013 semester, what is your class standing?
<ul style="list-style-type: none"> • First year • Sophomore • Junior • Senior 	<ul style="list-style-type: none"> • First year • Sophomore • Junior • Senior
Use familiar words and avoid jargon	
How many booths did you visit at the Bazaar?	How many student organizations did you talk with at the Alcalá Bazaar, the student organization fair?
<ul style="list-style-type: none"> • More than 10 • 7-9 • 4-6 • 1-3 • none • I didn't attend 	<ul style="list-style-type: none"> • More than 10 • 7-9 • 4-6 • 1-3 • none • I didn't attend

Avoid words that have multiple meanings

How often do you usually attend campus events?

- All the time
- Often
- Not much
- Never



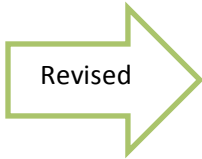
How many campus events did you attend in the last week?

- 3 or more
- 2
- 1
- I did not attend any campus events in the last week

Avoid double negative items

Do you agree or disagree that USD should not be a smoke-free campus?

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree



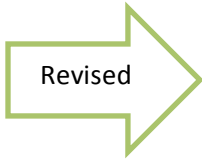
Do you agree or disagree that USD should become a smoke-free campus?

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Shorter questions are better

This question is trying to better understand how you find academic advising on this campus. Please indicate the extent to which you agree or disagree with the following statement. The academic advising I have received at USD has met my needs.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree



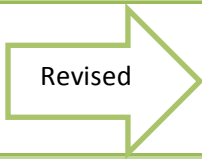
The academic advising I have received at USD has met my needs.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Use complete sentences with simple sentence structure

Where you live.

- On-campus
- Off-campus



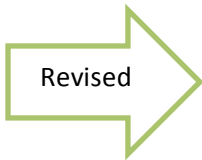
Where do you live during the academic year?

- On-campus
- Off-campus

Avoid leading or biased questions

Do you favor or oppose increasing the student fee to enable associated students' excessive spending on student programs?

- Strongly favor
- Favor
- Neither favor nor oppose
- Oppose
- Strongly oppose



Do you favor or oppose increasing the student fee to expand associated students' spending on student programs?

- Strongly favor
- Favor
- Neither favor nor oppose
- Oppose
- Strongly oppose

Avoid double barreled questions

How satisfied or dissatisfied are you with the social and educational events offered on campus?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied



How satisfied or dissatisfied are you with the social events offered by the Torero Program Board on campus?

- Very satisfied
 - Satisfied
 - Neither satisfied nor dissatisfied
 - Dissatisfied
 - Very dissatisfied
- Repeat question using "educational events"*