Designing & Conducting Survey Research

Santa Monica College
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Presented by:
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Office of Institutional Research
Workshop Overview

**Part I:** Overview of Survey Method

Paper/Pencil + Online Surveys:

**Part II:** Developing Effective Survey Questions

**Part III:** Administering the Survey

**Part IV:** Analyzing and Reporting Survey Results
Part I: Overview of Survey Method

Description of Survey Method

Survey method:
• Measurement process that involves asking questions of respondents
• Collecting information from a small number of people to be representative of a larger number of people (*sample survey research*)

Types of surveys:

**Questionnaire**
- Respondent completes
- Typically paper & pencil or online (web-based)

**Interview**
- Interviewer completes based on what respondents says
- Typically in person or via phone
Part I: Overview of Survey Method

*Selecting the Survey Method: Questionnaires*

Surveys typically collect three types of information:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Info about respondents</td>
<td>Income, age, math placement</td>
</tr>
<tr>
<td>Behavior</td>
<td>Info about respondents’ behaviors</td>
<td>Mode of transportation, academic dishonesty</td>
</tr>
<tr>
<td>Preference</td>
<td>Respondents’ opinions</td>
<td>Preference for study tool, satisfaction with program</td>
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</tbody>
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Part I: Overview of Survey Method

Selecting the Survey Method: Questionnaires

Is a paper and pencil survey the best tool to answer your research question?

<table>
<thead>
<tr>
<th>Paper &amp; Pencil (Questionnaire)</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Narrow, specific Qs</td>
<td>✓ Exploratory</td>
</tr>
<tr>
<td>✓ Quantify phenomenon</td>
<td>✓ Used when you don’t know what to expect</td>
</tr>
<tr>
<td>✓ Describe larger group</td>
<td>✓ Deeper understanding of phenomenon</td>
</tr>
<tr>
<td>✓ Generally, the “whats”</td>
<td>✓ Generally, the “whys” and “hows”</td>
</tr>
</tbody>
</table>

Selection should be driven by your research question/purpose
Exercise: Which method?

- How familiar are students with varying technology tools used in the classroom?

- How did faculty work together to develop the curriculum for ENGL 85?

- What do you like most and least about the Institutional Research department?
“There’s never an option that reflects exactly what I want to say.”
Part II: Developing Effective Survey Questions

**Basic Guidelines**

**Clarity:** Are the questions understood by the respondents? Are the response choices sufficiently clear to elicit the desired responses?

**Comprehensiveness:** Are the questions and response choices sufficiently comprehensive to cover a reasonably complete range of alternatives?

**Acceptability:** Should be appropriate in length; should not invade privacy of respondents

### Part II: Developing Effective Survey Questions

**Question Formats**

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
</table>
| Close-Ended   | • Fixed list of response choices  
• Ask respondents to select one or more of the choices as indicative of best possible answer | • Facilitates comparison across groups  
• Fixed list of possible Q choices make question more clearer & remind of choices they would have forgotten  
• Better for sensitive issues by implying acceptable category range | • Compel respondents to choose closest representation of actual response  
(Mitigate by providing “other”)  
• Ease of responding may increase carelessness |
| Open-Ended    | • Ask respondents to write in response                                      | • Able to track response choices respondent was not aware of                               | • Inconvenient  
• Requires a greater communication skills of respondents  
• Not easy to analyze |
Exercise: Change Question Format

1. How much is your annual household income?

2. How many abortions have you had?

3. Please indicate the sports you play in a typical year:
   a. Basketball
   b. Volleyball
   c. Swimming
   d. Soccer
Exercise: Change Question Format

How much is your annual household income?

Please indicate the range that best describes your annual household income:

- a. Less than $15,000
- b. $15,000 - $29,999
- c. $30,000 - $44,999
- d. $45,000 - $59,999
- e. $60,000 and above
Exercise: Change Question Format

How many abortions have you had?

How many abortions have you had?

a. None
b. One
c. Two
d. Three
e. Four
f. Five or more
Exercise: Change Question Format

Please indicate the sports you play in a typical year:

a. Basketball
b. Volleyball
c. Swimming
d. Soccer

e. Other, please specify: ____________________
Part II: Developing Effective Survey Questions

Guidelines for Phrasing Questions

EVERYBODY NOT IN FAVOR, TAKE ONE STEP BACK!
Part II: Developing Effective Survey Questions

Guidelines for Phrasing Questions

**Level of Wording**

- For community colleges, general rule of thumb is to use language at the 5th grade or lower
- Simple, straightforward, and to the point
- Avoid jargon, highly technical language, abbreviations
- Avoid double negatives

Example:

A. Have you or any member of your family been engaged in substance abuse during the past year?

B. Have you or any members of your family used illegal drugs during the past year?
Part II: Developing Effective Survey Questions

Guidelines for Phrasing Questions

Avoid Ambiguous Questions

☑ Be specific and straightforward

Example:
A. How many people live in your household?
B. Including yourself, how many people live in your household?
C. Which what ethnic group do you most closely identify?
D. Please indicate your race/ethnicity.
Avoid Multipurpose Questions

✓ Multipurpose questions may confuse the respondent by introducing two or more issues with the expectation of a single response

Example:
A. In the past semester, have you visited any of the counseling and tutoring centers?
B1. In the past semester, have you visited any of the counseling centers?
B2. In the past semester, have you visited any of the tutoring centers?
Part II: Developing Effective Survey Questions

Guidelines for Phrasing Questions

Avoid Biasing Words or Phrases

✓ Be neutral as possible, invite true Responses

Example:

A. You wouldn’t say you are in favor of the new costly health benefit plan, would you?

B. Please rate the extent to which you agree with the following statement:

“I am in favor of the new health benefit plan”
Part II: Developing Effective Survey Questions

Ordering of Questions

Follow:

- Natural sequence of time
- Most familiar to least familiar
- Avoid items that look alike
- Sensitive questions should be introduced in the middle of the survey
- End the survey with easy questions
Part II: Developing Effective Survey Questions

Response Choices

Categorical or nominal

Labels only; only for counting number of responses by response choice

• In a typical week, which of the following modes of transportation do you use to commute to campus?
  • Drive alone
  • Carpool
  • Motorcycle, moped, motorized scooter
  • Bicycle
  • Walk, skateboard, or other non-fuel
  • Public transportation (bus, train, etc.)
Part II: Developing Effective Survey Questions

Response Choices

Ordinal

Ranks categorical data but does not reveal specific measure of the amount of difference between response choices

• How old is your oldest child?
  • Infant
  • Child
  • Adolescent
  • Adult
Part II: Developing Effective Survey Questions

*Response Choices*

*Interval*

Labels, orders, and uses units of measurement that exactly describe the value of category

- How old is your oldest child?  
  _____ years of age
Part II: Developing Effective Survey Questions

Response Choices

When using interval ranges...

• The categories should be equal as possible in terms of their interval size
• Each category should contain a reasonable number of responses
• The boundaries of the categories should conform to traditional breaking points
Part II: Developing Effective Survey Questions

*Likert Scales vs. Yes/No*

In general, Likert scales give you more information than yes/no response choices

A. Is your student ID card swiped whenever you ride the Big Blue Bus?
   → Yes/No

B. How often is your student ID card swiped whenever you ride the Big Blue Bus?
   → Always, Very Often, Sometimes, Rarely, Never
**Part II: Developing Effective Survey Questions**

**Ordinal Scales Should Match the Question**

<table>
<thead>
<tr>
<th>Question</th>
<th>Scale</th>
</tr>
</thead>
</table>
| Please select the number which best corresponds to your feeling about the following statement: | 5 Challenging  
|                                                                          | 4                          |
|                                                                          | 3                          |
|                                                                          | 2                          |
|                                                                          | 1 Easy                     |
| “I found this course to be challenging.”                                  |                            |
| Please select the number which best corresponds to the extent to which you agree with the following statement: | 6 Strongly agree  
|                                                                          | 5 Agree                    |
|                                                                          | 4 Somewhat agree           |
|                                                                          | 3 Somewhat disagree        |
|                                                                          | 2 Disagree                 |
|                                                                          | 1 Strongly disagree        |
| “I found this course to be challenging.”                                  |                            |
Part II: Administering the Survey

Pre-Code Data

Example: 1 = Strongly Agree; 2 = Agree; 3 = Disagree; 4 = Strongly Disagree

Example:
High school or less = <HS
High school graduate = HS
Some college = SC
Four-year degree = BD
Graduate degree = GD
Part III: Administering the Survey

Invitation to Participation in Survey

In solicitation letter AND before actual survey:

✓ 1 or 2 sentences describing purpose or goal of survey
✓ Mention length of survey (managing expectations)
✓ Ensure that responses are confidential
✓ Ensure that participation is voluntary
✓ If anonymous, mention it!
✓ Provide contact information in the cases where students have questions about survey
✓ Describe when survey closes
✓ Thank you in advance
Response rates for mail out/email is approximately 15% at SMC.

Survey fatigue may negatively impact response rate.

Incentives may increase response rate.
Part III: Administering the Survey

Sampling

EMPLOYEE SATISFACTION SURVEY

WOW! I'VE GOT A CHANCE TO EXPRESS MY HEART...

Dil Se...

H.R.

ONLY SATISFIED EMPLOYEES SHALL TAKE UP THE SURVEY

nshrivastava2@gmail.com
Part III: Administering the Survey

Sampling

Purpose of sampling is to reduce the cost and resources to survey the entire population of interest.

Probability sampling:
Respondents were randomly selected to participate in the study. *Only studies using probability sampling can make an inference about the population from the sample data.*

Non-probability sampling:
Most common is convenience sampling which involves getting respondents that are easiest to reach to fill out the survey.

Self-selection bias:
Respondents who choose or volunteer to participate in the study may be inherently different than the population.

Non-response bias:
Respondents who choose not to respond may be inherently different than the population.
Part IV: Analyzing and Reporting Survey Results

“If at first you don't get the survey results you want on your first survey, get mad and tear it up.”

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Part IV: Analyzing and Reporting Survey Results

General Rules:
• Contain analyses to those (descriptive or statistical) that directly answer your research questions.

• Do not use “causal” statements (i.e., Supplemental Instruction causes students to be more successful in their courses) as non-experimental survey design does not provide data to support cause and effect claims.

• Use caution in interpreting data
  • For example, if used non-probability sampling, all you can say is “Of students who responded to the survey, 45% say they are satisfied with program services”