



UTM
UNIVERSITI TEKNOLOGI MALAYSIA



**Online
Learning**

Quantitative Research Design: Survey Research

**Adibah Abdul Latif | Aqeel Khan | Hee Jee Mei | Mahani
Mokhtar | Narina Abu Samah | Zainudin Hassan**

Survey Research

- Survey research involves **collecting data** to test hypotheses or to **answer questions** about **people's opinions** on some **topic or issue**.
- A survey is an instrument to collect data that describes characteristics of a population.

Survey Research

- A **sample survey** is designed to sample participants and generalize to a population.
- A **census survey** samples every member of the population.
 - Census surveys are generally done with small and accessible populations.

Survey Research Designs

Cross-Sectional Surveys

- Example: A study that examines the self-concept of all pre-service teachers at a given teaching college.
 - Data are collected from selected participants at a single point in time.
 - These studies provide a snapshot of current beliefs or opinions.
 - These survey studies are not intended to provide insight into trends or changes over time.

Survey Research Designs

Longitudinal Surveys

- Data are collected at two or more time points.
- One of the challenges when conducting longitudinal studies is attrition.

Survey Research Designs

Longitudinal Surveys

- There are several types of longitudinal survey designs.
 - **Trend studies** examine changes over time in a particular population defined by some trait.
 - e.g., female valedictorians

Survey Research Designs

- **Cohort studies** examine one population selected at a particular time period.
 - e.g., A researcher could study children that received speech and language support as first graders in 2007. She might examine some participants from the population in 2008 and then sample others from that population in 2010.

Survey Research Designs

- **Panel studies** involve the same sample of individuals over a set time.
 - e.g., A researcher might conduct a five-year panel study of the first class of law students at a new institution. He might survey them each spring for five years.
- **Follow-up studies** investigate change in a previously studied population.
 - e.g., A researcher might be interested in a follow- up study in 2015 of those participants involved in the cohort study of first-graders in speech and language support during 2007.

Conducting Survey Research

- Questionnaires are a written collection of survey questions answered by a group of participants.
 - Usually mailed or emailed
 - New technologies for on-line surveys (e.g., SurveyMonkey.com, Zoomerang.com, etc.)
- Interviews are oral, in-person question and answer sessions between the researcher and a respondent.

Conducting a Questionnaire Study

- Stating the problem
 - Participants are more likely to respond to questionnaires that they perceive address a sufficiently relevant topic or problem.
 - Researchers should set objectives for the type of information desired from a questionnaire.

Conducting a Questionnaire Study

- Most surveys include one of two types of items.
 - Structured items or closed-ended items for which participants choose among possible responses (e.g., Likert scale).
 - Unstructured items in which participants have freedom of response (e.g., fill-in answer).

Conducting a Questionnaire Study

Guidelines to consider when constructing a questionnaire:

- Include only items that relate to the objectives of the study.
- Focus each question on a single concept.
- Collect demographic information.

Conducting a Questionnaire Study

- Define terms.
- Include a point of reference or comparison for participants.
- Avoid leading questions.
- Avoid sensitive questions to which respondents might not answer honestly.
- Don't ask a question that assumes something that may not be true.

Conducting a Questionnaire Study

- Organize items from general to specific.
- Have others read your instrument and provide feedback.
- Write directions for the respondents.
- Include the purpose of the study at the top of the instrument.
- Pilot test the questionnaire.

Conducting a Questionnaire Study

- Pilot testing the questionnaire
 - Pilot test with members of the intended sample population.
 - Ask respondents to make suggestions for any content to add or to delete.
 - Incorporate feedback from your pilot administration and make any appropriate changes.

Conducting a Questionnaire Study

- Preparing the cover letter
 - Cover letters should accompany all surveys.
 - Cover letters should be brief.
 - Cover letters should be addressed to a specific person.
 - The cover letter should explain the purpose of the study.

Conducting a Questionnaire Study

- Preparing the cover letter
 - The cover letter should include a statement regarding the importance and significance of the study.
 - The cover letter should include how results from the study will be shared with respondents and interested others.
 - Pilot test the cover letter.

Administering the Questionnaire

- Selecting participants
 - Appropriate sampling strategies should be followed.
- Distributing the questionnaire
 - Email
 - Mail
 - Telephone
 - Personal administration
 - Interview

Mail

Advantages

- Inexpensive
- Can be confidential or anonymous
- Standardized items and procedures
- Easy to score most items

Disadvantages

- Response rate may be small
- Cannot follow up items
- Response sets possible
- Limited to those who read

Response set: A pattern of a participants response to questions on self report measure that is not related to what is being asked or the capacity of the question being asked.

E-Mail

Advantages

- Easy to target respondents
- Quickly administered
- Inexpensive
- Can be confidential or anonymous
- Standardized items and procedures
- Easy to score most items

Disadvantages

- Not everyone has email
- Multiple replies from same participant possible
- Response rate may be small
- May get sorted to trash
- Cannot follow up items
- Response sets possible
- Limited to those who read

Response set: A pattern of a participants response to questions on self report measure that is not related to what is being asked or the capacity of the question being asked.

Telephone

Advantages

- High response rates
- Quick data collection
- Can reach a range of locations and respondents
- Can use 800 call in numbers to increase response rates

Disadvantages

- Requires phone number lists
- Difficult to get in-depth data
- Administrators must be trained
- Cost
- Cell phones versus landlines

Personal Administration

Advantages

- Efficient when respondents are in close proximity
- Personal connection with respondents

Disadvantages

- Time consuming
- Training
- Cost
- Personal connection with respondents

Interviews

Advantages

- Can follow-up responses and probe for additional information or clarity
- May be recorded
- Response rate
- Personal connection with respondents

Disadvantages

- Time consuming
- Training
- Cost
- Interviewer bias possible
- Unstructured data analysis
- Personal connection with respondents

Conducting Follow-Up Activities

- The higher the return rate the better your study.
- Low response rates limit generalizability.
 - Send out a reminder postcard to increase response rates.
 - Send out a second complete mailing to increase response rates.
 - Consider phone-call reminders to increase response rates.

Conducting Follow-Up Activities

- Response rates vary.
 - First mailings usually return about 30%-50%.
 - Second mailings add an additional 20%.
 - Most times additional mailings are not cost-effective.
- Researchers should try to determine possible reasons for nonresponse.
- Nonresponse may be at the survey or item level.
- Researchers should carefully look for patterns of nonresponse.

Tabulating Questionnaire Responses

- Use scannable answer sheets if possible.
 - Accuracy
 - Time
- Enter answers into spreadsheet or statistical package.
- Code open-ended answers.
 - Consider available qualitative software analysis packages. (NVIVO)

Analyzing Results

- Report total sample size.
- One way to report results from surveys is to share **overall percentage of return** and **response rates per item**.
 - e.g., Percentage that answered 'yes' and percentage that answered 'no'

Analyzing Results

- Alternative reports can include total scores or mean scores by cluster or area of a survey. Such as comparisons by participant characteristics.
 - e.g., Percentage of men or women with a particular response.
- Reports of survey studies will vary by the underlying purpose of the survey.

Thank you