

# Designing Reliable and Valid Surveys

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# Introduction

- Most surveys are designed for a specific project
- Goal of survey design is to maximize response rate
- Survey items come from project mission and goals AND research questions
- Survey design developed along with sampling methods to facilitate collecting minimal but sufficient data to generalize from sample to population
- Many of the following recommendations apply to designing all instruments including interviews

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## Tasks for Survey Design

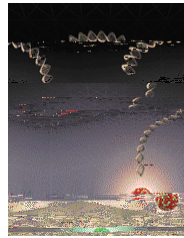
1. Develop goals and research questions
2. Choose data collection method – *Is surveying the best method?*
3. Outline topics and draft items
4. Choose response formats
5. Write and edit items
6. Determine sequence of items
7. Determine physical characteristics of the survey
8. Review and revise the survey
9. Pilot test and revise the survey
10. Administer the survey
11. Analyze the data and report the results

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## **Task #2 Choose Data Collection Method**



## **Choose Data Collection Method**

- **Is surveying the most appropriate method to answer your research questions?**
- **Would interviews or focus groups be better?**
- **If surveying is the best method, will it be a mailed survey, telephone survey, e-mail survey, or Web-based survey?**

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# Task #3

## Outline Topics and Draft Items



## Outline Topics and Draft Items

- What topics need to be covered to answer the research questions?
- What items will fully address these topics?
- Do not include topics or items that are merely “interesting to know”
- Draft reliable and valid items
- Six types of items (Patton, 1990, pp. 290-291):
  - Experience / Behavior Questions
  - Opinion / Values Questions
  - Feeling Questions
  - Knowledge Questions

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## **Outline Topics and Draft Items**

- **Draft reliable items**
  - Will respondents interpret the item in the same way on another day?
  - Will the item be interpreted in the same way by all respondents?
  - Will the item be interpreted by the respondents in the way you have intended?
- **Draft valid items**
  - Will the item elicit the information you want?
  - Will the item elicit accurate and relevant data?
  - When you know the answers to these items will you know the answers to your research questions?

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## **Draft Reliable and Valid Items**

- **Work in small groups to draft questions for a retention survey to answer the research questions previously developed**
- **No need to think about response formats yet**
- **Use tips for drafting reliable and valid items on the following 3 slides**

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## **Task #4 Choose Response Formats**



### **Choose Response Formats**

- **Will the responses be open-ended or closed?**
- **How will the data be loaded into the computer?**
- **How will the data be analyzed?**

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# Choose Response Formats

- **Open-ended response formats:**
  - Allow respondents to express their own views in their own ways
  -

## **Add Response Formats to Previously Drafted Questions**

- **Work in small groups to add formats to the questions you drafted**
- **Refer to the tips for designing closed question formats on the following 4 slides**
- **You may have to edit some of your questions to match your response formats**

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## **Choose Response Formats**

- **Closed Question Formats:**
  - **Tips for designing closed question formats:**
    - **Use 3-5 categories on a rating scale (SA --- SD)**
    - **Write mutually exclusive response options**
    - **Supply enough categories for every conceivable response**
    - **Use “don’t know” when some respondents will not know**
    - **Balance scales between positive and negative responses**
    - **Label midpoint accurately (neutral; neither agree not disagree) or do not use midpoint (forced choice)**
    - **Arrange responses vertically**
    - **Repeat response formats at the top of each page**
    - **Do not change response formats too frequently but do change occasionally**

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# Choose Response Formats

- **Closed Question Formats:**
  - **Tips for designing closed question formats:**
    - Specify how respondents should answer fill-in-the-blank items (e.g., “What is your age?” \_\_\_\_\_ years)
    - Items for rating scales must be stated positively or negatively
    - Items for rating scales must avoid asking two questions that may have different ratings
    - Should respondents choose one response or all that apply?
    - Use SA / A / D / SD rather than 1 / 2 / 3 / 4
  - **Tips may be modified depending on whether the survey is administered as a paper and pencil survey, or uses**

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