Writing Questionnaire Items

- Open-ended items
- Partially open-ended items
- Closed (Restricted) items
  - Provide a choice for all potential responses
  - Response choice should not overlap
    - Wrong: AGE 5 - 10 10 - 15 15 - 20
    - Right: AGE 5 - 9 10 - 14 15 - 19
- Rating Scales
  - Likert-type scales
  - Rank order responses

Likert-type Scales

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

- Label the endpoints only
- Label endpoints and middle
- Label every point on the scale

1 2 3 4 5

SD D N A SA
Non-Verbal Variants of Likert-type Scales

Guidelines for Writing Questionnaire Items

- Keep the wording simple
  - Consider the language skills of respondents
  - Avoid abbreviations and jargon
  - Avoid tasks that are too demanding
- Avoid making assumptions about the respondent's knowledge
  - Do you agree with the mayor's philosophy of government?
- Questions about sensitive topics must be worded carefully – avoid biased wording
Guidelines for Writing Questionnaire Items

- Avoid ambiguous questions
  - State questions precisely
  - Be as specific as needed to answer your question

- Response options should be precise
  - VAGUE: frequently, several, seldom, usually
  - PRECISE: once a week, once a month, twice a day

- State questions in concrete terms
  - ABSTRACT: Did you enjoy the book?
  - CONCRETE: Would you recommend the book to a friend?

- Negative constructions are confusing and should be avoided
  - POOR: He did not disagree with the suggestion
  - BETTER: He agreed with the suggestion

- Avoid double-barreled questions
  - Should adolescents be allowed to choose their own friends and drink on weekends?

- Each question should ask only one thing
  - Should adolescents be allowed to choose their own friends?
  - Should adolescents be allowed to drink on weekends?

- Avoid leading questions
  - Given that fact that installing scrubbers at utility plants could increase electric bills by 20%, do you believe the Clean Air Act should be strengthened, weakened, or left alone?

- Avoid loaded questions (using emotionally-charged words)
  - Do you believe the Federal government wastes money?

- Use a neutral wording to avoid creating response biases
Guidelines for Writing Questionnaire Items

- Loading can occur in subtle ways
  - Would you vote for Dr. John Smith?
  - Would you vote for John Smith?
  - How fast were the cars going when they touched each other?
  - How fast were the cars going when they collided?
  - How fast were the cars going when they smashed into each other?

Ordering Items on a Questionnaire

- The first questions set the tone for later questions
- Best order might depend on mode of administration
  - Paper and pencil: Begin with questions that capture the respondent’s interest
  - Interviews: Begin with simple questions that give the respondent something easy to answer (a sort of “small talk” to establish rapport)

Ordering Items on a Questionnaire

- Funnel Questions
  - General questions
  - Specific questions
- Filter Questions
  - Shorten length of questionnaire by directing respondents to skip to another section based on their response
  - Do you own a dog?
    - If no, skip to question 17; if yes, complete the following questions:
Administration

Mail surveys
- Non-response bias
- Provide incentives to respond
- Follow-up reminders and duplicate questionnaires

Internet surveys
- Who has access to the internet (sampling bias)
- Control of the number of times an individual responds
- Are the respondents who they claim they are?

Telephone surveys
- Answering machines, cell phones, unlisted numbers

Administration

Group Administration
- Convenience of sampling many people at one time
- Will respondents take the questionnaire seriously?
- Potential loss of anonymity
- Potential for coerced participation

Face-to-face interviews
- Potential to clarify misunderstandings
- Added effects of the social interaction between interviewer and respondent (experimenter effects)

Reliability

Test-retest reliability can be assessed for measures of stable attitudes

Split-half reliability for single-administrations
- Only suitable if questions can be randomly divided and still make sense as a measure
- KR-20 looks at the average of all possible split-half correlations for a given set of items
Increasing Reliability

- Increase the number of items
  - More items provide a larger sample of responses
  - Assumes all items are intended to measure the same thing
  - Too many items can undermine motivation
- Standardize procedures for administration
- Standardize scoring procedures
- Write questionnaire items carefully

Sampling Issues

- Representative Samples
  - Sampling error – distortions in sample due to random processes in sampling procedure
  - Sampling bias – distortions in sample due to non-random processes
    - Systematically exclude some members
    - Systematically include some members

Sampling Techniques

- Simple Random Sampling
  - With replacement
  - Without replacement
- Stratified Sampling
  - Divide population into well-defined strata
  - Randomly sample within strata
  - Size of each sample might depend on characteristics of the strata sampled
    - Larger n for more variable strata
    - Consideration of cost of sampling each individual
Sampling Techniques

- **Proportionate Sampling**
  - Identify categories of individuals in population
  - Match proportion of each category in the sample to its proportion in the population

- **Systematic Sampling**
  - Sample every kth element

- **Cluster Sampling**
  - Identify natural clusters in the population
  - Classrooms, blocks of a neighborhood, households, etc.
  - Randomly select clusters
  - Survey all members of the cluster