Are you asking the right questions? Strategies for writing better survey questions

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Available at: https://works.bepress.com/ldlong/34/
Questionnaire Development

Are you asking the right questions in the right way?

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Modified slides available at: works.bepress.com/ldlong/34
Case Study: Assessing Orientation Tours

How useful was the Neighborhood Engagement Center information provided in helping you feel confident about being successful?

☐ Very useful  ☐ Somewhat useful  ☐ Not at all useful

What areas did you tour that would assist with your transition and academic success? (check all that apply)

☐ study areas  ☐ student rooms  ☐ engagement center  ☐ dining rooms

While on tour, did you learn about the role the RA and Graduate live-in staff have in fostering safe, supportive communities and assisting in learning and personal growth?

☐ Yes  ☐ No

Context: Example of three survey questions that someone developed for an assessment of student/parent perceptions of the residence hall tour program during new student orientation. What are the limitations of these questions?

At the end of this session, you should know what the limitations are and how you might improve the questions.
Learning Outcome

As a result of this program, participants will be able to:

- Identify at least five typical errors in questionnaire development
- Write survey questions with improved face-validity
- Assess the quality of their survey questions
Writing Survey Questions

- Quantitative Research
- Question Structure
- Principles for Writing Survey Questions
- Assessing Survey Questions
- Activity
Is Survey Research Appropriate?

Is there a relationship between on-campus living and student learning?

What percentage of conference guests were satisfied with their stay?

Is there a difference in resident satisfaction by room type?

**Keywords:**

difference, relationship, percentage

If you are interested in studying experiences and perceptions, qualitative approaches might be more appropriate.
## Quantitative Data Analysis

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<tr>
<th>Continuous</th>
<th>Ordered</th>
<th>Nominal</th>
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<tbody>
<tr>
<td>Mean, Median, Mode</td>
<td>Median, Mode</td>
<td>Mode</td>
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<tr>
<td>T-test (2 groups)</td>
<td>Cliff’s delta</td>
<td>Chi-Squared Test</td>
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<tr>
<td>ANOVA (3+ groups)</td>
<td>Rank-based ANOVA</td>
<td>Configural Frequency Analysis</td>
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<td>Correlation Analysis</td>
<td>Logistic Regression</td>
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<td>Regression Analysis</td>
<td>Caution – Using the following methods with ordered data might violate procedural assumptions:</td>
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Note: Most introductory stats courses only teach these analyses

This table is not exhaustive
Reliability and Validity

**Reliability:** Are measures repeatable/consistent?

**Validity:** Does the instrument measure what it is supposed to measure?
Validity

Research suggests that self-reported data are likely to be valid under five conditions:

1. The information is known to respondents;
2. The questions are phrased clearly and unambiguously;
3. The questions refer to recent activities;
4. The respondents think the questions merit a serious and thoughtful response; and
5. Answering the question does not threaten, embarrass, or violate the privacy of the respondent or encourage the respondent to respond in socially desirable ways.

(Kuh, 2001; Pike et al., 2012)
## Validity

### Class level:

- [ ] Freshman
- [ ] Sophomore

First-year students with sophomore standing might select “sophomore”
Question Structure

What format should you choose?
Question Structure

- Three main questions types:
  - Open-ended
  - Closed-ended, ordered
  - Closed-ended, unordered
Question Structure

- Open-ended
  - May solicit short and long responses
  - Answers are qualitative in nature

How can this presentation be improved?

By providing line space one can indirectly inform people how long their response should be
Question Structure

- Closed-ended, ordered
  - Use ordered categories
  - Likert scale

To what extent do you agree or disagree with the following statement.
“My leadership skills improved as a result of living on-campus.”

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree
- No Opinion
Question Structure

- Closed-ended, unordered
  - Respondents must compare responses
  - Creating the categories can be challenging

What is your favorite educational program?

- Diversity 101
- Sharpening your Leadership Skills
- Selling your RA Experience in an Interview
- Other
- I don’t have a favorite educational program
- I haven’t attended an educational program
Writing Survey Questions

Steps:
1. Identify the purpose of the assessment
2. Brainstorm potential questions
3. Select the questions that are most relevant
4. Revise the questions
5. Create the survey
6. Pilot/test the survey
7. Revise the survey
Writing Survey Questions

Step 1: Identify the purpose of the assessment

“Begin with the end in mind.”
What do you want to do with the results?
How will you analyze/report the results?
What are the potential implications?
Writing Survey Questions

**Step 2:** Brainstorm potential questions

Potential References:
- Council for the Advancement of Standards in Higher Education (CAS) standards – www.cas.edu
- Departmental learning objectives
Writing Survey Questions

Example of Using CAS:

**Effective Communication**

Examples of achievement indicators

Writes and speaks coherently and effectively; Expresses oneself effectively through a variety of media; Able to respectfully disagree; Writes and speaks after reflection...


**To what extent has living in a residence hall enhanced your ability to write effectively?**

To what extent has your involvement in a student organization increased your ability to...
Writing Survey Questions

**Step 3:** Select the questions that are most relevant

Questions to ask yourself:
- Does the question help you change something?
- What would you do if you got a low score?
- What would you do if you got a high score?

- *Were you satisfied with the leadership retreat?*
- *What resources did you learn about on your residence hall tour?* (check all that apply)
Writing Survey Questions

Step 4: Revise the questions

Step 5: Create the survey

Step 6: Pilot/test the survey

Pilot – Have group of people complete the survey
Focus Group – Have small group talk through the survey (content, questions, responses, interpretations, etc.)
Cognitive interview – 1-on-1 interview about survey

Step 7: Revise the survey

PILOT THE SURVEY
Principles for Writing Questions

- Dillman (2007) provided 19 principles
- The principles may be contradictory – choose the best option
Principles for Writing Questions

- Avoid bias from unequal comparisons

Which entrée do you like the most?

- Our tasty chicken parmesan
- Beef stew
- Tuna casserole

Most people would choose the first option. Ensure your response options are comparable and not biased.
Principles for Writing Questions

- State both sides of attitude scales in the question stems

  Do you agree Ball State should have a smoking ban?

  To what extent do you agree that universal health care should be afforded to everyone?

“Do you agree or disagree Ball State should have a smoking ban?”
Principles for Writing Questions

- Develop response categories that are mutually exclusive

**How many times do you visit the library per week?**

- □ 0
- □ 1-3
- □ 3-5
- □ 5-7

If I visit the library three times per week, should I select the 2\textsuperscript{nd} or 3\textsuperscript{rd} option?
Principles for Writing Questions

- Avoid asking respondents to say yes in order to mean no

Do you disagree with the following statement: “Eating McDonald's every day is good for you.”

☐ Yes
☐ No
Principles for Writing Questions

- Avoid double-barreled questions

  Do you believe students who live on-campus are more involved and more academically proficient than their peers who live off-campus?

  - Yes
  - No

Split the questions into two questions
Assessing Survey Questions

- Dillman (2007) provided eight questions to ask oneself to assess the quality of survey questions
Assessing Survey Questions

1. Does the question require an answer [from every participant]?
   
   If you watched the Academy Awards, how well did you like the host?
   
   □ Very much □ somewhat □ not much □ not at all

2. To what extent do survey recipients already have an accurate, ready made answer for the question they are being asked to report?

   How many siblings do you have? ______ siblings

Question 1: Consider adding “I did not watch the awards ceremony”

Question 2: These questions are easy to answer and generally provide solicit accurate responses
### Assessing Survey Questions

3. Can people accurately recall and report past behaviors?

   **How often did you engage in community service last spring?**
   - [ ] frequently
   - [ ] often
   - [ ] seldom
   - [ ] never

4. Is the respondent willing to reveal the requested information?

   **Have you ever filed bankruptcy?**
   - [ ] Yes
   - [ ] No

Question 3: Responses may be inaccurate because people are unable to remember.

Question 4: One may have to use a different method (i.e. phone interview, internet survey, etc.)
Assessing Survey Questions

5. Will the respondent feel motivated to answer each question?
   - Survey that looks overwhelming
   - Can be a problem with open-ended questions

6. Is the respondent’s understanding of response categories likely to be influenced by more than words?
   - Placement of response categories
   - Response to other questions
Assessing Survey Questions

7. Is survey information being collected by more than one mode?

8. Is changing a question acceptable to the survey sponsor?

Question 7: Different methods may solicit different responses. One may have to revise questions when doing mixed-mode.

Question 8: If you are doing a longitudinal study you may not be able to change the questions. Ask!
Activity

How can the following survey questions be improved?
Activity

What is your class standing?

- [ ] 1st-year undergraduate
- [ ] 2nd-year undergraduate
- [ ] 3rd-year undergraduate
- [ ] 4th-year undergraduate

5th-year students are left out
Activity

8. How many Greek organizations do you believe are represented on Washburn’s campus?
   - 6  - 11  - 17  - 23  - 31

9. How many sororities do you believe are represented on Washburn’s campus?
   - 2  - 7  - 8  - 9  - 13

10. How many fraternities do you believe are represented on Washburn’s campus?
    - 4  - 7  - 10  - 14  - 20

What if you don’t know?
Will participants try to mathematically figure it out?
Activity

On average, how many hours per week do you commit to service?

- 0 hours
- Less than 5 hours
- 5 – 10 hours
- 11 – 15 hours
- 16 – 20 hours
- 21 or more hours

The first two options both include “0” as a possible response
Activity

Do you believe that Greek students at Shippensburg “party” more than non-Greek students?

☐ Yes
☐ No

Do you believe Greek students at Shippensburg consume alcohol more, about the same, or less than non-Greek students?

Greek students consume alcohol:
- More
- About the same
- Less
Things we didn’t discuss

- Formatting the questionnaire
- Sampling
- Marketing the survey/getting people to respond
- Analyzing the results
- Reporting the results

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