Questionnaire Design

BUS 230: Business Research and Communication

1 Introduction

1.1 Goals and Learning Objectives

Goals and Learning Objectives

- Goals of this chapter:

    - Identify survey questions / variables needed to answer a research question.

    - Understand benefits and problems with open ended and fixed-alternative questions.

    - Be able to phrase questions to limit respondent bias.

    - Be able to order questions to limit respondent bias.

- Learning objectives:

    - LO2: Recognize and use the appropriate techniques to collect or use survey data to address a research problem.

    - LO2.C: Identify sources of respondent and administrative error and develop the ability to construct and administer a survey instrument that minimizes these errors.

1.2 Basic Principles

Basic Principles

1. What should be asked?

2. How should questions be phrased?

3. How should questions be sequenced?

2 What should be asked?

2.1 Variables

What should be asked?

- Get data on relevant outcome variables.

- Get data on background variables and other explanatory variables.

- Example: Living on campus and academic performance

    - Outcome variables: semester GPA, cumulative GPA, frequency using campus resources, extra curricular activities.

    - Relevant explanatory variables: high school GPA, parents' income, year in school.

- Be careful not to ask too many questions! This can decrease response rate.

2.2 Open-ended Questions

Open-ended Questions

- **Open-ended questions** can serve uses that fixed alternative questions cannot:

    - How can service be improved?
    - Viterbo might want to ask: What Viterbo community events are you aware of?

- Can get deeper answers, reasoning behind answers.

- Useful for exploratory research, though not exclusively.

- Responses can be grouped together into categories after data has been collected.

- Might be useful to even count number of responses to a particular question.

Problems with Open-Ended Questions

- Greater chance for respondent biases.

    - *Average person effect:* individual may not want to give a response he or she may expect is unusual.

    - *Social desirability effect:* individual may give untrue responses to demonstrate he or she cares about an issue.

    - *Acquiescence bias:* individual may give a response to placate the interviewer.

- Questions and/or expectations for answers may be unclear.

- Less anonymity: face-to-face, hand writing, or even choice of words or reasoning can expose respondents.

2.3 Fixed Alternative Questions

Fixed Alternative Questions

- **Fixed-alternative questions:** questions where the interviewer provides only a limited number of answers to choose from.

- Simple dichotomous questions: respondent must pick one and only one of two possible alternatives.

  - Have you attended any UW-L varsity athletic sporting events in the last year? **Yes** □   **No** □

- Determinant-choice questions: respondent chooses one and only one choice from 3 or more options.

- What is your current academic status?

  □ Freshman (undergraduate degree seeking / less than 30 credits accumulated) □ Sophomore (undergraduate degree seeking / 30 or more credits and less than 60 credits accumulated) □ Junior (undergraduate degree seeking / 60 or more credits and less than 90 credits accumulated) □ Senior (undergraduate degree seeking / 90 or more credits accumulated) □ Undergraduate Non-degree seeking. □ Other

Avoid Problems with Determinant Choice Questions

- Don't force invalid responses: make sure your choices are **totally exhaustive**.

- Make sure the correct choice is clear:

  - Make sure wording is sufficient and appropriate (notice definitions about college year)
  - Make sure choices are **mutually exclusive**.

- Impossible for respondents to explain, clarify, or qualify an answer:

  - Do you think women should be able to legally get an abortion? Yes / No.

Frequency Determination Questions

- **Frequency determination questions:** Questions which ask for how often some occurrence generally happens.

- How often do you study for your classes, besides completing homework assignments?

  □ One ore more times every day. □ 4-6 times per week □ 2-3 times per week □ Once per week □ One or two times per month. □ Less than one time per month.

- Look out for:

  - Should you expect frequency to be constant, or does it change by season, semester, etc?
  - Is it reasonable to suppose respondent can accurately recall frequency, according to your scale?
  - Make sure scale is totally exhaustive and mutually exclusive.

Checklist Questions

- **Checklist question:** fixed-alternative question that allows respondent to provide multiple answers to a question.

- Please check which of the following sources of media you use at least twice per week, if any:
  □ Facebook. □ Network television. □ Cable television. □ *La Crosse Tribune.*

- Offers more flexibility than other fixed-alternative questions.

Questionnaire Accuracy

- Write questions that generate accurate answers.

- Questions should have answers that are easy to recall.

- Be careful with questions regarding quantity or frequencies: make sure it is reasonable for respondents to accurately report these.

- Do the following questions have accuracy problems? How would you fix it?

  - How many hours per week do you usually study?
  - How many hours do you spend each week on Facebook?
  - How many hours per week do you skip classes?
  - How many credits are you taking at UW-L during Fall 2011?

Ordinal Scales

- **Ordinal scales:** Responses to a question that have a natural order/ranking.

- Common attitude scales:

    - Strongly agree, Agree, Disagree, Strongly disagree.
    - Very satisfied, somewhat satisfied, somewhat dissatisfied, very dissatisfied.

- Common quality scale:

    - Excellent, Very Good, Fair, Poor

- Avoid ambiguous frequency scales:

    - Always, Often, Occasionally, Rarely, Never

Using Ordinal Scales

- Avoid neutral responses (neutral response bias).

- Use no-answer responses if appropriate: no opinion / don't know.

- Limit number of choices to ensure an accurate response.

- Use words, not meaningless numbers (1-10 scales).

3 Phrasing Questions

3.1 Loaded and Leading Questions

Phrasing questions

- Avoid **leading questions:** questions that lead the respondent to a particular conclusion.

- Avoid **loaded questions:** questions that suggest a socially desirable answer, or questions or answers that are emotionally charged.

- Examples:

    - Should foreign-born terrorists caught and held in United States detainment facilities be given the same legal rights as U.S. citizens?
    - Do you believe it is acceptable for the United States to detain potentially innocent battlefield detainees without legal representation and interrogate them by means that violate the Geneva Convention against torture?
    - Do you believe the presumption of innocence should apply to suspected enemy combatants.

3.2   Ambiguous Phrasing

Avoid Ambiguity

- How often do you read your local newspaper or popular national newspapers such as the *Wall Street Journal* or the *New York Times*? ☐ Frequently   ☐ Occasionally   ☐ Hardly Ever   ☐ Never

    – Where is the line between frequently and occasionally?
    – Does the *New York Post* count as a "popular national newspaper?"

- How many car repairs did you do in the last year?

    – Do yourself or take to a mechanic?
    – Per-car, or for all the cars you owned?
    – Repairs you made for other people?

- How would you rate your experience at UW-L?

    – What about the experience? Quality of education? Friendliness of faculty and staff? Extra-curricular experience?
    – For an "overall" question, ask something more specific and meaningful, "Would you recommend UW-L to a friend or family member?"

3.3   Explicit and Implicit Assumptions

Explicit and Implicit Assumptions

- Avoid questions that make assumptions:

    – Should General Electric continue to pay its stockholders its outstanding quarterly dividends?   Yes/No
    – The researcher made an assumption for the respondent, that the respondent might not necessarily believe.

- Avoid questions that assume the respondents have thought about an issue, or have knowledge of an issue:

    – Should Cartwright Center change its name? Yes / No
    – Many respondents will answer, even though they have no prior opinion and no prior knowledge of the topic.

4   Question/Answer Sequencing

4.1   Examples

Question/Answer Sequence

- Sometimes the ordering of alternatives can influence which outcome people pick:

- Which candidate are you most likely going to vote for in the 95th Assembly Race: ☐Jill Billings, ☐Nick Charles, ☐Christine Clair, ☐David Krump.

- Often times the ordering of questions can influence the response to the questions that follow:

- How satisfied are you with the outside availability of your instructors at UW-L?

- How satisfied are you with the knowledge/expertise of your instructors at UW-L?

- How satisfied are you with the quality of your instructors at UW-L?

- How satisfied are you with the quality of academic technology at UW-L?

- How satisfied are you with the quality of academic resources at UW-L?

- How satisfied are you with the quality of your education at UW-L?

4.2   Sequencing Strategies

Sequencing Strategies

- **Funnel technique:** strategy of asking general questions before specific questions in order to limit question-sequence bias.

- Avoid bias by giving multiple alternative questionnaires that differ on order.

- **Filter question:** To eliminate bias caused by lack of knowledge or prior opinion, first ask questions that reveal the respondent's background on the topic, then proceed only if there is sufficient background.

    - Do you plan to vote in the upcoming Democratic primary election for the Wisconsin 95th Assembly seat?
    - Are you aware of existing arguments for and/or against changing the name of Cartwright Center?