Terrify your Enemies by Writing Highly Effective Survey Items

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Review from our previous session: Key lessons? Progress on bringing clarity to your survey’s purpose?
Let’s look at the survey I shared last week:
http://tinyurl.com/NDSUbad

What was your initial response to this survey?
Did you think it would produce accurate, usable responses?
Would you be likely to complete it if this were a real survey sent to you?
What were some of the issues you identified?
It can also be more subtle:

How frequently did you attend football games in the last year?
A. Never
B. One or two games
C. Three or four games
D. More than four games
What do you mean by “football?”

Football

OR

Football

OR
• I was in the band / dance team / yell squad, does that count as attendance, or should I only count times when I was a spectator?
• I went to a high school football game, does that count?
• I work concessions at the games, does that count?
• I went to part of six games – what should I mark?
• I tailgated but I didn’t actually go into the game, does that count?

...you won’t be able to address every alternative reading of a question, but note how easily they come up and how they can negatively impact the accuracy of your survey’s results!
Your Goals in Survey Item Development

Develop questions that all respondents will:

A. Interpret in the same way
B. Be able to respond to accurately
C. Be willing to answer (Dillman, 2000)
D. And are well-suited for the method of data collection
A. Interpret in the same way

- Includes literal translations (like in the photo)
- Cultural or ethnic “translation”
  - E.g., “football” vs. “football”
- Question ordering sometimes impacts interpretation
- Critical to test items before administration
B. Be Able to Respond to Accurately

• Many surveys ask respondents to do difficult or complicated calculations in their heads (e.g. “how many servings of vegetables did you eat on average last week? 1 serving is 1 oz. of vegetables)

• Tempting to ask things people cannot accurately remember (e.g., “how many hours last year did you spend folding laundry?”)

• Many people are bad at math – can you ask a simpler question and then do the calculation for them? (e.g., “how old are you” vs. “what year were you born”)

• Response options can bias or lead respondents to certain (inaccurate) answers (e.g., “is your level of depression below average?”)
C. Be Willing to Answer

- Did you cheat on your taxes last year?
- What do you think of your boss?
- Do you have HIV / AIDS?
- Please describe your sexual activity in the last year:
- Many people will find questions such as these (and even many less intrusive questions than these) objectionable and will refuse to answer
- Only ask if you must; if you must, find neutral language and ensure respondents feel responses will be confidential and their rights are protected
D. Well-suited to the Method of Data Collection

- Many electronic surveys will be completed on mobile devices
- Are you asking for long paragraphs of text?
- Are the items wide (requiring lots of horizontal scrolling)?
- Do you have a large number of items on each page (requiring lots of vertical scrolling)?
- Are the items accessible to persons with disabilities?
- Test your items on a range of devices and many supports available in Qualtrics (and other systems)
Selecting the Proper Question Format

- Multiple Choice
- Select all that apply
- True / False
- Ranking
- Open-ended / short answer
- Sliders
- Heat maps

**Choose carefully! There are implications for your analysis, the difficulty in answering, and how you can use results**
Multiple Choice

- Easy to score, generally easy to answer
- Can be scaled attitude questions (e.g. 1-5) or pick an option (e.g., select your favorite pizza delivery restaurant)
  - Suggest at least 5 scale points if you are trying to make the item continuous-like (6 – 10 even better)
- Can also be correct / incorrect (e.g., “what is the minimum GPA required for staying in good academic standing?”)
Select all that Apply

- People sometimes don’t

- If you have a long list, try to randomize the order in which they are presented (you can do this in Qualtrics)

- Do you want a little information about a large number of things (e.g. “Select all pizza restaurants you visited in the last year”) or a lot of information about a small number of things (e.g., “The most recent pizza I had from Pizza Hut was delicious” strongly agree – strongly disagree)?
  - (Select all that apply gives you a little information about a bunch of things)
Ranking

- Order these pizza restaurants from your most favorite to least favorite
- What happens when someone doesn’t know anything about one of the options? Can they leave it out? Or if someone doesn’t answer, does it record data?
- It can be difficult to analyze the results, often less clear than other types of questions
- Some drag-and-drop ranking tools are not accessible to persons with disabilities
Open-ended

- Make sure the amount of space you provide reflects the amount of space respondents need to provide an answer.
- How will you analyze the results?
- Often good practice to include at least 1 open-ended question (e.g., “Is there anything else you want to share about XXXX?”)
- People may not like typing long answers if they are completing the survey on a mobile device.
Other fancy-pants item types

- Can be tempting to play around with fancy item types, such as sliders, heat maps, other drag-and-drop tools
- People don’t see these types of items very often so it can take longer to administer
- May not be accessible to persons with disabilities – can you offer an alternative?
- Can limit your analysis choices
The Dirty Dozen: Good Practices in Item Writing
1. Use Complete Sentences and Simple Words

“The efficacy of this program’s ability to avoid obfuscation was:”

“Program efficacy:”

“The program’s requirements were clear.”
2. Use Precise (but not overly) Non-Overlapping Quantifiers

Please select the category that represents your current age

a. More than 26,297,400 minutes
b. 27,000,000 to 10,000,000 minutes
c. Less than 8,000,000 minutes
Please select the category that represents your current age:

a. More than 50 years old
b. 30 to 49 years old
c. Less than 30 years old

*Note the impact on your data analysis that are caused when you ask for age categories instead of actual ages!*
Please enter the year you were born:____

Even better, don’t ask and pull this information from the NDSU student record (or whatever data source you are using)
3. Avoid Double-Barreled Questions

“To what extent were the employees pleasant and the room temperature comfortable?”

If someone says “not at all,” do you fix the room temperature or the employees?

“To what extent were the employees pleasant?”

“Was the room temperature comfortable?”
4. Use Neutral Language

“I was highly engaged in my program.”

“The leader was excellent.”

Bias toward expecting the student to be engaged and the leader to be excellent (non-agreement is deviance)

“Please state your level of engagement in your program.”

“Please provide an overall rating for the leader.”
5. Align Question Stem with Response Categories

“How frequently did you miss scheduled program events?”

- Strongly agree
- Agree
- Do not know
- Disagree
- Strongly Disagree
“How frequently did you miss scheduled program events?”

▪ Never
▪ Sometimes
▪ Frequently

*Respondents might differ in what they think counts as “frequently”*
“How frequently did you miss scheduled program events?”

- Never
- Once or twice during the semester
- Three to four times during the semester
- Five or more
6. Be Careful with Placing “does not apply” and “Neutral” Categories

- **Does not apply** = do not know / cannot answer
  - Should be placed at the end of the scale
  - Try to avoid asking lots of questions that “do not apply”
  - Use survey logic to skip questions that don’t apply

- **Neutral** = middle opinion (between “agree” and “disagree”)
  - Belongs in the middle of the scale
7. Use an Equal Number of Positive and Negative Categories

“Please provide an overall rating for the program.”

▪ Excellent
▪ Above average
▪ Good
▪ Poor
“Please provide an overall rating for the program.”

▪ Excellent
▪ Good
▪ Mediocre
▪ Poor
8. Do respondents have a ready-made, accurate response?

“The content covered in this program was important to my future career.”

▪ May not have future career planned (or be very different between respondents)
▪ All respondents may not agree what “content” was in the course
▪ Hard to predict what will be “important” in the future
9. Write items that are culturally sensitive

“How much green-space should there be on campus?”

- One football field worth
- Two football fields worth
- Three football fields worth

*People not familiar with American football may not be able to contextualize the size of a football field*
10. Write questions that are respectful of diversity

- “Are you a man or a woman”?
- Transgender persons cannot answer this question and others may be uncomfortable with it
- Current guidance recommends asking the question in two separate questions if birth sex is important for your survey (otherwise use question #1 by itself)

1. What is your sex or current gender? (check all that apply)
   A. Male
   B. Female
   C. TransMale/Transman
   D. TransFemale/Transwoman
   E. Genderqueer
   F. Additional Category (Please specify): ____
   G. Decline to state

2. What sex were you assigned at birth?
   A. Male
   B. Female
   C. Decline to state

*From the Center of Excellence for Transgender Health*
Don’t ask questions, particularly questions that might make people uncomfortable, if you DON’T HAVE A CLEAR PURPOSE FOR USING THE RESULTS

For example, many surveys ask about sexual orientation as an automatic or default demographic variable when they have no real intent or need to ask such information based on the purpose of the survey.

-Doing this may lower your response rate, lengthens your survey unnecessarily, and could increase the level of risk for survey respondents.
11. Ordering Questions

- Would you alphabetize a grocery list? (Dillman, 2000)
- Group questions by topic and response categories (for ease of answering)
- Choose first question carefully
  - Interesting, apply to everyone, easy to answer
- Demographic questions go last
  - Better to pull these data from NDSU system (or whatever system you are using) if possible
- Watch out for order effects both of questions and response categories
1. How closely did you follow the events of the most recent political scandal?
   a) I followed it very closely
   b) I followed it somewhat closely
   c) I did not follow these events at all

2. How corrupt is our government?
   a) Very corrupt
   b) Somewhat corrupt
   c) Not at all corrupt

*People will likely answer more strongly on #2 if question #1 is asked first than if the questions were in the opposite order!
12. Most importantly

ALWAYS TEST YOUR SURVEY ITEMS WITH REPRESENTATIVES FROM THE GROUP YOU WANT TO SURVEY

Your enemies will be terrified by how accurate your surveys become and the quality of the inferences you can draw from your results
Activity

▪ Let’s fix/write some items!

▪ Work in small groups, share what you have so far, and let’s see what we can get done

▪ If you don’t have a sample to work on, you can always correct the “bad” survey we did at the start of the session
Next session:

Why would anyone ever respond to a survey? How can I get them to take my survey?

Strategies for ensuring a high response rate and using survey tools