Fielding a survey - A very short guide

Research Beyond the Lab: Open Science and Research Methods for a Global Engineer

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#1: Know What a Survey Can (Not) Do

Can:

- Gather (a lot of) data (e.g., ratings, frequencies, opinions)
- Provide standardized data (all respondents answer the same questions, allowing for consistent and comparable data)

Can Not:

- Capture the full complexity of human behavior (we’re irrational every now and then)
- Eliminate bias (e.g., social desirability bias, acquiescence bias, recall bias)

#2: Single-Subject Rule for Every Question

A concept borrowed from constitutional law: A survey question may deal with only one issue.

Good:

“On a scale of 1 to 5, where 1 is ‘very dissatisfied’ and 5 is ‘very satisfied,’ how satisfied are you with the speed of our online checkout process?”

Bad:

“How satisfied are you with our product’s price and customer service, and would you recommend it to a friend?”

Pro Tip: Assign the corresponding research question to each and every question. This helps you to see if the survey question (partially) allows you to answer your research questions.

#3: Diminishing Marginal Utility of Questions

- We all want to answer as many questions as possible (after all, you never know if you might need the information later), but please don't
- Survey fatigue is a big issue
- Be honest with yourself: Are you really going to analyze the answers afterwards?
- **Rule of thumb:** If you're not sure if you should include the question, don't include it.
- Also, respondents incur opportunity costs for taking the time to answer your questions. Make sure it's worth their time.

#4: Structure Your Survey (Visually)

- Work with groups, colors, sections, tabs, etc.

select_one yesno	apply_fertilizer	Did you apply chemical fertilizer in your maize field LAST YEAR?	Make sure to make clear the question refers to	K
begin_group	chemical_fertilizer_application	Chemical fertilizer application questions		
integer	n_bags_npk	How many bags of NPK did you apply last year?	Type -99 if the farmer didn't apply any NPK.	K
begin_group	npk	NPK		
integer	n_bags_npk_subsidized	How many of those were subsidised?		N
integer	price_bags_npk_nonsubsidized	How much did you pay for a full-priced bag of NPK?		K
integer	price_bags_npk_subsidized	How much did you pay for a subsidised bag of NPK?		K
select_one yesno	enough_bags_npk	Was this enough NPK to meet your needs?		K
integer	n_bags_npk_desired	How many bags of NPK would you have liked?		K
end_group	npk	NPK		
integer	n_bags_npk_buying_next_year	How many bags of NPK will you try to buy for the coming year?	Type -99 if the farmer doesn't know yet.	K
integer	n_bags_urea	How many bags of urea did you apply last year?	Type -99 if the farmer didn't apply any NPK.	K
begin_group	urea	Urea		
integer	n_bags_urea_subsidized	How many of those were subsidised?		N
integer	price_bags_urea_nonsubsidized	How much did you pay for a full-priced bags of urea?		K
integer	price_bags_urea_subsidized	How much did you pay for a subsidised bags of urea?		K
select_one yesno	enough_bags_urea	Was this enough urea to meet your needs?		K
integer	n_bags_urea_desired	How many bags of urea would you have liked?		K
end_group	urea	Urea		
integer	n_bags_urea_buying_next_year	How many bags of urea will you try to buy for the coming year?	Type -99 if the farmer doesn't know yet	K

#5: As Many Checks as Possible

- The more logical incoherences you can anticipate the better!

Example:

Survey Question 1: “What is your age?” [answer_q1]

Survey Question 2: “How many years have you been driving?” [answer_q2]

Logical Check: The response to [answer_q2] should not exceed the response to [answer_q1] minus the legal driving age in the respondents area.

Implementation: If [answer_q2] > ([answer_q1] - 18) (assuming 18 is the legal driving age), display an error message: *“Please correct your response. The number of years you have been driving cannot exceed your age minus the legal driving age.”*

#6: Open-ended Questions

- You can’t think of every possible option in close-ended question, so open-ended questions can be a good option
- However, more often than not, they tend to clutter your survey and since the data is unstructured, it is a lot harder to analyze
- Pro tip: You can include open-ended questions during a pilot (see Tip #8), see if there are answer options haven’t thought about and then include them in an updated close-ended question

#7: Think About Data Analysis Already

- Name variables consistently (e.g., firstword_secondword or FirstwordSecondword)
- Prefixes for groups (e.g., nutrition_item1, nutrition_item2, nutrition_outlook, nutrition_cycle)
- Use meaningful labels (e.g., “morning”, “noon”, “evening” instead of 1,2,3)

#8 Soft Launch Your Survey

- As much as you anticipate, you will only really know if your survey works once it’s out in the real world.
- Send it to friends and colleagues to test it.
- Ideally, you go through several iterations of soft launches before you field the actual survey.

#9: Provide the Full Package

- Don’t just publish the final analysis.

Publish Also...

- The raw data
- The questionnaire
- The sampling frame
- Additional files like photos or recordings if not
- The data processing files
- The analysis scripts

#Bonus: Cultural Sensitivity

- Ensure accurate translation by native speakers, not just literal translations.
- Avoid questions that may be considered taboo or offensive in certain cultures.
- Allow for diverse responses and avoid imposing Western-centric categories.
- Consider color symbolism, as colors can have different meanings in different cultures.
- Choose distribution methods that are accessible and culturally appropriate for the target population.