Survey Design for quantitative data collection

Starting shortly, Please wait!
Presented by the ActivityInfo Team

All in one information management software for humanitarian and development operations

- Track activities, outcomes
- Beneficiary management
- Surveys
- Work offline/online
The Webinar Series

- **23/4**: Survey Design for quantitative data collection
- **23/5**: Survey Implementation
- **27/6**: Survey Design and Implementation: Real life examples
Outline

01 The decision

02 Questionnaire development

03 Ethical considerations

04 Q/A session
The decision
Why do we implement surveys?

Evaluation

Accountability

Project Monitoring

Learning

Evidence Based decision making

The ToC, Results Framework and MEAL plan as cornerstones
Key principles

- Implement user-centred design
- Include “need-to-know” information
- Collect reliable information
- Adhere to ethical standards

Transform data into knowledge
When to perform a survey?

A survey questionnaire should:

- Have a clear objective
- Only collect data that cannot be found elsewhere
- Measure outcomes that have a reasonable chance of changing between baseline and the final survey.
Questionnaire development
Standards for questionnaire development

**Need to know information**

- ToC, Results Framework, MEAL plan
- Data analysis plan

### PMP

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### Research question

**How did attendees rate the event overall?**

1. Overall, how satisfied were you with the conference?
2. How useful was this conference compared to other conferences you have attended?

**What parts/aspects of the conference did attendees like the best?**

3. How would you rate the difficulty of the workshop?
4. Overall, do you think the conference provided too much, too little, or about the right amount of networking?

**What parts/aspects of the conference need to be improved?**

5. In general, how would you rate the food at the conference?
6. Do you feel the temperature in the conference building was too hot, too cold, or just right?
Standards for questionnaire development

Quantitative questions

<table>
<thead>
<tr>
<th>Question Type</th>
<th>Example</th>
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</thead>
<tbody>
<tr>
<td>Question</td>
<td>Response Example</td>
</tr>
<tr>
<td>Numerical</td>
<td>1. “How long have you been displaced?”</td>
</tr>
<tr>
<td>Two-option response</td>
<td>2. “Are there handwashing facilities at the latrine?” If no, skip Question 3 below.</td>
</tr>
<tr>
<td>Multiple choice</td>
<td>3. “Which handwashing resources are currently available at the latrine?”</td>
</tr>
<tr>
<td>Rating scale or Likert scale</td>
<td>4. Indicate the extent to which you agree with this statement: “My household has enough water to meet our household consumption needs.”</td>
</tr>
</tbody>
</table>

Field Testing

- Closed ended or numerical questions
- State the units used in each question
- Gain additional insights prior to data collection
- Core to localization
- Core to usefulness
Step-to-Step approach

1. Align survey question to survey objectives
2. Review feasibility of the questionnaire
3. Review data analysis plan
4. Review questionnaire: structure and format
5. Translate
6. Use ICT4D technology for data collection
7. Field test
8. Incorporate feedback
9. Train enumerators
Writing content: modules

Content includes:
- Areas expected to change (i.e. levels of theory of change) - different modules
- Information that field teams need complementary to MEAL plan and core the project operations (i.e. safeguarding, feedback complaint and response mechanism)
- Questionnaire length (1Hr for an adult and less than 45 min for children depending on age)
Writing content: modules

Example of modules
- Participants Meet basic needs
  - Reducing coping strategies \((\text{guidance})\)
  - Ability to cover basic needs \((\text{guidance})\)
- Satisfaction with Cash Assistance
- Feedback complaint and response mechanism
Writing content: actual questions

**Reduced Coping Strategy Index**

- Determine question type
- Validation: Constraints? Skip logic?
- Number questions
- Review questions order within the module

<table>
<thead>
<tr>
<th>Code</th>
<th>Question</th>
<th>Answer</th>
<th>constraint</th>
</tr>
</thead>
<tbody>
<tr>
<td>csi_note</td>
<td><strong>In the past 7 days, if there have been times when you did not have enough food or money to buy food, how many days has your household had to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>csi_1</td>
<td>Rely on less preferred and less expensive foods?</td>
<td></td>
<td>. &lt;= 7 and . &gt;= 0</td>
</tr>
<tr>
<td>csi_2</td>
<td>Borrow food, or rely on help from a friend or relative?</td>
<td></td>
<td>. &lt;= 7 and . &gt;= 0</td>
</tr>
<tr>
<td>csi_3</td>
<td>Limit portion size at mealtimes?</td>
<td></td>
<td>. &lt;= 7 and . &gt;= 0</td>
</tr>
<tr>
<td>csi_4</td>
<td>Restrict consumption by adults in order for small children to eat?</td>
<td></td>
<td>. &lt;= 7 and . &gt;= 0</td>
</tr>
<tr>
<td>csi_5</td>
<td>Reduce the number of meals eaten in a day?</td>
<td></td>
<td>. &lt;= 7 and . &gt;= 0</td>
</tr>
</tbody>
</table>
Determining question type

- **Ordinal**
  - E.g. Top three needs

- **Interval**
  - E.g. How long does it take to reach the closest market by foot? (in minutes)

- **Nominal**
  - E.g. What is your gender?

- **Ratio**
  - E.g. How much did you spend on food over the last 7 days? (in national currency)

**Categorical**
- Multiple choice
- Ranking
- Itemised rating (i.e. Likert)
- Quantity
Writing content: actual questions

● **Write short, precise and clear questions** - limit to a single piece of information
  
  Was the doctor you saw yesterday professional and helpful?
  1) Was the doctor you saw yesterday professional?
  2) Was the doctor you saw yesterday helpful?

● **Use neutral and non-bias way of writing**
  
  Change: Why don’t your children go more often to school?
  Into: What are the reasons that the school-aged children in this household are not able to regularly attend school?

● **Avoid questions that can lead to heated answers and limit amount of difficulty questions. Carefully ask sensitive questions**
  
  In your village, have you seen an increase in children working during school hours since the earthquake?

● **Ask only questions that the respondent has knowledge to respond to.**

● **Ensure that questions are culturally appropriate, use appropriate language, facilitate recall.**
  
  In general, last year’s harvest of rice was very good because there was a lot of rain. How would you compare your current harvest to last year’s?
Writing content: Extra Tips

Identify questions
- Refer to previous questionnaire and international guidance (USAID/ Indikit/ OCHA/ UNHCR/sector specific site - e.g. Shelter cluster)
- Multiple select or single select can be created based on existing qualitative exercises, feedback staff

Single select options
- Mutually and Jointly exclusive options

Avoid missing answers:
- Specify an “other” option
- Specify how enumerators should record missing quantitative data ( -999)
- Specify a “Do not wish to answer” option
- Specify a “Do not know” option

Coding answers

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the student in secondary school now?</td>
<td>Yes</td>
<td>……1</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>……0</td>
</tr>
<tr>
<td></td>
<td>No response</td>
<td>……888</td>
</tr>
<tr>
<td></td>
<td>Don’t know</td>
<td>……999</td>
</tr>
</tbody>
</table>
Common problems and solutions

**Initial:** Which percentage of your average monthly income, did you spend on Hygiene product?

**Issue:** Unlikely that the respondents would be able to provide the answer

**Proposed:**
What was your income during the past month (in X currency)?
What was the amount that you spent on hygiene products during last month? (in X currency)
Common problems and solutions

Initial: How far do you live from the cash distribution site?

Issue: lack of specificity: time? Kilometers?
Proposed: How much time does it take you to reach the nearest distribution site?

Initial: To which extent are you satisfied with CBI assistance?

Issue: use of abbreviations
Proposed: To which extent are satisfied with the cash assistance provided?
How to format the questionnaire?

**Organize**
- Groups questions within modules, order question within modules and order modules
- Start and finish with non-sensitive questions
- Sensitive later in the interview
- Important question early enough

**Start with unique identifier**

**Include clear introduction**
How to format the questionnaire?

Write instructions to enumerators

- Specify the consent that the enumerators should read
- Specify the enumerator should record the responses: single or multiple select?
- Specify whether the enumerator should read the responses
  e.g. "now I will read a series of statements and ask you to tell me whether the statement is true, not true, or sometimes true"
- Specify additional instructions that the enumerators should provide to the respondent
How to format the questionnaire?

- Use and table format that includes: Instructions, Question code, Question, possible answers, answer codes and skip or constraints patterns

<table>
<thead>
<tr>
<th>Question Code</th>
<th>Question</th>
<th>Coded responses</th>
<th>Skip</th>
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<tbody>
<tr>
<td>A.17</td>
<td>Is attending student in secondary school now?</td>
<td>Yes ........................1</td>
<td>To A.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No ........................0</td>
<td></td>
</tr>
</tbody>
</table>

- Use consistent formatting choices across

- Leave space for observations
**Data quality**

**Skip logic: specifies whether a question is relevant**
1. Are you aware of any complaint or feedback mechanisms where you could submit a concern if you needed to? Yes/No
2. What feedback mechanisms do you know? (if 1=Yes)

**Instructions for Enumerator: Read the following question out loud to the respondent. Circle the answer that the respondent gives.**

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<td></td>
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**Constraints: expected value for given questions**

In the past 7 days, if there have been times when you did not have enough food or money to buy food, how many days has your household had to: → expected 0 to 7
Ethical Considerations
Ethical considerations

Do Not harm
- The benefits/knowledge to be gained must outweigh risks
- The benefits/knowledge to be gained must outweigh risks

Consent
- Purpose of data collection
- Duration
- How data will be used
- Where and for how long the data will be stored
- Rights of affected population

Asking sensitive questions
- Rephrase questions
  “Do you gamble?” simply assume people do, and ask, “How many times have you gambled in the past (specific time period)?” Be sure to provide a none/zero option.
- Make sensitive questions optional
Key messages

Prior to decision:
- Survey must have always a clear objective. Tip: consider ToC, Results Framework and MEAL plan

During survey design:
- The first draft should be validated against objective
- Consider how you formulate the questions, how you structure and then how you can improve the data quality
  - Are the expected answers associated with my objective?
  - Can be understood in the same way by different users?
  - Are precise and clear? Can lead to biased responses?
  - Have I included a unique ID? Consent?
  - Have I placed the sensitive questions properly?
  - Have I reduced the possibility of missing values?
  - Have I mitigated the risk of data entry errors?
Resources

- M&E MINIMUM STANDARDS
- IRC Research Toolkit: Questionnaire Design and Development
- Quantitative data collection tools
- Indikit
- Questionnaire Design: How to design a questionnaire for needs assessments in humanitarian emergencies
- Monitoring 4 CTP
- USAID
Questions?

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