Collecting Original Data

Michael Long
Andrew MacDonald

OneStar Evaluation Institute

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Learning Objectives

By the end of this presentation, you will understand:

- The difference between quantitative and qualitative data

- Common methods used to collect data and the advantages and disadvantages of each

- How to avoid common mistakes when writing survey questions

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What Are "Original Data"?

- **Original data (or "primary data") refers to data that you collect for your evaluation**

  - Original data can be qualitative (e.g., focus groups) or quantitative (e.g., closed-ended surveys, assessments, etc).

  - Data should be *systematically* collected, recorded, and analyzed.
    - Data collection should be based on a plan that outlines who what data will be collected, by and from whom, at what points in time, and using what instruments and techniques
    - You have a clear sense of how you are using each piece of data, and what questions you are trying to answer

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Quantitative Data

- **Quantitative data are usually used to answer "counting" questions**

  - Does program participants' knowledge improve after the training?

  - How many participants participate in the intervention?

  - How do participants rate the intervention?

  - How long do members typically stay in the field?

  - What percentage of members enroll in higher education after their service?

- **Sources of quantitative data include test scores, attendance logs, activity logs, surveys**

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Qualitative Data

- **Qualitative data are usually used to answer "how" or "why" research questions.**

  - How are AmeriCorps members trained to deliver after school tutoring?

  - Why do program participants sign up for the intervention?

  - Why do some participants drop out of the program?

  - How did AmeriCorps members' career goals change during their service year?

  - Why did program beneficiaries change their behavior after attending seminars run by AmeriCorps members?

- **Sources of qualitative data include interviews, focus groups, observations, and surveys**

Using Quantitative and Qualitative Data

- **You can (and probably should) use both quantitative and qualitative data in combination**

  - For example, quantitative outcome data can tell you whether or not your program is working

  - Qualitative data can tell you why the program is or is not working, or what needs to be improved

Common Data Collection Techniques

- **Interviews**

- **Focus Groups**

- **Structured Observations**

- **Surveys**

Interviews and Focus Groups

- **What are they?**
  - Discussions with individuals or small groups

- **Good for collecting:**
  - Qualitative (non-numeric) information about the experiences and/or attitudes of volunteers, participants, staff, or partners

- **Advantages**
  - Very flexible method for collecting open-ended data
  - Can provide deeper insights than surveys

- **Disadvantages**
  - Can be time-consuming if trying to collect information from large number of people
  - Not appropriate for collecting closed-ended or quantitative data
  - Difficult to "add up" results neatly

Interviews and Focus Groups

- **Can be more or less structured—although having some sort of guide or list of questions is advisable**

- **Be wary of discussions with groups of more than 8 people**

- **Advantages of focus groups over interviews:**

  - Can talk to more people more efficiently

  - Generate interaction between participants, which can produce interesting ideas

- **Advantages of interviews over focus groups:**

  - Can ask more detailed questions about a single person's experience

  - Dynamics of a group discussion can be tricky to manage (e.g., group-think, or domination by a single participant)

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Structured Observations

- **What are they?**

  - Deliberate viewing of an intervention or activity in action

- **Good for collecting:**

  - Information on implementation of volunteer training or other services

  - Data on fidelity to a program model

- **Advantages:**

  - Opportunity to observe program in natural setting

  - Low burden on participants

  - Can avoid asking other people what happened, which could produce bias or issues with recall

- **Disadvantages:**

  - Can be time-consuming for observers

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Structured Observations

- **Observations are often more effective if observers follow a specific guide or protocol, or list of things to look for**

  - A protocol will improve the consistency and completeness of the data

- **Be intentional about who is doing the observing**

  - Avoid observers who might have a conflict of interest, or might have inherent biases

- **Be careful about inter-rater reliability**

  - Train observers about what they should record, and have them "co-observe" at first to make sure their ratings align

Surveys

- **What are they?**

  - Method for collecting <u>structured</u> data from a group of people

- **Good for collecting:**

  - Quantitative or categorical information about people's experiences, attitudes, knowledge, or behavior

- **Advantages**

  - Produce data that can be aggregated and analyzed relatively easily, because people are answering the same questions in the same order

  - Allows for data collection from a large number of people more efficiently

- **Disadvantages**

  - Produces less detailed and "rich" information

  - Not always good for identifying unexpected issues or problems

Closed vs. Open-Ended Survey Items

- **Examples of <u>Closed-Ended</u> Questions**

  a) On a scale of 1 (least satisfied) to 5 (most satisfied), how satisfied were you with the training that you received?

  b) To what extent do you agree with the following statement? "This program has given me the skills I need to succeed." (Response options: strongly agree, agree, disagree, strongly disagree)

  c) How would you rate your health? (Response options: excellent, good, fair, poor)

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Closed vs. Open-Ended Survey Items

- **Examples of <u>Open-Ended</u> Questions**

  a) What did you like most about the training?

  b) What skills did you gain through this program?

  c) What concerns do you have about your health, if any?

Closed vs. Open-Ended Survey Items

- **Advantages of Closed-Ended Questions**

  - Easy for respondents to answer—they just have to choose from a list of answers

  - Easy to "tally" responses after it has been administered—all responses fit into pre-determined codes

- **Disadvantages of Closed-Ended Questions**

  - The data are more limited—it is hard to dig deeper

  - Answers are forced into categories

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Closed vs. Open-Ended Survey Items

- **Advantages of Open-Ended Questions**

  - You get richer, more detailed answers

  - Sometimes you can learn about issues you were not expecting

- **Disadvantages of Open-Ended Questions**

  - More time-consuming for respondents

  - It is not as straightforward to analyze

    - You may need to code data and/or analyze by themes

Using Closed- and Open-Ended Questions

- **In most cases, you should include closed-ended and open-ended questions in your survey**

- **Closed-ended questions can help you get summary data**
  - For example, "On a scale from 1-5, how useful did you find this training?"
  - These questions can be good for collecting data to measure <u>outcomes</u>

- **Open-ended questions can help you get more descriptive information**
  - For example, "How could this training be improved in the future?"
  - These questions can be good for collecting data for <u>process</u> evaluations

"Questionable Questions"

- **Review the survey questions that you are given, and think about:**

  - What weaknesses might these questions have?

  - How might these weaknesses affect the answers that respondents give, and make the results less useful or informative?

  - How could the questions be improved?

Survey "Modes"

- **Surveys can be administered in a number of ways:**

  - In-Person

  - Online

  - Mail

  - Telephone

  - Interactive Voice Response (IVR)

  - Mobile phone app

- **For program evaluation, most common modes are in-person and online**

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Online Surveys

- **Advantages of online surveys**

  - You can program "skip patterns"; i.e., you can show people different questions based on their previous answers

  - No need to manually enter data that you collect on paper

  - Easy for people to respond from different locations (including on cell phones)

  - Easy to send reminders by email

Online Surveys

- **Disadvantages of online surveys**

  - You need to learn how to use an online survey platform, including programming a survey, emailing invitations, and accessing results

    - Not necessarily difficult, depending on the platform

  - Response rate may be lower than an in-person survey

Online Survey Platforms

- **There are many free online survey platforms**

    - SurveyMonkey

    - Google Forms

    - Typeform

    - SurveyGizmo

- **These platforms are user-friendly and easy to learn**

- **Most platforms charge a small fee for certain features, such as larger surveys, skip patterns, complex questions, etc.**

Pre-Post Surveys

- **Pre-post surveys are frequently used to measure changes in knowledge, attitudes, or behavior**

  - "Pre-post" means asking the same question before and after a program intervention, and comparing the results

- **Examples:**

  - *Knowledge*: How would you rate your knowledge about how to prepare for a disaster?

  - *Attitudes*: On a scale of 1 to 5, how important is it to have a plan in the case of a disaster?

  - *Behavior*: Does your family have a plan for what to do in the case of a disaster?

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Pre-Post Surveys

- **Potential problems with pre-post questions**

  - Not enough time between pre and post to measure change

  - Respondents might give you what they know you want (i.e., rate themselves higher at post-survey on purpose)

  - Ceiling effects—people's responses on the pre-test may be so positive there is no room for improvement

  - For knowledge questions, people might learn how much they don't know

    - For example, a person might say they know "a lot" about nutrition on the pre-survey, but realize during the program that they know less than they thought. So on the post-survey, they say know "a little" about nutrition. So the evaluation shows that the program <u>decreased people's knowledge!</u>

One Option: Retrospective Pre-Post Test

- **Rather than asking a person about their level of knowledge before and after an event, wait until the end and then ask about their level of knowledge before and after.**

  - For example, on post-test ask: "On a scale of 1 to 5, how would you rate your knowledge about nutrition?" "How would you rate your knowledge about nutrition before you began this program?"

- **In general, this approach works best when you want to measure knowledge, but is less effective when you are trying to measure attitudes or behavior.**

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Improving Response Rates

- **Response rate = the percentage of participants who respond to your survey**

  - No "hard target" for response rates, but the lower the response rate, the more likely it is that the results might not be representative

- **Approaches to improve response rates**

  - If you can, collect data in person (don't let them out of the room!)

  - Send reminders, preferably though multiple modes of contact (email, phone call, in-person if possible)

  - Keep surveys as short as possible

  - Explain how you'll use the survey results to improve your program

  - Consider surveying only a sample of participants (but make sure that the sample is representative of the whole population)

Additional Resources

- **CNCS Data Collection for Program Evaluation Presentation** (https://www.nationalservice.gov/sites/default/files/resource/May_21_Data_Collection_for_Program_Evaluation.pdf)

- **CNCS's Knowledge Network** (http://www.nationalservice.gov/resources/americorps/evaluation-resources-americorps-state-national-grantees)

- **The American Evaluation Association** (http://www.eval.org)

- **The Evaluation Center** (http://www.wmich.edu/evalctr/)

- **American Statistical Association** (http://www.amstat.org/sections/srms/pamphlet.pdf)

- **National Science Foundation** (http://www.nsf.gov/pubs/2002/nsf02057/nsf02057_4.pdf)