

**TRAINING PACKAGE FOR USING SOCIAL SCIENCE IN COMMUNITY ENGAGEMENT AND/OR COMMUNICATIONS ACTIVITIES**

**SESSION 4.7:** Mixing different methods to produce quality evidence to inform action

SESSION CONTENT

**Learning approach:** Real-time presentation, individual and group exercises, case examples

**Delivery mode:** Online and offline, 90 minutes approx.

**Essential sessions to have completed before this session:** 4.1

**Summary:** This session teaches the value and benefits of applying mixed methods approaches.

**Learning outcomes:**

* Understand the value of a mixed methods approach
* Know different ways of conducting a mixed methods approach

FACILITATING THE SESSION



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Introduction: (5 minutes total)

Talk through session summary and learning outcomes.

Position this session in the question flow.

1. How to ensure that this information goes back to communities? To inform community-level actions and decision-making of the broader response?
2. What methodology and tools should be used to collect and analyse this information?
3. How to track the information used to ensure that it effectively contributes to operational and strategic priorities?
4. Who can collect this information?
5. Does this information already exist? Is there a related needs assessment or study?
6. What information is needed?

**DATA TO ACTION:**

Key questions in social science research

1. Who needs this information?
2. How to ensure that the information is used to make operational and/or strategic decisions?

Qualitative methods (10 minutes total)

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|  | Question to participants (5 minutes):  How are quantitative research methods different to qualitative research methods?  Online: Invite the participants to write the answers in the chat function and summarize  Offline: Ask two or three participants to share their thoughts  (Recap of session 4.2) |

Quantitative approaches differ from qualitative approaches in several ways.

Quantitative approaches

Use quantitative methods when you want to know ‘how many’ and/or ‘how often’.

* Work with numbers – the instrument used in quantitative research poses questions in which response options are assigned numbers
* Generally uses surveying of a large group of people (usually several hundred) and a structured questionnaire that contain predominantly closed-ended, or forced choice, questions
* Can test theories you have about a situation: e.g. pregnant women are less likely to use water chlorination tablets than non-pregnant women (although not all quantitative research is designed to do this)
* Can establish causal relationships – e.g. X causes Y: trust in health system contributes to greater vaccine uptake
* Analysis often uses statistical methods to interpret the significance of the findings
* The more representative the sample is – when it has characteristics of the whole population including vulnerable and marginalized population groups such as ethnic minorities, people living with disabilities etc. – the more likely it can be generalized to a wider population.

Qualitative approaches

Use qualitative method when you want to know how people feel and what they think. You don’t need to know how many people think or feel this way.

* Not based on numbers
* Generally use interviews, focus groups discussions and observations
* Exploratory: looking at factors such as cultural expectations, gender roles, ethnic and religious implications and individual feelings
* Usually uses a smaller sample size than quantitative approaches
* Methods provide results that are usually rich and detailed, offering many ideas and concepts to inform your programme
* Are used to understand ‘the why and the how’ – why do people behave in a certain way, how do they perceive the situation and how are their priorities and capacities evolving

Table 1 illustrates the main differences between quantitative and qualitative approaches in social science research.

Can be given as a handout (offline) or downloadable as a [PDF](../Handout/Module4.7_Handout_1.pdf) (online)

Table 1: Differences between quantitative and qualitative methods in social science research

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|  | Quantitative | Qualitative |
| **Type of questions the approach is best suited  to answer** | What? How many? How often?  Answers a controlled sequence of questions with predetermined possible answers. Because responses are predefined, they can be counted. | How? Why?  No pre-formed answers, just captures what respondents say (words are the ‘data’). |
| **Participatory** | Less likely. Participants have limited to no control over question sequence and responses. Pilot testing mandatory to ensure responses are relevant and relatable.  Researchers define the line of inquiry, the questions and their sequence, and the universe of response options. It is a structured method where participants just respond to questions in the sequence that is presented and within the parameters provided. Every participant experiences the same structure. | More likely. Participants have more control of the discussion through responding to more open-ended questions. Strong interviewer skills required to facilitate discussion which is relevant to participant but also covers all areas of questionnaire.  Researchers define the line of inquiry and provide open-ended questions for use in a conversational context where the researcher and participants INTERACT responsively to each other. Sequence and spontaneity are allowed for both the researcher and participant. Semi-structured, organic process. Participants do not experience the same set of questions or interactions because the researcher is empowered to listen and probe the participant in ways that achieve the aims of the inquiry. |
| **Research design, data collection and sampling** | Tools and procedures established beforehand. Fixed formats that are consistently applied is key to quality and the ability to compare groups or assess trends over time. | Flexible and open tools and adjustable procedures. Flexible formats that allow for exploration and characterization of important (deep) contextual information that does not need to be compared across populations, places, or over time. |
| Survey-based with close-ended questions. The unit of analysis is at the individual level of respondents or counts of respondent universe. | Case-based: open-ended questions, semi-structured or unstructured interviews, focus group discussions. The unit of analysis depends on the method employed but usually represents the conversation between the researcher and participants. The transcript of an interview or a focus group discussion is analysed as a whole data unit regardless of the number of individual participants. |
| * Surveys (e.g. face-to-face interviews) * Telephone interviews * Self-administered via mail, internet * Population movement tracking * Registration * Structured interviews | * Individual interviews * Key informant interviews * Semi-structured interviews * Focus group discussions * Observations |
| Greater number of subjects with characteristics of the whole population. | Few subjects with characteristics of specific populations (e.g. purposive sampling). |
| A specific number of participants is statistically defined. | Number of subjects is often defined in the field with data collection stopping when ‘saturation’ is reached – that is, researchers get answers from new respondents that are similar to what they have heard from earlier respondents without any new ideas or insights. |
| **Data analysis, interpretation and findings** | Statistical analysis: statistical programs, charts, deductive methods, descriptive statistics,  inferential statistics,  univariate or multivariate analysis. | Interpretation: thematic analysis, content analysis, inductive reasoning, iterative process of reading, categorizing the data into codes that are defined, and describing patterns and making interpretations of those patterns to represent the perspectives of research participants |
| Establishment of association among results. | Researchers interpret the categorized/coded data. |
| **Presentation and dissemination** | Mainly numerical and categorical values. Can display findings through tables, charts and pictures with or without a discussion. | Mainly textual (words, pictures, audio, video). Narrative synthesis with descriptions and quotations, and detailed discussion/debriefing session required. |

Mixed methods research (20 minutes tota)

Mixed methods research is an approach whereby researchers collect and analyse both qualitative and quantitative data within the same study.

This approach involves a purposeful mixing of methods in data collection, data analysis and interpretation of the evidence (refer to Table 1 handout/PDF).

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|  | Question to participants (5 minutes):  Why might we use mixed methods research?  Online: Invite the participants to write the answers in the chat function and summarize both sides of the debate  Offline: Ask one or two participants to share their answer |

A mixed methods approach can be used when neither quantitative nor qualitative methods could answer the question alone. Individually, these approaches can answer different questions, so combining them can provide you with more in-depth findings. In general, quantitative data is better at answering questions like ‘What are the actions people might be taking in response to an emergency situation?’ and qualitative data can show how and why they are taking those actions. Mixing methods draws on the strengths of both approaches.

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|  | Case example (15 minutes):  (See [Case study 1](../Handout/Module4.7_CaseStudy_1.pdf) – summarized below – for more details).  <https://www.sciencedirect.com/science/article/pii/S2212567114010004>  The focus of this mixed methods research was on gender vulnerabilities – what are they, what are their determinants, and what causes them. Open-ended and exploratory interviews were held with representatives of NGOs and reconstruction beneficiaries. Questionnaires were also given to both types of participants. Questionnaires were analysed using factor analysis and t-test in particular to identify prominent types and key determinants of gender vulnerability in a post-earthquake reconstruction context. The main vulnerabilities identified were along the physical dimension (e.g. disabled, pregnant, elderly women), four types of social dimensions (violence against women, homeless women, women with many dependents and women heading households) and two types of economic dimensions (women in debt and women without productive assets). Existing patriarchal culture and weak gendered institutions were identified as root causes. Conclusions included that assessing gender vulnerability in post-disaster reconstruction helps key stakeholders to identify dimensions and determinants of gender vulnerability that should be tackled to ensure gender equality within post-disaster reconstruction.  Questions for participants: Why were mixed methods helpful in this study? What links are there between the physical, social and economic ‘dimensions’ of vulnerability as determined by this study, and the [Behavioural Drivers Model](https://www.unicef.org/mena/reports/behavioural-drivers-model) (first presented in Session 1.1)?  Gender vulnerability is a complex concept. Qualitative methods allowed experiences to be explored in detail, while quantitative methods allowed researchers to identify the prominent types of vulnerability and what might cause them. |

Sequencing qualitative and quantitative research (20 minutes total)

Sequencing basically means ordering.

There are different approaches to sequencing or ordering qualitative and quantitative data collection.

Set-ups can include both types of methods being applied simultaneously – at the same time as in the case study above, or sequentially – one after the other. Sometimes, they are done iteratively over time so that we can monitor changes in what people know, think, feel and do as well as how public health interventions are being received (or not).

Designing a mixed methods approach is based on what is known already about a topic, and what we need to know more about.

Consider four scenarios:

1. Well-known issue with a population/context that is well known by researcher
2. NEW issue with a population/context that is well known by researcher
3. NEW issue with a population/context that is NOT familiar to the researcher
4. Well-known issue with a population/context that is NOT familiar to the researcher

For example, on a topic that has had extensive social science research, especially qualitative studies, it’s easier to start with quantitative methods because we can design surveys based on the research that has been done and then field test the survey for local/linguistics contexts. Qualitative data might then be collected after the quantitative survey to help explain the ‘why’ or the ‘how’ of certain quantitative findings – e.g. a rapid needs assessment survey given to households impacted by a chemical spill, followed by focus groups with a subset of the population who were found to have not reported to a health screening to understand why.

However, if we are dealing with something NEW, we have no idea how people talk or think about the issue so it would be extremely difficult for us to do a quantitative survey because we would have no idea what response options should or could be. We would have to do qualitative studies to explore this, such as asking open-ended questions to allow researchers to learn the language/lexicon, thoughts, emotions, and actions of participants. Insights from this work can then be used to shape quantitative methods for understanding how people think, feel or act in the ways described.

When a researcher is NOT familiar with a population or context, they also may need to start with qualitative methods to build relationships and trust and learn as much as they can that could inform decisions about appropriate quantitative approaches to answering relevant questions. If there are similar issues with similar populations/contexts, this can help, but making assumptions based on similarities can be problematic.

When something is familiar/known and is an issue that has been studied a lot already, starting by reviewing that literature is an important first step. If there are validated survey instruments on the topic but the survey has not been used in the population you are serving, then taking those instruments and doing qualitative studies with your population is an important first step. Even if the instruments were validated with populations that were similar to yours, you will still want to do some interviews to ensure they work in your context (e.g., languages have many dialects). Language and meanings of words are not universal so doing a few interviews with your intended survey population is important. You need to have confidence that respondents will interpret the questions the way you intend them to. If you don’t do this step and respondents interpret your questions very differently than the way you intended, you will have a hard time interpreting their responses to your questions. If your interpretation of the misinterpreted questions is used to make decisions about how to help the population, you could do more harm than good.

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|  | Case example (15 minutes):  ([See Case study 2](../Handout/Module4.7_CaseStudy_2.pdf) – summarized below – for more details)  [A mixed method approach for testing the usability of a mobile health (mHealth) intervention](https://mhealth.jmir.org/2019/4/e11656/)  This article describes testing the usability of mHealth interventions for people to manage their chronic health conditions. It proposes that researchers use simultaneous qualitative and quantitative data collection and analysis that informs new versions of the technology. This should continue cyclically through multiple rounds of mixed methods data collection and analysis until the mHealth technology under evaluation is found to work to the satisfaction of the researchers. They suggest that early development is more qualitatively driven but progressively becomes more quantitatively driven.  Question for participants: Why might qualitative data be more important at the earlier stages of the product development? Why might quantitative data be more important at later stages of the product development? |

Challenges of using mixed methods approaches (10 minutes)

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|  | Brainstorm (5 minutes):  What might be some of the challenges or downsides of mixing qualitative and quantitative methods?  Online/offline: Participants can call out answers or write in the chat function. |

This can make the process more complex in terms of:

* Specific expertise required in different disciplines
* Different approaches to analysis
* Adequate time to work with all the data generated
* Integrating different types of data

As noted, following the collection of mixed methods data, it is then necessary to bring it all together. Session 4.8 discusses the triangulation of data and session 7.1 describes a comprehensive approach to data integration.

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|  | Group exercise (15 minutes total):  What other research topics/questions relevant to your work might benefit from both quantitative and qualitative data? Choose one topic and discuss how you might sequence your methods.  Turn to your neighbour/find a way to connect online (e.g. join a breakout room) with another participant to generate one or two ideas.  Online: Invite the participants to write the answers in the chat function and summarize both sides of the debate  Offline: Ask two or three pairs to share their answers  Ask one group to feedback their work  Ask others to comment if they had any very different ideas (take two or three answers) |

Wrap-up/summary (5 minutes)

* Qualitative and quantitative methods are both helpful. They allow us to address different sorts of questions
* Use quantitative methods when you want to know ‘how many’ or ‘how often’.
* Use qualitative methods when you want to know how people feel & what they think.
* A mixed methods approach can be used when neither quantitative nor qualitative methods could answer the question alone. Individually, these approaches can answer different questions, so combining them can provide you with more in-depth findings.
* Set-ups can include both types of methods being applied simultaneously – at the same time, as in the case study above, or sequentially – one after the other. Sometimes, they are done iteratively over time so that we can monitor changes in what people know, think, feel, etc.

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