INTRODUCTION

**What is qualitative research?**

Qualitative research is used to discover meaning. It helps us understand what influences people’s opinions, views and actions. This includes how they feel in relation to an issue and/or topic. Therefore we can explore the perspectives of different individuals, communities and/or other groups in relation to a research interest. Overall, conducting qualitative research can help us understand why certain issues develop in a certain way in specific cases.

**Qualitative data**

Qualitative research aims to understand meanings and wherever possible reveal unique perspectives. The data generated by qualitative research is often conversational and text based. The data is not numerical, as in the case of quantitative data, and does not aim to discover trends that can be measured. This is the main difference between qualitative research and quantitative research.

**What is this toolkit for?**

This toolkit outlines how qualitative data can be collected and analysed to answer a range of questions. Qualitative data tells us about how our projects have impacted on people and communities. It can give background to the numbers (quantitative data) we collect, or can be used by itself to find out about the changes happening in people’s lives. Essentially, qualitative approaches can provide a deeper understanding of how individuals and communities have interacted with and been impacted by Blue Ventures’ projects. Understanding these perspectives can provide valuable learning for future activities.
This toolkit will provide you with guidance in conducting qualitative research. The steps you will be guided through can be seen below:

- Develop a research question (Section A)
- Prepare to go into the field (understand what, who and where you are researching and identify appropriate methods) (Section B)
- Organise your data (Section C)
- Analyse your data (Section C)
- Learn from your findings (Section C)
A1. QUALITATIVE RESEARCH QUESTIONS

A key aim of qualitative research is to understand how and why actions, certain topics or issues influence people. People’s thoughts, opinions and feelings are hard to measure with numbers. These thoughts, opinions and feelings can be very different from person to person. Some influences shaping these differences may be where they live, their culture and their role in their community. These are just a few examples, as sometimes the smallest difference and/or event can have a big influence on an individual. This is where qualitative research can be useful.

So, what are we looking for?

In qualitative research we are looking to understand influences that may be unpredictable, highly individualised, and/or something we currently lack understanding of. In summary: something we cannot meaningfully measure or expect to have the same influence consistently across different people, places and scales.

Qualitative research does not aim to reveal the likelihood of a characteristic developing in the same way elsewhere as it has in the studied case. Instead we are concerned with how influences develop and shape a certain situation in a particular case.

Therefore, the research questions we can answer are different to quantitative research.
Example:
Identifying a qualitative research question

Scenario: Blue Ventures have used their monitoring data to identify that fish catches have reduced in a particular area. Reduced fish catches have an impact on the amount of fish that fish stall owners can sell at a local market.

The monitoring data shows the amounts the catches have reduced by – this is a quantitative measure! However, understanding the impacts this has on a fish stall owner’s life is more complicated. The changes in sales would impact different people in different ways – you can set out to understand these ways through qualitative research.

In such a case, your overall research question could be: how have changes in fish market sales influenced the home lives of fish stall owners?

Some more questions may follow depending on the specific aspects of their home life you are interested in.

For instance, if you are interested in their family, a second research question may be: how have these changes influenced their relationship with other family members?

You can then aim to gain more detail by using a third research question: why do they think their family relationships have been influenced by reduced fish sales?

Taking this approach helps you study a case in detail. For example, an individual may have a family structure that is different to most families in the community you are studying. Using the questions above would allow you to see the impact of this.

Unique characteristics are as important as any common characteristics when conducting a qualitative study. It is key that such cases are included in your study wherever possible.

Qualitative research helps us to answer the ‘hows and whys’ relating to research interests that we cannot easily measure. Therefore it is recommended that qualitative research questions focus on the ‘hows and whys’ as outlined in the example above. Doing so enables us to understand influences like personal opinions, personal relationships, culture and any unknown characteristics that may be important for answering your research question.
Example:

Illustration

This scene shows a fish market that has been impacted by reduced fish sales. The fish on the stalls and the income of the fish stall owners, represented by the size of their money bags, can be measured. However, the influence this has on their lives will differ from individual to individual.

We need to use qualitative research to ask them about these influences directly. By doing so we can begin to understand how changes in sales have impacted things like their children’s education and how this makes them feel about the future of their community.
A2. Qualitative methods

After identifying your research questions the next step is to plan your research methods. An important step in qualitative research is to understand the specific case you are researching as much as possible. This will help you design and use the most appropriate methods for your study (see Table 1. for a summary of when some common methods can be used).

This step is important because understanding who will be contributing to your research and where it is taking place enables you to add more detail to the case you are studying. This includes your research team, the potential participants and other aspects that have an influence on your case. Examples of key aspects to consider would be the political situation, community characteristics, cultural sensitivities and any specific events which may have had an impact on your case.

As methods can vary depending on your situation there is no set way or prescriptive best practice guidance on methods. However, there are some important considerations when choosing and using a qualitative research method. Ideally, your method has to be defined by what is being studied, where it is being studied, how it is being studied and who it is being studied with.
The table below provides a summary of qualitative methods and when they may be useful (note: more detail on what to consider when a method is chosen and when you are in the field is provided in Section B2. In the field).

<table>
<thead>
<tr>
<th>Method</th>
<th>Summary</th>
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<tbody>
<tr>
<td>Interviews</td>
<td>- Purpose: Interviews help to draw out personal opinions and allow participants to think and talk about their views in depth.</td>
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<td></td>
<td>- An interview needs to be designed so it focuses on your research question but gives a participant the opportunity to put forward their own</td>
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<td>opinions. This is covered in more detail in Section B2. In the field.</td>
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<td></td>
<td>- Logistics: Interviews need to be a comfortable experience for your participant and yourself. Interviews held in the specific places (e.g.</td>
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<td>the beach, the local market, the village hall etc.) you may be researching can be useful. This may help to discuss specific features of the</td>
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<td>place you are researching. However, in some circumstances it may be more appropriate to hold an interview in a private one-to-one setting.</td>
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<td></td>
<td>This is usually the case when your interview could potentially touch on sensitive subjects.</td>
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<td>Focus Groups</td>
<td>- Purpose: Focus groups are an ideal opportunity to gain an in-depth understanding of collective opinions. By giving opportunities to</td>
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<td>individuals in the group to voice their opinions together you can begin to see interactions within the group (e.g. what causes tension, who</td>
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<td>agrees with who and whether there are occasions when some individuals have not considered another person’s opinion before).</td>
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<td>- Logistics: Focus groups work best with between 6-8 participants and the most important thing to consider when bringing participants together</td>
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<td>is their comfort. Certain sensitivities which would have a negative impact on a group should be avoided (cultural sensitivities are particularly</td>
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<td></td>
<td>important).</td>
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<td></td>
<td>- The appropriateness of a focus group location is led by the same considerations as for interviews (see above).</td>
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<tr>
<td>Questionnaires</td>
<td>- Purpose: Questionnaires are usually associated with quantitative methods but it is possible to include some open questions (see Section A2.3,</td>
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<td>Piloting for more details) in your questionnaires. Open questions help you to gain more depth to the responses of your participants. This</td>
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<td></td>
<td>may include asking ‘why’ a participant chose a particular option and/or how they think something may change in the future.</td>
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<tr>
<td></td>
<td>- Logistics: Making sure the open questions included make sense in relation to the rest of your questionnaire is essential. Additionally,</td>
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<td>ensuring that participants are given an accurate estimate of how long a questionnaire will take to complete is important.</td>
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</table>
Example: Quantitative questionnaire vs. qualitative questionnaire

A quantitative questionnaire aims to show trends and is concerned with the number of certain responses. On the other hand, a qualitative questionnaire will mostly comprise of ‘open questions’ (see Section A2.3. Piloting for more details), such as ‘how do you think the community will be impacted if fish catches continue to reduce in size?’ The responses to such a question need to be collated and coded as shown in Section C: Processing Qualitative Data.

Quantitative questionnaires will try to measure and compare responses numerically. For example, a questionnaire may be formed of questions such as, ‘who in your family is most impacted by the falling fish sales you have experienced?’ followed by a multiple choice of yourself, spouse, parents, children and other. Through this approach you can identify who the fish stall owners feel their drop in income is impacting on the most.

A questionnaire may use ‘mixed methods’. For example, following the quantitative question above with ‘why’ can allow participants to talk about their reasons for their choices. The responses to this ‘why’ question would differ from individual to individual and comparing them numerically would not be useful. These responses need to be collated and coded as recommended in Section C: Processing Qualitative Data.
The example below shows how methods can be put together using your research questions

**Example:**
**Designing your methods**

*Research question:* **How have changes in fish market sales influenced the home lives of fish stall owners?**

*If you are interested in the opinions of a fish stall owner’s family as well as their own, it may be appropriate to conduct interviews with the whole family. This is highly dependent on the possibility of this and whether it would be deemed appropriate. It may be less appropriate if you are asking questions that may cause tension amongst families.*

Alternatively...

*Research question:* **How have changes in fish sales influenced how other family members contribute to the household income of fish stall owners?**

*This may be an opportunity to conduct interviews in the workplaces of other family members or at their home if they have domestic responsibilities. This can give participants the opportunity to be prompted by specific aspects of that place that are relevant to how things have changed.*

Alternatively, focus groups may be more appropriate if people are involved in community activities that generate income. This will help the studied groups to talk about their opinions collectively. Under such circumstances, it is important to capture as much detail as possible in relation to how the participants interact with each other. This would include their moods, tense relationships, friendships and any topics that cause tension or agreement. This can be done by taking notes during and after the focus group. This will be covered in more detail in Section A2.4. Reflecting on your methods during a study and B2.2. Field diaries.*
Example:
Illustration

These two scenes show two very different interview settings. In one the interview is set up in a room with a table and chair. This is ideal for a study that may discuss sensitive subjects that participants do not want someone else to hear. In the other scene we see an interview with a participant on a beach. This is ideal if we are talking about specific aspects of the beach environment. Neither setting is wrong or right. What is best for your research questions, your participants and yourself should guide where your interview conversations take place.
In summary, the research method and venue has to be a comfortable experience for both participant and yourself. The conditions for this will differ from person to person and from case to case. Achieving these conditions is important in qualitative research. Therefore, conducting your methods in the same way and in the same place for each participant is not a priority. Unlike in quantitative research, we are not looking to compare participants or identify trends. Allowing each participant to talk about their opinions as comfortably as possible is the main goal!

<table>
<thead>
<tr>
<th>Open Questions</th>
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<tbody>
<tr>
<td>Open questions give respondents the opportunity to express the reasons and meanings behind their opinions. Such questions usually begin with ‘why’ and ‘how’ and responses to them are led by the respondent’s view</td>
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<table>
<thead>
<tr>
<th>Closed Questions</th>
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<tbody>
<tr>
<td>Closed questions have a clear-cut answer. This would include questions that have multiple choice options where we are not interested in the reasoning behind the choices participants make (we are just interested in the choice). Yes / No questions are also an example of a closed questions.</td>
</tr>
</tbody>
</table>

Open Questions

Closed Questions
A2.1. Capturing data

There is no set way to capture data as long as we detail:
1. How data was captured
2. Any limitations of these capture methods
3. Why you made your decisions to capture data in a certain way

A common and useful way of capturing data is by recording your participants. This can be done either by using a voice recorder or a smartphone. If they are uncomfortable with being recorded, you can take notes during your conversations. Either way, it is extremely important to ask for permission from your participant in regards to how you are capturing your conversations.

Remember, this is always dependent on participant consent!

If a participant is uncomfortable with being recorded or with notes being taken during the interview then do not insist. In this case, making notes after the interview would be more appropriate. It is again important to ensure that the participant is happy with their opinions being used in your study. They should be presented with the right to withdraw their participation at any point, even after they have taken part in an interview, focus group or questionnaire.
A2.2. Resources and timeframes

Resources and timeframes play a big role in defining how we conduct our research methods. For example, if it is only possible to talk to your participants for a short time, a questionnaire may be more appropriate compared to an interview with no time limits!

Illustration

This illustration shows how i) the time and resources available to us; ii) the studied community’s characteristics; iii) the method we have chosen (interview, focus group or questionnaire) and iv) the consent we have from our participants to conduct this method all fit together to produce a successful study.
Example:
Considering your resources and timeframes

If you consider the research question below:

Research question: How have changes in fish market sales influenced the home lives of fish stall market owners?

You may be interested in changes in a person's home life over the 'life-course' i.e. how life in the community has changed from the stall owner's childhood up to the present. In this circumstance you can talk about the changes they feel are influenced by fish sales in relation to other changes that have happened in their lifetime.

However, this is a time intensive method (such interviews can last many hours or even over days!). If your resources and timeframes do not allow for this, you should prioritise what is most important for your study. For example, you can focus on impacts that are specifically related to current changes or due to a specific event (such as a programme run by Blue Ventures). As a result, interviews can be shorter in length and this provides you with the opportunity to talk to more individuals. See Section B1. Qualitative Data Samples for more details on sampling.
A2.3. Piloting

It is useful to pilot interviews, focus groups and/or questionnaire designs with a small group in the studied community before starting a full study. This will ensure the information given to participants before they take part in your study is accurate and appropriate.

Key points to consider in the information given to individuals prior to their participation are:

i) Whether the questions you have used have been understood and are culturally appropriate.

ii) The potential locations you can talk to participants in.

iii) An estimate of the time it will take for participants to take part in your study.

iv) What sorts of questions will be asked i.e. the topics covered and open and/or closed questions.

v) The right of participants to withdraw from a study at any point and not answer questions they feel uncomfortable with.

It is important to relay this information to potential participants in the most appropriate manner i.e. in an area with low literacy rates it would more appropriate to talk to people directly instead of circulating written information.

In summary, piloting your methods 3-5 times can ensure you can deliver questions so they develop like a ‘natural conversation’. Section A2.4. Reflecting on your methods during a study provides more detail on how you can reflect on your methods during a study to continue improving your conversations with your participants.
A2.4. Reflecting on your methods during a study

As outlined above the methods used in qualitative research are extremely open. However, there are principles of qualitative research that help us improve the quality of our research. An individual collecting qualitative data, whether it be through a questionnaire, focus group and/or interview, is part of the conversations they have with their participants. Therefore reflecting on interactions with individuals, communities and places is an important process in qualitative research. These reflections can be used to improve future interviews, focus groups and/or questionnaires. For example, by altering questions so they are more effective in allowing conversations to develop (see Section B2. In the field for more details on this).

Additionally, you will make a series of decisions during a project. For example, the adaptations you make to your data collection methods so they are more comfortable for certain participants. It is important to be open about these decisions and explain why you have taken them.

This helps others understand why these decisions were made and will help you report your study in more detail at the end (see Section C3. Reporting findings for more details).

The following points are some considerations you can think about when making key decisions during your study: i) the specific individuals you have managed (or not managed) to involve (researchers and participants), ii) cultural values, iii) political situation and developments in this situation; and iv) history of a community and/or place.

Overall, the amount you can reflect on your study is based on how much time you will have to process, organise and analyse your qualitative data (see Section C: Processing Qualitative Data for more details on processing and analysis). Capturing reflections immediately after each interview, focus group and/or questionnaire is not always possible! Therefore, keeping a record of when you were able to reflect on your methods and the decisions you made is an important process to ensure openness and clarity regarding your study. Field diaries are a useful way to document your reflections (see Section B2.2. Field diaries for guidance on how to write a field diary).

If there is no time to reflect in the field, then going through your qualitative data in date order and reflecting on the findings once your interviews, focus groups and/or questionnaires have ended is an important process. Again, being open and honest about what you have done is an important step in producing a good quality qualitative study.
If we are interested in the research question, ‘how have changes in fish market sales influenced the home lives of fish market stall owners?’ you may decide to include a fish stall owner’s family in an interview. This would provide the opportunity for the whole family to talk about their opinions together. If you do conduct an interview in this way, the first step would be to reflect on how the family interacted with each other and yourself during the interview. However, if there are cultural sensitivities around discussing family life as a collective unit then interviewing the market stall owners alone would be more appropriate. In this case you would aim to reflect on how the views of their family members could have benefited or otherwise influenced your research. Include these reflections in your reports of the study.
B1. Qualitative Data Samples

The main aim of qualitative research is to gain an in-depth understanding of an issue and/or topic in a specific case. Therefore the main question to consider when sampling for a qualitative study is:

*What is appropriate for the specific case and your research questions?*

Your resources and timeframes, and the studied case, need to be prioritised when identifying how much qualitative data should be collected using your methods. This includes thinking about yourself, any others conducting the research, the community and the participants. In an ideal world you would involve everyone in the studied case in your study. However, this is rarely possible! *Purposive Sampling and Data Saturation* are two useful decision-making considerations to guide qualitative data sampling.
**Purposive Sampling** helps you identify a ‘minimum’ number of participants you should speak to. This is based on certain characteristics you may be interested in. You can then target these characteristics in a purposive sample.

**Example: Constructing a purposive sample using location and income.**

*If you are interested in rural/urban and high income/low income differences, the following sampling diagram can be constructed.*

![Diagram showing sample distribution by location and income](image)

This diagram highlights that your study must consider at least 4 characteristics. Therefore, the minimum number of questionnaires, interviews or focus groups to conduct in this scenario would be 4. Each participant would meet the differences you are interested in:
- Participant 1: Rural area and high income.
- Participant 2: Rural area and low income.
- Participant 3: Urban area and high income.
- Participant 4: Urban area and low income.
**Data Saturation** is a useful way to define an upper limit to your sample. Data saturation is when your study is not providing you with any new insights in relation to your research questions. As questionnaires, interviews and/or focus groups are conducted, you can use your reflections (see Section A2.4. Reflecting on your methods during a study) to think about whether your participants are talking about the same things over and again. Once you feel that there have been a series of conversations that have not added anything new to your study you may decide to finish your data collection.

Another way to think about data saturation is by coding your interviews, focus groups and/or questionnaires during your study (coding is covered in more detail in Section C2. Coding using a software package e.g. QDA Miner Lite). This is not always possible due to issues such as translation timeframes, and again what is most appropriate for your study should be prioritised. However, if you are able to carry out coding during your study you can judge whether you have reached data saturation based on whether the same codes are appearing over and over again.
If we refer back to the **how have changes in fish market sales influenced the home lives of fish market stall owners?** question, you may aim to interview all fish stall market owners in a particular region. Let's say there are 20. As you code your data (refer to [Section C2. Coding using a software package e.g. QDA Miner Lite](#)) and/or reflect on each participant you will be able to identify the common opinions and any new opinions that have been spoken about. If after 14 interviews you notice that your participants are all talking about the same things, you might be reaching data saturation. Therefore, you may end up not interviewing all 20 potential participants.

Note: It is important that the ‘data saturation’ decision you make is not ‘surface level’ i.e. if the fish stall owners are talking about the way reduced sales have impacted on their children, you need to go into more depth on the subject. For example, a stall owner talking about an impact on their child’s schooling compared to another who talks about affording clothing for their children should not be regarded as ‘the same topic / opinion’. However, if stall owners talk about not being able to afford schooling for their children across all of your interviews, this would be a moment to consider data saturation on that topic.

Once you start thinking about data saturation, it is recommended to conduct 2-3 more interviews. By doing so, you can make sure there are no ‘new opinions’ appearing.

**Example:**

**Data saturation**

This diagram shows how when you are coding (as outlined [Section C2. Coding using a software package e.g. QDA Miner Lite](#)) each new opinion is represented by a specific colour. When no new colours are appearing, this suggests that the same opinions are being spoken about over and over again. Therefore, data saturation may have been reached.
B2. IN THE FIELD

In any qualitative method, a researcher or interviewer and the respondents interact as in many conversations. Therefore, it is important to be aware that your attitude, language and choice of words can influence how a participant will feel and engage with you. You should pay attention to their reactions (e.g. body language and tone) that may give you clues about whether they feel confident and open with you.

After each interaction you should reflect on what you could have done differently to improve your interactions. Reflecting on these aspects can help you make your questions more relevant to your participants. For example, it is important to use the names of places or fishing gear that is familiar to the participants - even if they are not ‘formal’ names. Using the ‘commonly’ used name can be a useful way to build positive relationships and avoid confusion.
B2.1. Avoid leading questions

A leading question directs a participant into a line of conversation they might not have gone into themselves.

Overall, avoiding 'leading questions' is essential as they place your opinion and perception of a situation at the centre of a conversation. This might discourage a participant from expressing their own opinions. It is extremely important that participants are given the full opportunity to tell you what they want to and/or to develop their opinions if a question is related to something they have not previously thought about.
Example:
How a leading question can influence a participant

*Interviewer:* So do you think the lion fish jewellery you make helps to raise awareness about lion fishing?

*Participant:* I think a part yes

*Interviewer:* How so?

*Participant:* Erm because I thought erm... before I don’t know nothing about lion fish, but now I am one of the person that [makes jewellery] when I hear something about lion fishing I want to know more about lion fishing.

The example above shows one area of improvement and one example of good practice. The leading question is in BOLD. By directly referring to the positive impact of lion fish on awareness, a leading line of questioning is presented. Asking, “how do you think lion fish influence awareness around fishing?” would be more appropriate.

The good practice demonstrated in this is how the researcher asks the participant to elaborate on a short ‘yes’ response – this enables the researcher to delve into more detail in relation to the participant’s opinion.
Avoiding leading questions and identifying useful prompts for encouraging participants to talk about their own perspectives in detail is an essential part of qualitative research. Reflecting on questionnaires, interviews and/or focus groups helps you to do that.

Prompts are useful for:

1. **Enabling participants to give more detail**: if participants mention a particular experience relevant to your research question, you could follow up with prompts such as, i) who was there with you?; ii) what was being there like?; and iii) when did that happen?, to probe for more detail.

2. **Enabling participants to elaborate on their thoughts**: if participants talk about their perspective on an issue / topic, you can aim to ask about the reasons for their feelings by using prompts like, i) why is that?; ii) could you give me an example related to that?; and iii) could you tell me more about that?

3. **Gaining clarification on a point you are unclear about**: if you are not sure what a participant means while they are speaking, you could follow up with prompts such as, i) what did you mean by....?; ii) could you tell me more about that?; and iii) sorry about this, could you say a little bit more on that so I can make sure I fully understand what you mean?
Keeping a field diary helps you to reflect on what you have done and how to improve when conducting future questionnaires, interviews and/or focus groups. A quick-fire guide to field diaries can be seen below. These are only recommendations and do not have to be followed prescriptively.

### Points to consider

<table>
<thead>
<tr>
<th>Contextual Information</th>
<th>Conversational</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Date and time</td>
<td>1. What were the key things relating to your research question that the participant(s) mentioned? Yes / No questions are also an example of a closed questions</td>
</tr>
<tr>
<td>2. Location – including if a specific / unique event is taking place</td>
<td>2. Were there any opinions that you felt were particularly unique or that you had not thought about before?</td>
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<tr>
<td>3. Who did you speak to and how? For example, number of conversations, questionnaires, interviews and/or focus groups</td>
<td>3. If relevant to your research, were there any sensory descriptions participants used – sights, sounds, textures, smells, taste etc.</td>
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<tr>
<td>4. Keep notes in order – i.e. by using dates and page numbers</td>
<td>4. Note any positive or negative aspects of your interactions. i.e. Did anything cause tension? If relevant, were there any body language indicators at certain moments? i.e. laughter, sadness, sarcasm etc.</td>
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<td>5. Note any queries and/or points of confusion participants raised – can these be addressed/ avoided?</td>
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<td></td>
<td>6. If you have spoken to the person before, has anything changed since then? Did they express / indicate whether this was a positive / negative change?</td>
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</table>
Finally, **REFLECT** on the overall experience – focus on whether there is anything you would have reacted to differently or asked in a different way. Note these reflections and make any appropriate alterations to your data collection methods. Any changes you make should feature as reflections in your next field diary entry. In these reflections, you can assess whether the changes worked or whether they can be developed further.
As the previous two sections of this toolkit have highlighted, qualitative data is usually text and language based. This generates high volumes of written content – i.e. once interviews and/or focus groups are translated (if needed) and transcribed. This section will help in sorting the written data so that it can be dealt with in a manageable way. The key to working through large volumes of such data is to keep your research question(s) at the forefront of how you organise and analyse your data. If possible, discussing this data with others involved in the project and reaching agreement on how data should be organised and analysed (see Section C2. Coding using a software package e.g. QDA Miner Lite for more details on analysis) can help with this process.

This section explains the principles of coding and analysing qualitative data using computer assisted qualitative data analysis (CAQDAS) software. In our examples we use a free software package, QDA Miner Lite. There are many software packages that enable researchers to perform the basic steps of storing and organising qualitative data. Although the use of a CAQDAS is not compulsory to analyse qualitative data, it helps to do it in an organised manner.

You can save your data on the software package and use the package to organise it (see “C1. Indexing data”). Once you have organised your data, you can begin to highlight responses and specific opinions in relation to your research question(s). You can then sort similar opinions into categories and give each category a code (see Section “C2. Coding using a software package e.g. QDA Miner Lite”). Unfortunately the software will not analyse the data to define categories and codes for you, but ensures categories are easily accessed and ordered. This will help with reporting, which is discussed in more detail in “C3. Reporting findings”.

The categories you apply to your data are the codes you use to group opinions that are relevant to your research question. The rest of this section covers how we can ensure this process is carried out effectively.

This section will also cover key considerations when reporting qualitative data.

Overview resource – Tutorial to QDA Miner Lite: https://www.youtube.com/watch?v=EY9qDSFC6yw
**C1. Indexing data**

Indexing data involves assigning codes as categories to sections of a questionnaire, interview, focus group and/or field notes. This can enable you to access responses to the same and/or similar questions. This is most useful when the qualitative method used has a set of key questions.

**Example: Indexing using QDA Miner Lite**

This example shows the first three questions of a Blue Ventures Most Significant Change Survey once they have been saved on QDA Miner lite. The themes of the questions have been set to form categories – as can be seen in the small window to the bottom left labelled “CODES”. The codes assigned to specific responses will then appear under these categories.
The following video is a resource created by the software provider and, using a step-by-step approach, demonstrates how files can be uploaded to the software, and how categories can be added to your data: https://www.youtube.com/watch?v=IIU4MWjVsAI

The following parts of this section cover how codes can be assigned to your data to help with analysis. Two useful ways of doing this are covered – “C2.1 Structured coding” and “C2.2. Open coding”.
C2. Coding using a software package e.g. QDA Miner Lite

Two different approaches can be used for coding:

**Structured coding** enables you to assign codes to your data using a pre-defined set of categories. The themes of these categories can be led by your research project’s research questions.

**Open coding** lets your data lead the categories you decide to create and then use as codes. Therefore, it is a more interpretive process and useful for studies with broader research questions. See Section “C2.2. Open coding”.
C2.1 Structured coding
Structured coding enables you to apply a pre-defined set of codes to your qualitative data. You are structuring your participants' responses into existing categories.

Illustration
This diagram shows how your data is coded using an existing set of categories. Each category is shown by a different colour.
Example: Structured coding

If the Most Significant Change Survey was going to be used to explore the impacts of a programme on fishing then this can be added as a predefined category. Responses relating to fishing can then be collated under this category by assigning it to the data as a code. See below for an indication of what this would look like on QDA Miner lite:

Video: https://www.youtube.com/watch?v=IIU4MWjVsAI
More codes can then be added to the responses that relate to this predefined code. In the simplest case this may be whether a participant is speaking about fishing positively or negatively. See below:
C2.2. Open coding

In open coding, the codes and categories are constructed as you read through and reflect on the responses to your study. Reflecting on your codes ensures they are well thought-out and relevant to a study's aims. This reflection will enable you to detail why you have chosen the codes you have applied to your data. The quality of qualitative research is enhanced when a researcher is open regarding the decisions they have made and shows consistency with their codes from one participant to another.

Illustration

The ‘messy’ swirl in this diagram represents a complicated set of opinions your participants have expressed. This is usually the case when we try to understand a highly individualised issue i.e. when different people are influenced differently due to their specific characteristics and life circumstances. In such cases you can use the data itself to guide the categories you use to code all of your responses. Each time you read through and reflect on a new response you may decide to add a new category (represented by the smaller grids being added to the main grid). Ensuring each category is relevant to your research question(s) is key. Otherwise you may go on finding new opinions forever!
Overall, your research questions should be used to focus the open coding process.

**Example:**
**Open Coding Text**

**Categories and codes are added in the same way for open coding using QDA Miner Lite.** The extract below focuses on how individuals generate income. Therefore a researcher may choose to assign a code relating to 'new skills' or specifically 'sewing' (categorised under "income") as the respondent speaks about sewing as a new way to earn money. See below:

However, the extract touches on some other influences. These can be coded if relevant to a study's research question. An example could be around a study which wanted to explore income and the influence of income on families. The respondent speaks about how they wanted to learn to sew after they had children and how their husband helped them with some paperwork as they were unable to read the papers.

In this case your coding decisions may be as follows:

- If your study is interested in general influences on income then 'influence of children' and/or 'spouse support' may be the code you decide to apply here. “Family influences” may be an appropriate category for these codes.

- However, if a study is interested in gendered findings, this data could be coded to reflect this. Highlighting the difference between women and men in relation to literacy levels would be appropriate here. For example, the code 'gendered literacy' could be added here and "Gendered roles" may be an appropriate category for these codes.
C3. Reporting findings

The quality of reporting qualitative findings is led by detailing the following points:

1. The decisions you made

2. The specific characteristics of your studied case in relation to your research question(s). Considerations to detail could include, but are not limited to, community characteristics, participant characteristics, specific places, cultural settings, political situation and history

3. the relationships, roles, and responsibilities of those involved in your study – including yourself

Your report(s) should provide as much detail as possible on the studied case and your reflections throughout a study. By reporting in this way you are showing what data was generated during your study and how this was influenced by the important characteristics of your specific case. If you are reporting to a specific audience who are interested in a particular part of your research, this can be highlighted in the introduction. Such reports can then focus on providing as much detail as possible regarding the audience’s specific interests.

Illustration

This scene depicts how you (the researcher) and your participants are ‘active’ in the data collection process during a qualitative study. Your data is formed by the conversations you have with your participants. The reporting of your study should reflect this two-way process and the opinions of each participant should be represented as best as possible. If possible, include your reflections during the study when reporting to add more detail.
QDA Miner Lite can help the reporting process as responses relating to specific categories and/or specific codes can be collated into one document. Right click on the category or code and click “Retrieve segment”. See below:
This feature enables you to easily include the relevant opinions your participants have spoken about in relation to your research question(s). A second feature of QDA Miner Lite useful for reporting is the “Coding Frequency” option. The ‘Coding Frequency’ is a quick way to see whether something you have coded is a unique opinion or widely shared amongst your participants. To access this feature click on the “Analyze” tab at the top of the screen and then click on “Coding Frequency”.

The pop-up page allows you to select a single code or multiple codes. Use the drop down menu by “Selected” to reveal the codes assigned. Once the codes are selected, click “Search” and the results appear as such (in the case below only “Fishing” was selected).
The percentages depicted by the results show how many of the cases included a particular code and what proportion of the overall codes a particular code (or combination of codes) make up.

**IMPORTANT:** These percentages should **not be interpreted as a statistical result**! The purpose of qualitative research is not to explore trends or measure something. Therefore, these percentages should be used as a guide to show the core opinions that were spoken about i.e. codes that occurred more commonly across all participants. The **codes that occur less often are as important as the more common codes**. They show the opinions that are more unique and this is usually because they are influenced by a specific characteristic. These opinions can inform the aims of a future study to investigate the reasons behind these more unique perspectives in more detail.
Taking such a view of the qualitative data provides an excellent idea of the 'norms' in a case (crudely the more common codes) and how some participants differed from these 'norms' (crudely the codes that occur less) with their opinions. Therefore, you will be able to demonstrate a 'full picture' of where, from who and how the responses to your research question(s) developed, and how these fit together in your studied case.

Example:
Talking about your findings

If you use the question 'how have changes in fish market sales influenced the home lives of fish stall owners?' as a guide, you may identify that some fish stall owners experienced less change or even no change in their home lives due to falling sales. This may have been in households where the fish stall owner has a working spouse and their income has improved. This may be a less common feature of the researched community but it is an important one to understand!

Illustration

This diagram shows how a study can identify opinions that are shared by its participants (represented by the pipes) in relation to your research question(s). In addition to this, some opinions can be extremely unique (represented by the splashes) and influenced by characteristics which are different to the norms in a case. When reporting on a study these opinions must be covered alongside the shared opinions. They are part of and important to your study.
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