Choosing a Method

There are an enormous number of print and internet resources available on how to do research and evaluation. Add to this the volumes of information offered on specific methods and choosing a single method or combination of methods can seem like a daunting task. Luckily, the best starting place for choosing a method does not begin with the research literature or other resources but your own idea or project. What you are trying to find out should guide your choice of methods. Consider the following questions when making your choice (Patton, 2002):

- What are you trying to learn?
- Who is the information for and who will use the findings?
- What kind of information is needed?
- How will the information be used, or what is the purpose of the evaluation or research project?
- When is the information needed?
- What resources are available to collect and analyze the information?

Other Tips:
- Take time to become familiar with the basic tenants of both qualitative and quantitative methodology (including their underlying philosophy and assumptions). This will give you a starting place and make your choice more informed.
- Take time to explore methods others have used in similar studies.
- Consider choosing a method that you understand well or have the time to learn about. This also applies to both data collecting and analysis.
- Have core methodology textbooks on hand for easy reference.
Quantitative Methodology

What is quantitative methodology?
Quantitative studies examine the facts or causes of phenomena, which can be expressed numerically and analyzed statistically. These types of studies are concerned with generalizability and are designed to test hypotheses. They are empirical, use structured methods, and examine the relationship between variables (Bryman, 2003).

How is quantitative data collected?
There are many pre-existing sources of quantitative data that can be used for research or program evaluations. Common data sources include:
- surveys
- standardized clinical tools or tests
- official statistics databases (e.g., census data)
- administrative databases

When quantitative data is collected for a specific evaluation or research project it is commonly collected through surveys and often uses rating scales and pre-determined response categories. Surveys can be done over the phone, internet or in-person (e.g., paper and pencil). Other methods include structured observations or interviews and content analysis. A key consideration when collecting quantitative data is to collect enough to allow for statistical analysis.

How is quantitative data analyzed?
Quantitative data analysis is synonymous with statistical analysis. Today, almost all quantitative data analysis is done with statistical software packages. Common programs are SPSS and SAS. Crystal reports is another program commonly used by government ministries or other large organizations. Data can be entered directly into these programs or imported from other programs that are designed for entering and managing data such as Microsoft Access or Excel.

Quantitative data analysis generally follows the process outlined in Figure 1. Data analysis begins with preparing and cleaning your data. This involves exploring the quality of your data to see how much information is missing and determining if you need to construct new variables by combining, calculating or recoding variables. This can be time consuming but is important for ensuring the reliability of your results. Next, it is a good idea to explore your data by running various descriptive statistics. This will help you become more familiar with the data and help you decide what statistical procedures will be best for your analysis. Once you are confident in and familiar with your data you can run the statistical procedures needed for your analysis and to interpret your results. After you have interpreted your results, it is good practice to verify your findings. This can be done by checking if they align with expectations about the outcomes of your study or with findings from similar findings or by having someone review your analysis. Once this is done, you can prepare the final presentation of your results.

Examples of when to consider using quantitative methods:
- When you want to confirm a specific hypothesis or theory.
- When you want to generalize results beyond your study.
- When trying to predict the outcome of a program or intervention.
- When you want to find out how prevalent or widespread a problem or issue of interest is.
- When you want to explore service use patterns.
- When measuring satisfaction with programs or services.
- When measuring awareness of a problem or topic of interest.
Qualitative Methodology

What is qualitative methodology?

Qualitative studies are more in-depth and flexible than quantitative studies. According to Spencer et al. (2003), qualitative evaluation or research “aims to provide an in-depth understanding of people’s experiences, perspectives and histories in the context of their personal circumstances or settings” (p. 3). It is more inductive than deductive (or hypothesis generating rather than hypothesis testing), considers context, and recognizes the role of the evaluator or researcher in the evaluation or research process (Silverman, 2000).

How is qualitative data collected?

Qualitative data can be text based, oral or pictorial. It is typically collected in a natural setting (i.e., not laboratories or controlled environments) and involves watching, asking or examining. Three principal data collection methods are:

- observations
- interviews
- document review

Other methods include focus groups, case studies, narrative or discourse analysis, and many more. Qualitative data collection methods are unstructured or semi-structured. This means that interviews use open-ended questions and let the interview progress naturally rather than following a pre-defined script. Observations and document reviews are typically exploratory in the sense that they do not impose pre-defined categories. Instead, themes and categories are generated from the observations or documents themselves.

How is qualitative data analyzed?

In qualitative evaluations or research, data collection and data analysis are not viewed as entirely distinct activities. Analysis begins with data collection. During data collection, decisions are made on the data to include or exclude and preliminary organization and interpretation of the data takes place.

According to Miles and Huberman (1994), qualitative data analysis generally involves three activities:

- data reduction
- data display
- conclusions and verification

Analysis begins with data reduction, but these three activities are not entirely sequential and will often overlap. Qualitative data collection methods often generate large amounts of information making data reduction an important process. Data reduction involves sorting, coding and classifying information as well as identifying themes and writing summaries. This will require you to read and re-read your information multiple times. Coding sheets or templates for organizing your data may be developed for this purpose. Qualitative data analysis software, such as NVIVO or ATLAS-ti, can also be used for sorting, coding, and organizing data.

Once your data is organized in a more manageable format, your data can be displayed in a form that is accessible and easy to see what is happening. This can include creating matrices, concept maps or charts that depict the relationship or linkages between the categories or identified themes. Once this stage is complete, conclusions can then be drawn and verified. Analysis software can also assist with these processes. Similar to quantitative studies, verification in qualitative studies can involve having others review your analysis and checking to see if your findings align with expectations about the research or the results of similar studies.

Examples of when to consider using qualitative methods:

- When you want to understand people’s perspectives and experiences.
- When you want a more detailed, in-depth understanding of a particular problem or issue.
- When you want to document the history of a program or person.
- When there are only a small number of potential participants in your research.
- When you want to explore a concept or generate a theory.
Mixed Methods

What is mixed methods evaluation or research?

Mixed methods studies involve mixing or combining qualitative and quantitative methods, approaches, and concepts in a single study (Creswell, 2009; Johnson & Onweugbuzie, 2004). This is something that is often done in evaluations and can be either sequential or concurrent. An example of a mixed methods study that is sequential would be a program evaluation that documents service use patterns of its clients to determine if they are using more or less services and also interviews some clients to find out their perspective and experience with the service. Conversely, qualitative and quantitative methods may be combined in interviews that include both open-ended questions and rating scales or other predetermined response categories, where the data are analyzed and presented in an integrated fashion. Qualitative and quantitative methods can have an equal status in the study or one can be dominant.

Key features of mixed method studies:

- pragmatic
- comprehensive
- complementary
- includes both induction (discovery of patterns) and deduction (testing hypotheses/theories)
- involves triangulation

Pragmatism in this context means that your choice of methods are guided by practical considerations, such as taking into consideration the data that is already available or is easily accessible, as well as the data collection and analysis techniques that will provide the most reliable and complete answer to your questions. Triangulation is also meant to increase the strength of your study by using a variety of data sources, involving multiple researchers or evaluators or using multiple perspectives to interpret your data (Patton, 2002). When mixing qualitative and quantitative methods it is important to keep in mind the different assumptions and principles these methodological approaches are based on and decide, in the context of your study, whether they can be combined and still generate trustworthy results.

Examples of when to consider using qualitative methods:

- When you want to first explore a problem or issue before designing and undertaking a large-scale survey.
- When you are interested in both the prevalence of a problem or issue but also want to understand how it affects individuals.
- When you want to test specific hypotheses, but you are also open to generating alternative ones.
- When you want to include both numerical and narrative results in your research.
- When you want to generalize qualitative finding beyond the individuals or program studied.
- When you want to study complex interventions or problems.
- When you want to answer ‘why’ and ‘how many’ questions in the same study.
References


