

# Differences between qualitative and quantitative research methods

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## Quantitative and Qualitative Methods

As outlined in the previous chapter, the AIMS/SEEP approach to impact assessment by and for practitioners combines quantitative and qualitative techniques. The Impact Survey and Client Exit Survey are categorized as quantitative tools because they collect standardized information by asking exactly the same questions to clients and organizing their answers into quantifiable response categories. The individual Loan Use Strategies Over Time and Client Empowerment interviews and the Client Satisfaction focus group discussions are qualitative instruments that gather more detailed information through a more flexible, in-depth dialogue with clients. AIMS believes that these two categories of tools are complementary, each providing different types of information that enable evaluators to gain a more complete, richer picture of impact than would be possible with only one.

This chapter's overview to quantitative and qualitative approaches presents the differences between the two techniques and provides general guidelines for their application. The interviewers' roles and responsibilities for both quantitative and qualitative techniques outlined here apply to all the corresponding tools presented in this manual.

## Quantitative? Qualitative? What Is the Difference?

This section explores the differences between quantitative and qualitative methods. One point of view is presented in Figure 3-1, Quantitative versus Qualitative Indicators.

**Figure 3-1.**

**Quantitative versus Qualitative Indicators** *"More tends to be made of the distinction between qualitative and quantitative data than is warranted. Not everything that is important can be counted, and much that can be counted is not worth knowing.... The quantitative-versus-qualitative debate is not an either/or question.... Within the context of USAID's performance-based management systems, the choice of more quantitative or qualitative indicators involves trade-offs among practicality and cost, objectivity and comparability, and the directness or validity of the measure."*

Excerpt from *Performance Monitoring and Evaluation TIPS, Guidelines for Indicator and Data Quality*, No. 12, (1998). USAID Center for Development and Information and Evaluation.

The quantitative approach, with proper sampling, allows for the measurement of many subjects' reactions to a set of questions. Because each question has a limited set of answers, the results can be compared and analyzed statistically; they also can be generalized to a larger population within known limits of error (Warwick and Lininger, 1975; Patton, 1986). Qualitative methods provide the context against which to more fully understand those results. They capture what people have to say in their own words and describe their experiences in depth. Qualitative data provides the texture of real life in its many variations; it gives insight into the reasoning and feelings that motivate people to take action. In short, quantitative methods are standardized, systematically obtaining succinct responses from as many clients as possible. A qualitative approach provides

greater richness and more detailed information about a smaller number of people (Patton, 1986). Which approach is more appropriate for any given evaluation exercise will depend on its specific objectives. Given the relative strengths and weaknesses of the two approaches and the varied purposes they serve, good-quality impact assessments increasingly employ both methods.

Figure 3-2, Differences Between Qualitative and Quantitative Inquiry, outlines some of the differences between qualitative and quantitative inquiry with examples from the tests of the AIMS/SEEP tools. *(Note: Although the small sample sizes cited in this table were sufficient for the purposes of a test, an actual application of the tools to evaluate a program would require larger sample sizes. See chapter 4, part E, for guidance on sampling.)*

### **Quantitative Methods and the Quasi Experimental Approach**

In the early decades of evaluation and social science research, a quantitative, quasi experimental design predominated, and many practitioners still associate good evaluation practice with this method. Drawing its basic statistical and experimentation techniques from agricultural research, this approach determines a program's effectiveness through rigorous comparison of a "treatment" group (those receiving program services) and a "control" group (those not receiving services). [11] (Patton, 1986). The sample or standard survey is its most common data collection instrument. Experimental design does offer options that differ in the degree of rigor required in the selection and composition of these groups, but its "scientific" features include the following:

- \_It is "deductive" in that specific research hypotheses and main variables are specified in advance of data collection;
- \_Respondents (both treatment and control groups) are selected according to random sampling methods that enable results to be generalized to the wider population targeted by the evaluation (for example, all program clients);
- \_Results are quantified and analyzed using tests of statistical significance that permit comparison of treatment and control groups, ideally with pre- and-post-test measures.

These features provide the findings with a high degree of credibility for many decision makers. The weakness of the approach is the difficulty of establishing controlled conditions in the real world and its insensitivity to complexities and subtleties in human interaction (Stecher and Davis, 1987).

**Figure 3-2. Differences Between Qualitative and Quantitative Inquiry**

<b>Qualitative</b>	<b>Examples from the tools tests</b>	<b>Quantitative</b>	<b>Examples from the tools tests</b>
<b>Lower number of respondents</b>	Honduras and Mali, approximately 12 clients per individual tool and 6 focus groups	<b>Higher number of respondents</b>	In Honduras and Mali between 72 and 96 respondents were included in the Impact Survey.
<b>Open-ended questions and probing yield detailed information that illuminates nuances and highlights diversity</b>	Loan Use Strategies Over Time tool demonstrates the diversity and complexity of how clients vary their loan activities over time	<b>Specific questions obtain predetermined responses to standardized questions</b>	Impact survey results reported the percent of clients who believed their enterprise income had increased in the last year and whether significantly more clients than non-clients reported increases
<b>Data collection techniques vary</b>	Focus group discussions and in-depth individual interviews	<b>Relies on surveys as the main method of data collection</b>	Impact Survey and Client Exit Survey
<b>Control group not required</b>	In Honduras and Mali, only participants' views obtained	<b>Control or comparison groups required to determine program impact</b>	Comparison groups were composed of incoming clients who had not yet received program services
<b>More focused geographically (limited use of vehicles)</b>	Specific locations identified for special characteristics; for example, urban vs. rural, vendors vs. manufacturers	<b>More dispersed geographically (more use of vehicles)</b>	In Mali, three categories of communities (towns, large villages, small villages) with three categories of clients (one-year, two-year, and incoming)
<b>More varied techniques in data analysis</b>	Simple content analysis is applied with the Loan Use Strategies Over Time and Client Empowerment tools, with a focus on grouping similar responses	<b>Relies on standardized data analysis.</b>	Use of Epi Info software to report descriptive statistics (prevalence and means) and to test for statistically significant differences between sample groups

Qualitative	Examples from the tools tests	Quantitative	Examples from the tools tests
<b>More suitable when time and resources are limited</b>	Interviews took one to two hours to conduct, but fewer were done	<b>Relies on more extensive interviewing</b>	Impact Survey takes 45-60 minutes with each client and done with large number; Client Exit Survey takes 25 minutes
<b>Empowering and participatory</b>	Asks for participants' reflection on their experience	<b>Not empowering</b>	Areas of inquiry are predetermined
<b>Sampling depends on what needs to be learned</b>	Clients selected by key variables; for example, gender, time in program, type of loan obtained	<b>Sampling focus is on probability and "representativeness"</b>	Considerable effort to randomly select clients within stratified samples to ensure "representativeness" of results and comparability of sample groups
<b>Provides information on the application of the program in a specific context to a specific population</b>	In Honduras, the Loan Use Strategies Over Time tool highlighted differences between individual and village bank clients	<b>More likely provides information on the broad application of the program</b>	In Mali, stratified samples clarified differences between rural and urban areas, but responses also pooled for general comparison to non-client group
<b>Explores causality</b>	Generates hypotheses	<b>Suggests causality</b>	Tests hypotheses

(Patton, 1990; Gosling and Edwards, 1995; Carvalho and White, 1997)

Of the two AIMS tools categorized as "quantitative," the Impact Survey is more influenced by this tradition and approach. Within the basic framework of the quasi experimental approach, SEEP has chosen the most practical options. To provide valid evidence of program impact, the survey addresses selected hypotheses and measures predetermined outcome variables. Survey results are quantified and comparisons made between randomly selected clients (the treatment) and a comparison group of incoming clients using statistical tests. While the Client Exit Survey also quantifies responses, its purpose is to systematically document the experience of ex-clients rather than test specific impact hypotheses.

The validity (accuracy) and objectivity of any quantitative-oriented evaluation will be highly dependent on the following five issues:

- \_Whether its hypotheses, design, and findings are based on an in-depth understanding of the clients (or subject of evaluation, the treatment), the impact processes, and the possible effects of external factors;
- \_Whether the sampling methodology is randomized and therefore likely to provide representative results;
- \_The quality of the data collection instrument (the survey);

- \_The quality of the data collection process, including interviewer technique and supervision; and
- \_The quality of the analysis (including data coding, cleaning, inputting, and analysis).

Can practitioners, skilled in the daily routines of providing financial services to micro-entrepreneurs, possibly satisfy these criteria: Issue #1 underscores how important it is that the survey instrument be tailored to the specific program, the context of the program, and the impact questions. Here, practitioners' in-depth knowledge of their programs is a real comparative advantage. A challenge, on the other hand, is the common lack of formal research skills among program staff. Many of these skills are introduced in this manual. Guidelines for sampling are offered for each tool in subsequent chapters. In our experience, practitioners can follow these guidelines to construct a valid sample if they take the time. Issues #3 and 4- instrument quality and interviewer technique-require training and practice. Applicable to both the impact and Client Exit Survey, these issues are addressed next.