Chapter 5 Data Analysis- The Construction Phase

Devaluation, where you create a structure from your raw materials. It is the process of taking the data you have collected (e.g., the responses on a surveys or journal entries) and organizing the information in such a way as to be able to draw conclusions. There are various ways to look at the data in order to draw conclusions. First, you must determine the type of analysis appropriate for the data collected. Some of the techniques for qualitative data include content and case study analysis. For quantitative data, the most common techniques are frequencies, percentages, and means. With outcome data, the results of analysis should enable you to answer the question "What changed for your service recipients during your program year?" See "Data Analysis" in the reference section for more information.

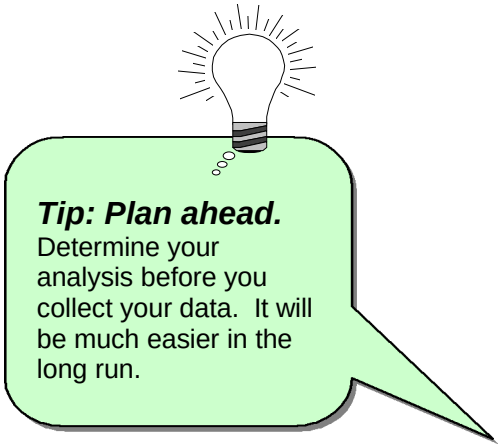
Background Concept:

Statistical Analysis

If you feel that your data might be adequate for higher level statistical analyses, you may want to seek the assistance of someone with knowledge about statistics. Be aware that unless you have used an experimental design to collect your data, these types of analysis may show a relationship between your service and an outcome, but they will not prove that your program efforts caused the outcomes.

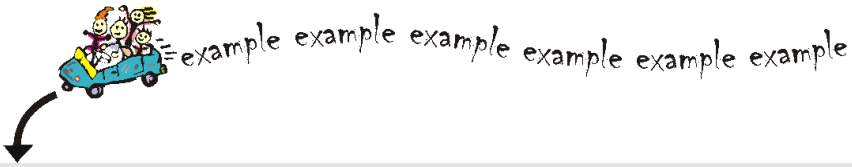
When analyzing your data, consider both the type of data and the resources. Statistical analysis other than frequencies, percentages, and means may require the assistance of an outside expert. Large amounts of text may require a significant commitment of time to analyze effectively. There are specialized software programs for analyzing both qualitative and quantitative data. If your evaluation involves a large amount of data, it may be efficient to purchase a software program to assist in data storage and analysis.

Data Analysis Plan



Your data analysis starts with developing a plan that reviews each question on an instrument. This plan will determine how to analyze the data to yield useful information. A data analysis plan will provide a consistent structure for the analysis. You can use a blank questionnaire or interview guide to outline the plan. After each question, note the analytic technique you plan to use. See the sample survey in "Data Analysis" in the reference section.

Once you have determined which analytical technique will provide you with the most meaningful information, assign a code to each answer. The codes will allow you to tabulate and analyze the data in an organized fashion. It is often helpful to enter the data into a database or word processing program that can assist in the data analysis. Another option is to summarize or tally the data on paper.



1. How would you rate the usefulness of this presentation?

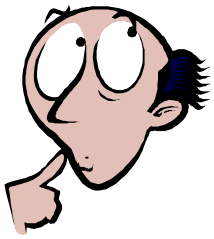
- ☐ 1 Not Useful
- ☐ 2 Somewhat Useful
- ☐ 3 Very useful

Frequency: Out of forty respondents, thirty individuals answered "somewhat useful" and ten individuals answered "very useful."
Percentage: 25 percent of the individuals answered "very useful."

Use only data that are collected consistently and systematically. Data should be "cleaned" to remove incomplete or incorrect data. While these data will not be included in the analysis, they should be stored with a record of the analysis for future reference. They also provide information about how the instrument might be improved.

Consider This:

Match the type of analysis used to the type of data collected. For example, it would make sense to put participant ages in numerical order and use it to calculate an average. However, it would not be appropriate to calculate an average for items that ask for a respondent's address. You can place open-ended responses to a question about favorite activities in categories of similar responses and count the answers that fall into that particular category.



Qualitative Data

For AmeriCorps programs, the most useful analytical techniques for qualitative data will probably be content and case study analysis. ***Content analysis*** consists of reviewing written documents (journals, observation notes, open-ended survey questions) or the text of spoken data (interviews or focus groups). As the evaluator reviews the material, he or she assigns codes to pieces of text that represent either *important concepts*, *common patterns* between respondents, or *distinct responses* by different subgroups. Isolate text associated with each code and then group it together by category. Categories can be *predetermined* (chosen at the time the instrument is developed) or *emergent* (chosen after examining the data).

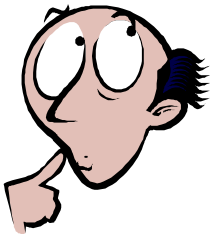
Case study analysis requires the collection of identical sets of data on individuals or groups (e.g., demographic profiles, family relationships, and responses to specific events). You can use each case as a data point or a comparison with one another. Conclusions from both types of analysis can be presented in text or table format.

Consider This:

It may be possible to use data analysis that is already occurring, particularly when you are using existing data. For example, school offices may track and report on attendance of chronically truant youth on a regular basis. Other community-based organizations may have systems in place to provide reports on clients. When planning your program's data aggregation and analysis, take time to find out what analysis is already being conducted and avoid duplicating efforts when possible.

Quantitative Data

For quantitative data, the most common type of analysis techniques will be frequencies, means, and percentage distributions. ***Frequencies*** refer to the number of instances a specific response was given. After calculating a frequency, you could also identify the ***mode*** or the response that occurs most frequently. A ***mean*** (or average) is the sum of the responses to the item divided by the total number of all responses. A ***percentage distribution*** tells you what proportion of the respondents chose a specific answer.



Consider This:

If your program is using non-traditional instruments such as rubrics or portfolios to assess student progress, you may find yourself with large amounts of handwritten information to process. Try examining samples of participant writing at several points throughout the program. Data of this type can give a very clear picture of progress; however, it takes a great deal of time to analyze. The time needed to analyze written comments depends on the amount of comments to be examined, the method of analysis (e.g., use of writing rubric, examination for key points, check for spelling and grammar), and the skill of the rater. The best way to know how much time to allot for analysis is to do a "dry run" through your analysis process.