Data Analysis, Synthesis, and Interpretation

This tip sheet will help you complete the **Data Analysis, Synthesis, and Interpretation** section of the Evaluation Plan and Step 5 of the evaluation process.

Basis for Judgment

When justifying the conclusions or results of your project, you need to establish what you measured them against. Setting the level for success (e.g., benchmark) helps your stakeholders decide on an acceptable measure for the program. It is important to have this discussion early in the evaluation process so that everyone has the same understanding. This step of justifying conclusions involves more than just analyzing and comparing data. It also includes interpreting your findings and judging them against an established basis. Different stakeholders will judge findings differently. You need to build consensus on the basis for judgment with stakeholders early in the evaluation process because this information guides how the data will be interpreted.

Examples

- Program missions, objectives
- Program theory of change
- National objectives
- Theoretical performance
- Past performance
- Performance of similar programs
- Program protocols and procedures

- Needs of participants
- Effects observed in other contexts
- Community values, expectations, norms
- Resource efficiency
- Mandates, policies, regulations, laws
- Judgments by participants, experts, funders
- Stakeholder values

Data Analysis

Data analysis is the process of organizing and classifying the information you have collected, tabulating it, summarizing it, comparing the results with other appropriate information, and presenting the results in an easily understandable manner[1]. Here are some examples of qualitative and quantitative analysis.

Qualitative Analysis Examples

- Content analysis
- Domain analysis
- Discourse analysis
- Policy analysis

Quantitative Analysis Examples

- Frequencies or simple counts
- Statistical tests for differences
- Multivariate modeling
- Trends over time

For more information about different analysis methods, see:
(https://www.betterevaluation.org/sites/default/files/Describe%20-%20Compact.pdf)

As you analyze your data, consider the following:

- What are the emerging patterns?
- Are there differences between certain groups or characteristics?
- Is the difference notable or statistically significant?
- Would the results be different if analyzed in another way (e.g., disaggregating, grouping)?
- What areas require additional analysis, information, or discussion with stakeholders?
- How will the data be displayed?

Below is an example of a data analysis plan that can help with planning.

Variable	Data Transformation	Analytic Technique	Data Visualization
What is the variable being analyzed?	*What coding or transformation needs to happen?*	*What test, stratification, or other techniques will be used?*	*How will results be visualized?*

Data Synthesis

Data synthesis brings together results and examines the findings together for patterns of agreement, convergence, divergence, or discrepancy.

As part of this step, triangulating your findings involves organizing all of the results effectively. Finding the best way to organize, compare, and display all findings in a way that makes sense for your evaluation is an art and science.

When triangulating, you are corroborating findings from different methods and perspectives, comparing the evidence, and dealing with discrepancies. Consider the following during data synthesis:

- Would the results be different if the evidence were collected differently (e.g., different data sources, groups, measures, design, time, level)?
- What areas require additional analysis, information, or discussion with stakeholders?
- Are the findings consistent or contradictory?
- Are your results consistent with theories supported by previous evaluations or research?
- What are the limitations of your data analysis and interpretation process (e.g., potential biases, generalizability of results, reliability, validity)?
- If you used multiple indicators or different data collection methods, did you get similar results?
- How do your results compare with those of similar programs?

Consider these examples for organizing your data:

- Theory of change
- Program component
- Evaluation question
- Criteria or standards
- Program goal
- Emerging themes

Data Interpretation

Data interpretation is the process for making sense of the evaluation findings based on the context of the program. This will involve judgement against basis or standards, if any.

Involving stakeholders in the interpretation of evaluation findings leads to deeper understanding and facilitates the use of the data. Participatory techniques, such as data placements or data parties, help you engage stakeholders in interpretation. For more information about these techniques, see
http://www.pointk.org/client_docs/innovation_network-participatory_analysis.pdf.

As you and your stakeholders interpret the findings, ask yourselves these questions:

Are there alternative explanations for any of the findings?

Are there recommendations or immediate actions that stakeholders can take? What are longer term actions?

Are your results what you expected? If not, why do you think they are not?

How do these findings answer the evaluation questions?

Will others interpret the findings in an appropriate manner?

What are explanations for negative findings? Do data need to be analyzed a certain way to diagnose the problem?

Are there any key takeaways for stakeholders?