CORE GUIDE / 05

# Data Analysis & Interpretation

Move from rows of data to patterns, comparisons and careful conclusions.

| START WITH A DECISION, NOT A FORM. | Ask what decision the evidence should inform before deciding what to measure. |
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## The essential idea

Analysis is the process of turning data into an answer to a question. It includes cleaning, describing, comparing, disaggregating, interpreting limitations and deciding what deserves action.

| WHY IT MATTERS | The analysis method should fit the question and data type. |
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## Start with the question, not the chart

The analysis method should fit the question and data type.

- Use descriptive statistics to understand levels and distributions.
- Use pre-post comparison to examine change over time.
- Use cohort analysis to follow a defined group.
- Use disaggregation to examine who is benefiting differently.
- Use qualitative coding to identify recurring themes and explanations.

## Interpret with care

A pattern is not automatically a causal conclusion. Look at context, implementation and data limitations.

- Compare the result against baseline or expected trajectory.
- Check sample size and missingness.
- Triangulate with other sources.
- State what the evidence cannot establish.

# Worked field example

A school network sees overall reading improvement, but Grade 3 growth is much slower than other grades.

| Programme question | Evidence to use | Decision it can support |
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| Which grades and student groups show the strongest and weakest reading progress? | Baseline/endline scores, attendance, class size, teacher observation data and support logs. | Prioritise Grade 3 support and investigate whether teaching practice, attendance or curriculum pacing explains the gap. |

# Try it in your work

- Choose one management question and list the minimum analysis needed.
- Create a simple disaggregation table before designing a chart.
- Write one conclusion and one limitation for each major result.

### Common mistakes

- Using averages that hide variation.
- Choosing charts before deciding what needs comparison.
- Presenting correlation as proof of causation.

### A stronger habit

- Use a one-page analysis plan.
- Show denominators and sample sizes.
- Pair every result with a possible action or further question.

| REFLECT | What could your team stop collecting because it does not currently support a decision, accountability requirement or learning conversation? |
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