

Data-Driven Storytelling

Creating Engaging and Informative Presentations

Course Framework Guide: The DISCOVER Model

This guide provides a structured, end-to-end framework for walking course participants through the complete data storytelling process, from a raw dataset to a finished, audience-ready presentation.

The DISCOVER Framework Overview

The DISCOVER Framework is a seven-stage process that guides practitioners through every step of turning raw data into a compelling narrative.

Stage	Name	Core Question
D	Define the Problem	What are we trying to understand?
I	Inventory Your Data	What do we have, and what are its limits?
S	Scrutinize for Bias	What might be distorting our view?
C	Choose Your Story	What is the single most important finding?
O	Organize the Narrative	How do we structure the story arc?
V	Visualize Intentionally	How do we design visuals that serve the message?
E + R	Engineer & Reflect	How do we deliver it — and improve it?

D — Define the Problem

"Start with the question, not the data."

Before opening any spreadsheet, participants must anchor themselves to the original problem or decision that prompted data collection. This stage prevents the most common storytelling failure: presenting data with no clear purpose.

Key questions to answer at this stage:

- What was the original problem or decision that prompted data collection?
- Who are the stakeholders and what do they care about?
- What does success look like — what action should the data inform?

Course Exercise

Participants are presented with a scenario. Write down 3 questions you would want to answer before touching any data. Share and discuss as a group.

I — Inventory Your Data

"Know what you have before you decide what matters."

Participants examine both datasets — the survey and enrollment records — and develop a clear picture of their structure, scope, and limitations before drawing any conclusions.

Key questions to answer at this stage:

- What datasets do you have, and what time period does each cover?
- What are the variables or fields in each dataset?
- What are the limitations — sample size, response bias, or missing data?
- What questions can each dataset answer, and what can it not answer?

Course Exercise

Participants are provided with a data dictionary or sample of both datasets. List what questions each dataset can and cannot answer. This surfaces assumptions early and builds critical thinking habits.

S — Scrutinize for Bias

"The data doesn't lie — but our interpretation might."

Participants learn to identify the common cognitive and methodological biases that distort data interpretation.

Key biases to cover:

- Selection Bias: Who responded to the survey vs. who didn't?
- Confirmation Bias: Are we looking for data that supports what we already believe?
- Survivorship Bias: Are we only seeing students who enrolled?
- Correlation vs. Causation: Enrollment dropped and satisfaction dropped. Did one cause the other?

Course Exercise

Ask: "What story would you tell? What's missing?" Let the debate unfold.

C — Choose Your Story

"You can't tell every story. Choose the most important one."

Participants learn that having many findings is not the same as having a story. They must evaluate which finding most directly connects back to the original problem and is supported by the data.

Use this prioritization tool to evaluate findings: *answers have been pre-filled as examples*

Finding	Relevant?	Actionable?	Supported?	Use It?
Satisfaction rates vary by program	Yes	Yes	Yes	Yes
Most respondents are current participants	Yes	No	Yes	Maybe
Survey had 35% response rate	Caveat	No	Yes	As a caveat
Enrollment grew in certain programs	Yes	Yes	Yes	Yes

O — Organize the Narrative

"Data points are not a story. A story has a beginning, middle, and end."

Participants learn to structure their findings using a classic storytelling arc: *Problem → Tension → Resolution*. This structure works for executive presentations, written reports, and dashboard narratives alike.

The three-part story arc:

- Beginning (Context): Here is the situation and what we set out to understand.
- Middle (Complication): Here is what the data revealed — including the surprises.
- End (Insight + Action): Here is what it means and what we should do about it.

Course Exercise

Give participants 5 data findings. Have them arrange the cards into a narrative sequence, then explain their reasoning to a partner.

V — Visualize Intentionally

"Every chart is a design decision. Make it on purpose."

This stage directly reinforces the course's core learning objectives: declutter visuals, focus on impact, and clarify the message.

Principles to cover:

- Choose the right chart type for the relationship you are showing (comparison, trend, part-to-whole, distribution).
- Remove everything that does not serve the message: gridlines, 3D effects, legends that are obvious, dual axes.
- Use color to direct attention, not to decorate.
- Add annotations — let the visual speak the conclusion, not just show the data.

Course Exercise

Show the same data in two ways: a default, cluttered Excel chart and a cleaned-up intentional version. Ask participants to name every change made and explain why each one improves the communication.

E + R — Engineer the Experience & Reflect

"Presenting data is a performance, not a report."

The final stage focuses on delivery and iteration. Participants practice presenting their one core slide and receive structured peer feedback. The reflection component ensures learning is consolidated before the course ends.

Engineer the Experience — key techniques:

- Open with a hook: a provocative number, a question, or a surprising finding.
- Pace the reveal — do not show everything at once.
- Pause to let a number land before moving on.
- Prepare for audience questions that challenge your interpretation.

Reflect and Refine — key questions:

- Does the presentation answer the original problem defined in Stage D?
- Would someone unfamiliar with the data understand it?
- Did you let the data speak, or did you speak for the data?

Course Exercise

Have participants present just their one core insight slide in 90 seconds. Peer feedback focuses on two questions only: Did the message land? Did I believe the data? Keep feedback fast and focused. If there is time, one or two groups can volunteer to share what they put together (one person needs to email the facilitator their final Excel or Google sheet so they can project it).