

A/B Testing for Non-Statisticians

Learning objective: You'll recognize what makes a genuine A/B test, understand why parallel testing under identical conditions is more reliable than a before-and-after comparison, and write your own falsifiable test hypothesis at the decision-maker level.

Key Takeaways

- Seventy percent of all online shopping carts are abandoned without a purchase, and more traffic doesn't fix that.
- A proper A/B test splits traffic randomly and runs both variants in parallel under identical conditions.
- Before-and-after comparisons get distorted by weather, day of the week, and campaign activity.
- Real hypothesis: What changes, why, and which metric are you measuring?
- Random assignment: The groups must be comparable.
- Parallel measurement: That's the only way to neutralize external confounding factors.

Framework steps

1. **Formulate a hypothesis**
2. **Split randomly**
3. **Measure in parallel**
4. **Decide with data**
5. **Random split**
6. **Variant A - Control**
7. **Variant B - Change**

Key points at a glance

CONCEPT

The Business Problem: Seventy Percent Abandonment

The Baymard Institute analyzed over one hundred thousand checkout processes and found an average cart abandonment rate of sixty-nine point eight percent.

CONCEPT

Why More Traffic Isn't the Answer

With a conversion rate of three percent and a seventy percent abandonment rate, you need thirty clicks to generate one purchase.

Your existing traffic is split randomly into two equal groups.

It's not a design competition where the prettier variant wins.

CONCEPT

Anatomy of an Experiment: The Hypothesis

A hypothesis states which change you're testing, why you're testing it, and what outcome you expect.

CONCEPT

Control, Variant, and Randomization

The control is the current version. It's your status quo, measured under existing conditions.

How to use this job aid: Use it as a quick reference before you tackle a campaign, an audit, or a strategy decision. The takeaways and the decision matrix help you focus quickly and avoid common mistakes.