

Worksheets

The Variable Identification Matrix and Actionable Insights Worksheet — Policy by the Numbers

Use these two worksheets with your data team before your first modeling attempt. Print them, fill them in by hand or digitally, and revisit them every year as a living template — your own recalculated coefficients should replace the baseline examples shown here.

Worksheet 1: Variable Identification Matrix

Fill in one row per variable before you request a single data export. If the “Owner/Contact” column has any blanks, that's your first phone call — not your first data pull.

Variable	Where It Lives	Owner / Contact	Update Frequency	Known Issues
Academic Performance (R)				
Attendance (A)				
Instructional Fidelity (I)				
Demographic / Subgroup (S)				
Growth Velocity (V), if used				

Table 1. Complete this inventory before requesting a single data export.

Worksheet 2: Actionable Insights Worksheet

Step 1 — Input your variables.

Variable	Your Value	Example
R (Normalized Test Score)		0.70
A (Attendance Rate)		0.92
I (Instructional Fidelity)		0.85
S (Demographic Factor)		0.40

V (Growth Velocity, if used) —

Step 2 — Input your district's levers. Use your own historical cohort analysis, or borrow the book's baseline weights as a starting point while you calculate your own.

Lever	Your Value	Book's Baseline (Sagebrush Valley)
β_0 (Baseline)		-4.0
β_1 (Test Score Weight)		3.0
β_2 (Attendance Weight)		2.5
β_3 (Fidelity Weight)		1.5
β_4 (Demographic Weight)		-0.5
β_7 (Growth Velocity Weight)		0.2

Tip: leave the “Your Value” column blank until your district recalculates its own coefficients from historical data — that keeps this worksheet a living template, not a one-time calculation.

Step 3 — Calculate and act.

If Your P Is...	Policy Action
Below 60%	Tier 3: Immediate individualized support and MTSS review
60% – 80%	Tier 2: Targeted small-group scaffolding
Above 80%	Tier 1: Maintain current high-fidelity instructional core

REFLECTIVE QUESTION Which variable had the largest impact on your result? If you increased that one variable by 5 points, how much would your final probability move? Run this same sensitivity-analysis exercise on your own numbers before your next board meeting.

From Policy by the Numbers: A Leader's Guide to Predictive Mathematical Modeling in K-12 Education Using Everyday Indicators. These worksheets correspond to Chapters 3 and 4 of the full book.