

Gap Analysis Cheat Sheet (aka Dual Discrepancy Analysis)

Typical ROI = (Benchmark Time 2 - Benchmark Time 1) / (# Weeks)

Target ROI = (Benchmark Time 2 - Student's Present Benchmark) / (# Weeks)

Attained ROI = (Student's Performance Time 2 - Student's Performance Time 1) / (# Weeks)

*Notes:

- 1.) A typical school year is 36 weeks (18 weeks for a semester / half year).
- 2.) Contemporary research (e.g., Ardoin & Christ, 2008; Christ, Silberglitt, Yeo, & Cormier, 2010) indicates a seasonal difference in Fall-Winter slope compared to Winter-Spring slope.
- 3.) Best method for calculating attained ROI using progress monitoring data is via Ordinary Least Squares trendline (Shapiro, 2008)

Example: 3rd Grade DIBELS Next

Miles Davis ORF in Sept = 40

Miles Davis ORF in May = 71

Benchmark ORF in Sept = 70

Benchmark ORF in April = 100

Typical ROI from 70 to 100 in 36 weeks = $(100 - 70) / 36 = \underline{0.83}$ wcpm/week

Target ROI from 40 to 100 in 36 = $(100-40) / 36 = \underline{1.67}$ wcpm/week

Attained ROI from 40 to 71 in 36 weeks = $(71 - 40) / 36 = \underline{0.86}$ wcpm/week

Gap Analysis

Level Discrepancy Analysis = Benchmark / Attained = discrepancy
(How Low is Low?)

Performance Against Typical = % Expected Performance = $100 - (((\text{Benchmark} - \text{Attained}) / \text{Benchmark}) * 100)$

ROI Benchmark Discrepancy = Target ROI / Attained ROI = discrepancy
(How Slow is Slow?)

Rate Against Target = % Targeted Growth = $100 - (((\text{Target ROI} - \text{Attained ROI}) / \text{Target ROI}) * 100)$

ROI Discrepancy Analysis = Typical ROI / Attained ROI = discrepancy

Rate Against Typical = % Typical Growth = $100 - (((\text{Typical ROI} - \text{Attained ROI}) / (\text{Typical ROI})) * 100)$

Example: 3rd Grade DIBELS Next

Miles Davis ORF in Sept = 40

Miles Davis ORF in May = 71

Benchmark ORF in Sept = 70

Benchmark ORF in May = 100

Typical ROI = 0.83

Target ROI = 1.67

Attained ROI = 0.86

Level Discrepancy Analysis = (May Data) $100 / 71 = \underline{1.41}$
(How Low is Low?)

Interpretation: Lena's level is 1.41X below the typical student

Performance Against Typical = % Expected Performance = $100 - (((100 - 71) / 100) * 100) = \underline{71\%}$

Interpretation: Mile's performance is 71% of the typical student in 3rd grade

ROI Benchmark Discrepancy = $1.67 / 0.86 = \underline{1.94}$
(How Slow is Slow?)

Interpretation: Mile's ROI is 1.94X below his needed growth rate to reach benchmark

Rate Against Target = % Targeted Growth = $100 - (((1.67 - 0.86) / 1.67) * 100) = \underline{51.5\%}$

Interpretation: Mile's ROI is 51.5% of his targeted growth to met benchmark in May.

ROI Discrepancy Analysis = $0.83 / 0.86 = \underline{0.97x}$

Interpretation: Mile's ROI is 0.97X faster than the typical student; He is moving faster than typical student

Rate Against Typical = % Typical Growth = $100 - (((0.83 - 0.86) / (0.83)) * 100) = \underline{103.6\%}$

Interpretation: Mile's ROI is 103.6% of the typical student's ROI (faster than typical)

So two Questions remain:

1.) How low is low?

2.) How slow is slow?