What ServeMinnesota Does

Today's example: Reading Corps

Educational Science

AmeriCorps Service

Real Positive Impact
Session Overview

Three Objectives

1. Quickly answer: Why use data in reading instruction?

2. Deep dive: Issues with using data for progress monitoring foundational literacy skills

3. Deep dive: Issues with using data for progress monitoring vocabulary skills

Also covered:

– Q & A
– Future Research Ideas
**Why use data?**

---

### IES PRACTICE GUIDE

**Making Assessment Matter**
- Nonie K. Lesaux and Sky H. Marietta

---

### IES PRACTICE GUIDE

**Using Student Achievement Data to Support Instructional Decision Making**

**Recommendation**

1. Make data part of an ongoing cycle of instructional improvement
2. Teach students to examine their own data and set learning goals
3. Establish a clear vision for schoolwide data use
4. Provide supports that foster a data-driven culture within the school
5. Develop and maintain a districtwide data system

---

### Table 2. Recommendations and corresponding levels of evidence

**Tier 1 intervention**

1. Screen all students for potential reading problems at the beginning of the year and again in the middle of the year. Regularly monitor the progress of students at risk for developing reading disabilities.

**Tier 2 intervention**

2. Provide time for differentiated reading instruction for all students based on assessments of students' current reading level.

**Tier 3 intervention**

3. Provide intensive, systematic instruction on up to three foundational reading skills in small groups to students who score below the benchmark score on universal screening. Typically, these groups meet between three and five times a week, for 20 to 40 minutes.

4. Monitor the progress of tier 2 students at least once a month. Use these data to determine whether students still require intervention. For those students still making insufficient progress, schoolwide teams should design a tier 3 intervention plan.

5. Provide intensive instruction on a daily basis that promotes the development of the various components of reading proficiency to students who show minimal progress after reasonable time in tier 2 small group instruction (tier 3).
Why use data?

(Fuchs, Deno, Mirkin 1984)
Reading Corps Master Coach

School Internal Coach
6-9 hours per tutor per month

Data-Based Decision Making
Evidence-Based Interventions
Implementation Fidelity
Why use data in Reading Corps?

Scope
- Helps with quality and standardization

Nature of Partnership
- Non-professional educators
- Build capacity of school personnel
- Objectivity

Quality Decisions
- Students get *right* support for *right* amount of time
Data inform the following decisions:
Assumes RTI/MTSS framework in which at-risk students should receive supplemental (Tier II/III) supports.

Should I make a change to intervention?
Should I keep doing what I’m doing?
Should I stop because it just isn’t working?
Should I stop because it DID work?!
A brief [and NOT comprehensive] history...

Paradigmatic Distinctions Between Instructionally Relevant Measurement Models

Lynn S. Fuchs
University of Minnesota

ABSTRACT: In this article, we define essential characteristics and distinctions between four approaches to measurement for instructional decisions, making specific subskill mastery measurement models explainable due to clear, and subtle, features of the production models are presented. Then, a major competing approach, the general cognitive assessment model, is presented, a curriculum-based measurement (CBM) is provided to improve general outcome assessment and the practical value of this alternative model is reviewed. Finally, we discuss how general outcome measurement represents an intuitive approach to assessment by bridging traditional and contemporary paradigms.

Fuchs & Deno distinguish b/w "general outcome measures" and "specific subskill measures"

NCRTI publishes conventions on interpreting progress monitoring data

Research community says "Whoopsie Daisies!"

Lines of applied research begin studying very real practical factors that affect decision-making

1991  2007  2013  Now...

ServeMinnesota
The power of AmeriCorps. The power of you.
What factors affect data based decisions???

Sample Reading Corps Graph—Foundational Skills

- **G3 ACTIVE**
  - Active means the student is currently being tutored

- **CBM - Reading**
  - **Target**: Where we want the student to score by the end of the school year. The spring target correlates with college readiness.
  - **Aim-line**: The line connecting the baseline score to the spring target. We would like students to progress at or above the aim-line to assure us they will reach the spring target.
  - **Tutor Log Dosage Summary Graph**: Full blue bars indicate 20 minutes on a given day, gray bars indicate missed sessions, white bars indicate weekends.
What about...

Year-end Target Criterion?

Base Rates

Criterion-Referenced Target: 90% failed

Norm-Referenced Target: 56% failed
What about...
How much data are available?

Decision Rules

<20 weeks: Caution
20+ weeks: Better

(Parker, Van Norman, & Nelson, 2017)
What about...
Decision-Rule Framework?

Decision Rules

Purely Point-Based: Essentially Chance
Trend/Mean: MUCH better

(Van Norman, Parker, & Nelson, 2017)
Summary for Progress Monitoring
Foundational Reading Skills

• Some clear takeaways:
  – STOP using data point rules. Certain decision-making frameworks appear better (i.e., trendline and median of recent X points)
  – Exercise caution with criterion-referenced year-end targets
  – When able, make decisions using more data.
  – A single, simple framework may be insufficient for maximal data-based decision-making.

• Additional research necessary
  – Guidance for all potential questions underdeveloped.
  – We don’t yet know much about other literacy skills

• Questions?
What about data for vocabulary???

Tier II/III interventions within RTI/MTSS are actually quite robust for vocabulary. But how can data be used to target and inform their progress?

Data inform the following decisions:
Assumes RTI/MTSS framework in which at-risk students should receive supplemental (Tier II/III) supports.

- Should I make a change to intervention?
- Should I keep doing what I’m doing?
- Should I stop because it just isn’t working?
- Should I stop because it DID work?!
What factors affect data based decisions???

Sample Reading Corps Graph—Vocabulary

**Results**

**K:** Mean 10.7/12 (SD 1.5) words retained each week

**1st:** Mean 6.6/10 (SD 2.5) words retained each week

**Decision Rules**

Interpret growth toward target.

Interpret “acquiring more words” + typical performance during intervention.
Summary for Progress Monitoring
Vocabulary Skills

• Some clear takeaways:
  – Using data with vocabulary is different than for foundational skills
  – We cannot interpret growth toward a target vocabulary level
  – We can interpret weekly performance in potentially useful ways
    • General index of word retention
    • How well intervention is helping

• Additional research necessary
  – Guidance for all potential questions underdeveloped.

• Questions?
Questions?

Contact Information

• David Parker: david@serveminnesota.org

• Ethan Van Norman: evannorman@gsu.edu.