The Why of RTI

Where we started…

- IDEIA and NCLB were companion laws.
- They were mutually referential.
- Together, they envisioned a seamless system of supports, based on the use of scientifically based instruction, in both general and regular education.

Where we are now…

- The mission is (still) the development of proficiency in basic skills (particularly reading) for all students.
- MTSS is the structure needed to implement the mission.
  - Standards-aligned curricula
  - Core instruction based on science
  - Efficient and effective universal screening
  - Data-analysis teaming
  - Robust interventions
  - Progress monitoring
  - Decision-making based on students' RTI

Why RTI for SLD

- When RTI is used in a fully functioning MTSS, important data are gathered that can inform the eligibility for special education:
  - Is the student deficient in level of performance?
  - Is the student's RTI not sufficient to realize meaningful growth in a reasonable amount of time? (Can the student catch up?)
  - Does the student need specially designed instruction that goes beyond the capacity of general education to make meaningful gains?
  - What strategies have been shown to work (and not work) during tiers of intervention (i.e., what should specially designed instruction be for the student)?

Why not MTSS/RTI and then "testing"?

- RTI for SLD encourages and supports the development and maintenance of an effective MTSS. Other approaches are divorced from MTSS.
- The data from MTSS/RTI is sufficient to address the first two criteria of SLD identification as well as the rule-out for lack of instruction (criterion #4) and the determination of the degree of need for special education.
- A full and individual evaluation is expedited because much critical data are already gathered.
- Other "testing" approaches have serious flaws.

Problems with the Ability-Achievement Discrepancy Approach

- Can under-identify students with SLD (childfind issues).
  - Need to wait until discrepant to deliver identify as SLD
  - False negatives (the slow learner myth)
- Can over-identify students with SLD.
  - False positives (high IQ; average achievement)
- Data gathered don't link with intervention.

Problems with the Patterns of Strength and Weaknesses (PSW) Approach

- Can over-identify students with SLD.
  - False positives (pattern conforms with theory; average achievement)
- Can under-identify students with SLD (childfind issues).
  - Adds additional requirements that would exclude students who would qualify as SLD using RTI (i.e., students with deficient achievement but lacking a theory-based pattern)
- Data gathered don't link with intervention.
- PSW is not recognized in Pennsylvania Special Education Regulations for SLD.

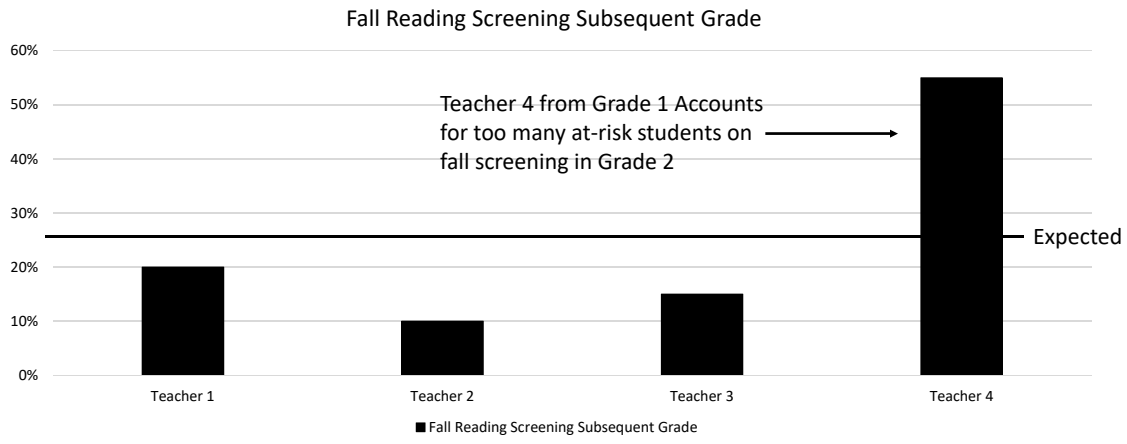
Other benefits of using RTI for SLD

- It frees up highly trained school psychologists and other specialists to focus attention on improving student academic achievement and mental health in both general and special education.

Lessons Learned

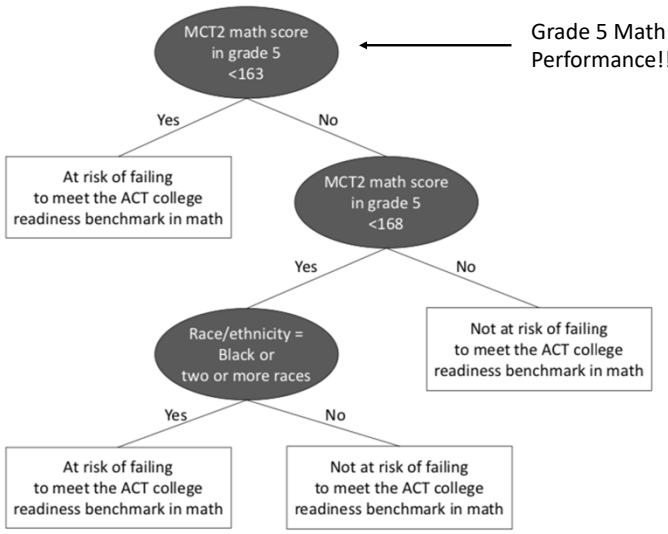
1. Specialized instruction is a myth. Intensified instruction is not.
2. Effective instruction saves lives.
3. Use classwide intervention.
4. Manage interventions.
5. Align instruction with student need.
6. Assess less.
7. Lead more effectively.

Risk Over Time is a Red Flag



Specialized Instruction Myth

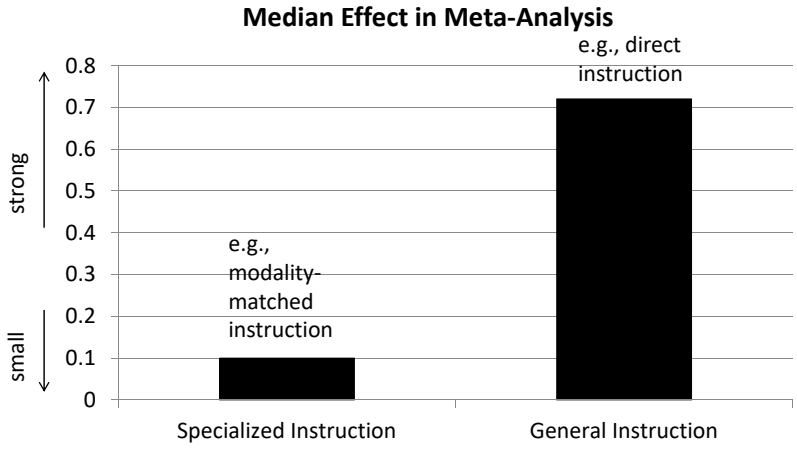
Figure 2. Classification and regression tree model decision rules for identifying Mississippi students as at risk of failing to meet the ACT college readiness benchmark in math, based on grade 5 math achievement and race/ethnicity, 2011/12–2016/17



Koon, S., & Davis, M. (2019). Math course sequences in grades 6–11 and math achievement in Mississippi (REL 2019–007). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southeast. Retrieved from http://ies.ed.gov/ncee/edlabs

Specialized Instruction Myth

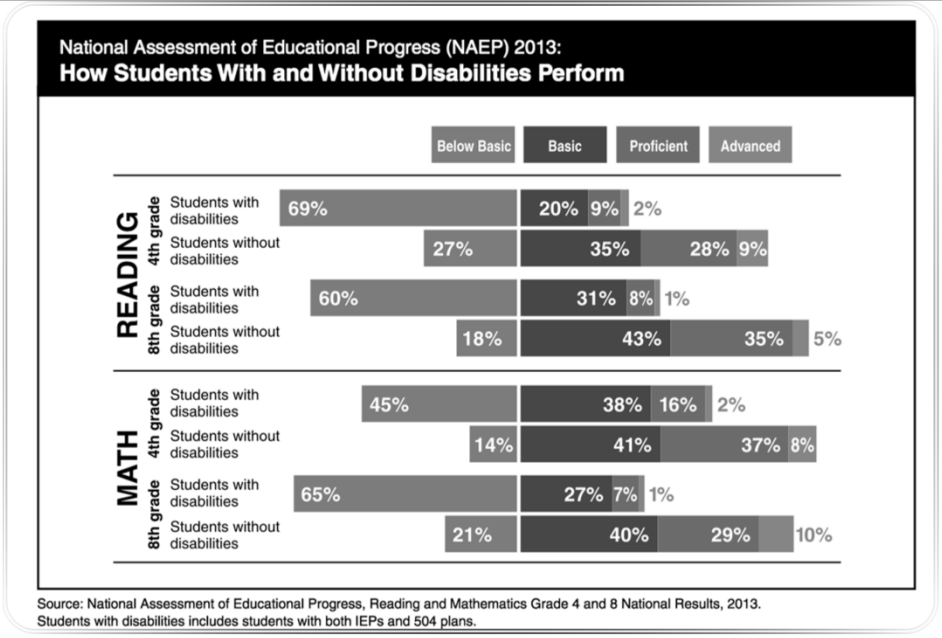
No Effect for "Special" Instruction



Reading comprehension	1.13
Direct instruction	0.84
Psycholinguistic training	0.39
Modality instruction	0.15
Diet	0.12
Perceptual training	0.08

Source: Kavale & Forness, 1999

Specialized Instruction Myth



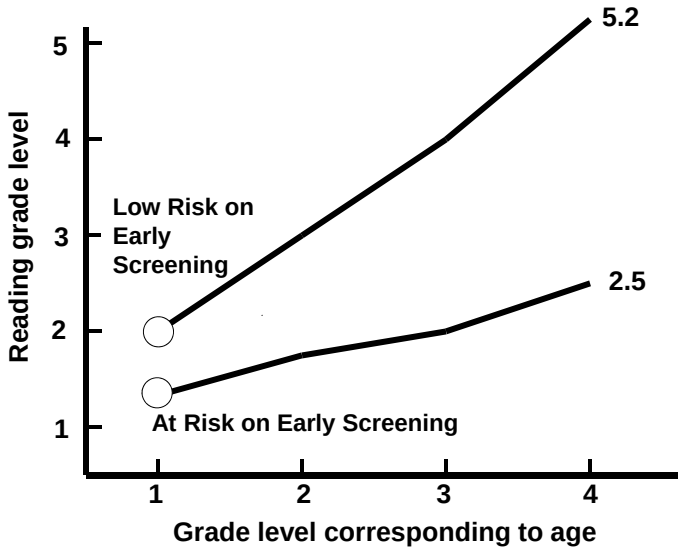
Cortiella, Candace and Horowitz, Sheldon H. *The State of Learning Disabilities: Facts, Trends and Emerging Issues.* New York: National Center for Learning Disabilities, 2014.

Specialized Instruction Myth

Lesson 2: Effective Instruction Saves Lives

Early Screening Identifies Children At Risk of Reading Difficulty

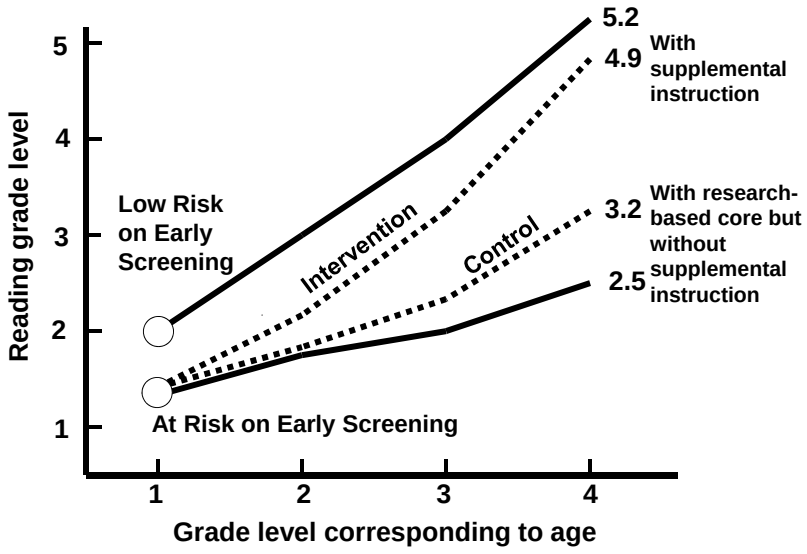
From Reading First



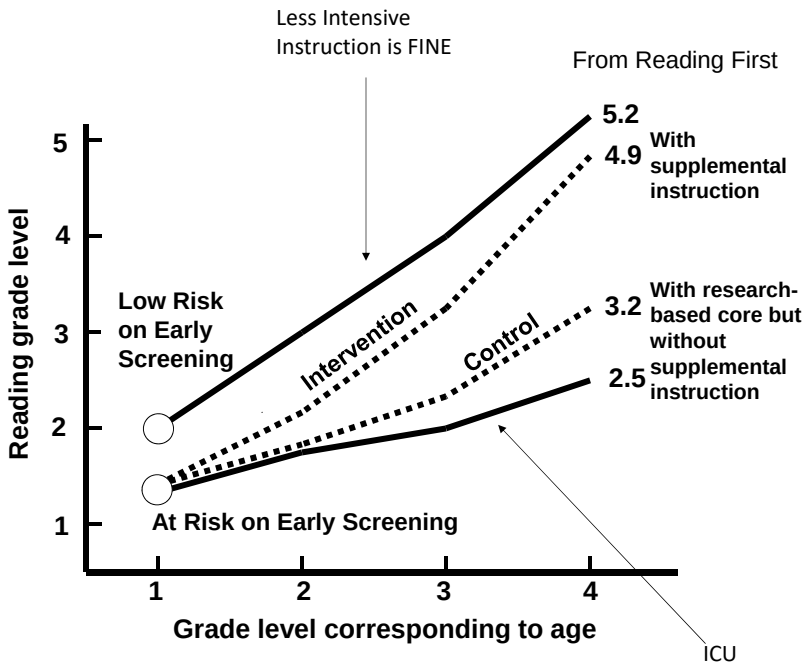
Effective Instruction Saves Lives

Early Intervention Changes Reading Outcomes

From Reading First



Effective Instruction Saves Lives



Effective Instruction Saves Lives

What You DO Makes a Difference

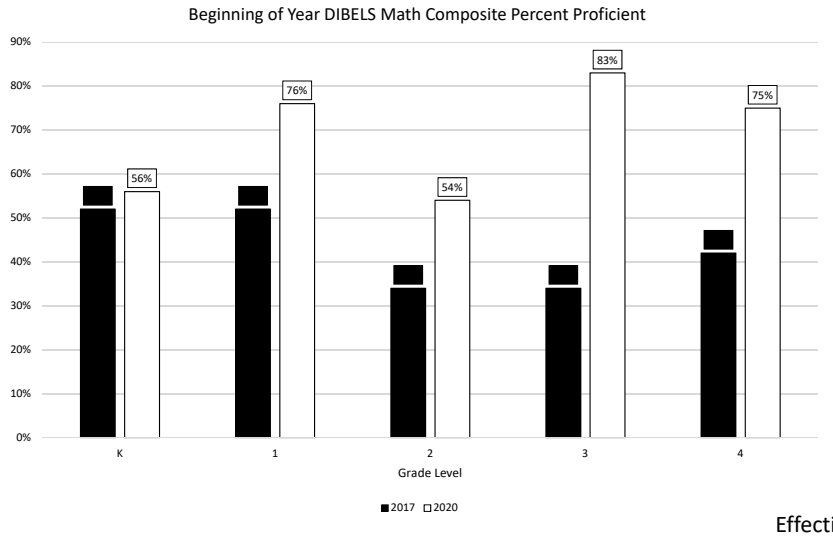
Source: Hattie (2009)

Teaching	Effect Size
Quality of teaching	0.77
Reciprocal Teaching	0.74
Teacher-Student Relationship	0.72
Providing Feedback	0.72
Teaching student self-verbalization	0.67
Meta-Cognition Strategies	0.67
Direct Instruction	0.59
Mastery Learning	0.57
Average	*0.68*

Working Conditions	Effect Size
Within-class grouping	0.28
Adding $	0.23
Reducing Class Size	0.21
Ability Grouping	0.11
Multi-Grade/Age Classes	0.04
Open v. Traditional Classes	0.01
Summer break	-0.09
Retention	-.016
Average	*0.08*

Effective Instruction Saves Lives

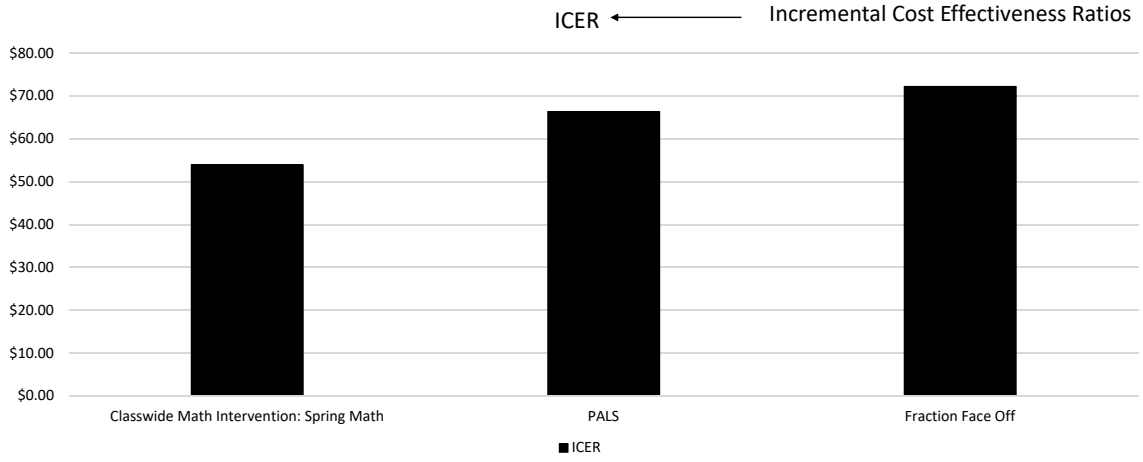
Prevention Effects from Effective Instruction Accumulate!



Effective Instruction Saves Lives

Think about Return on Investment

Per Student, Per 1 SD gain in outcome

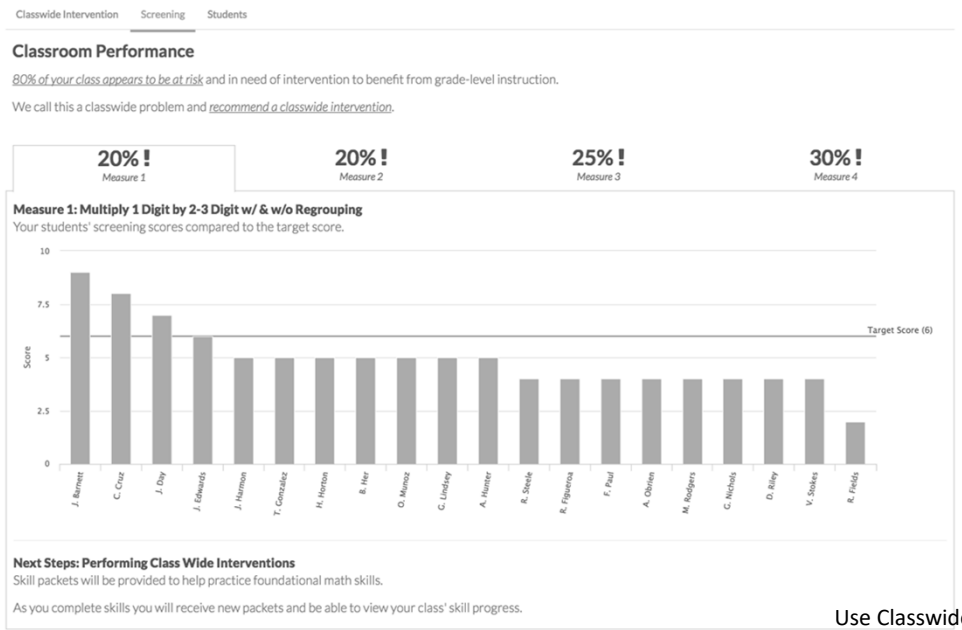


"Changing math curricula as an approach for whole-school intervention when large numbers of students do not achieve proficiency is more costly than targeted, preventative math intervention" (Morsi et al.)

Effective Instruction Saves Lives

Lesson 3: Use Classwide Intervention. Why?
- It takes 15-20 min per day.
- It's curriculum neutral and supplements.
- All students show benefits.
- It makes future risk decisions more accurate

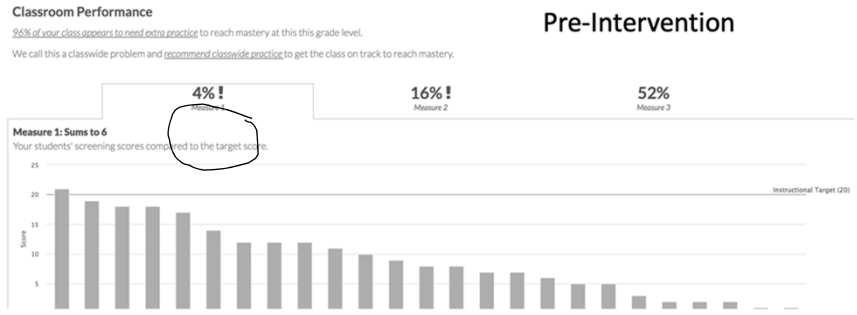
Use Class-wide Intervention



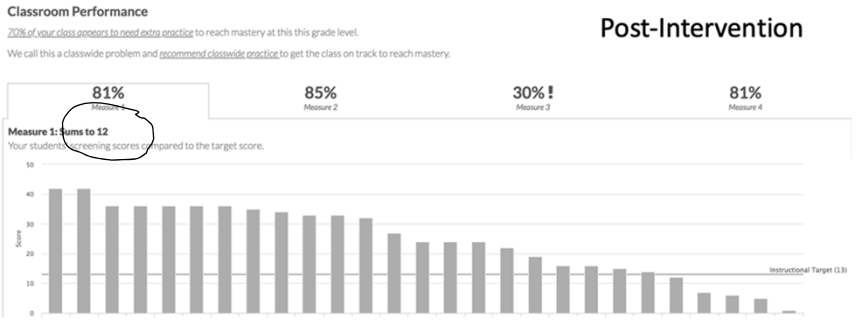
Use Classwide Intervention

High-Yield Action: Use Class-wide Intervention

Pre →

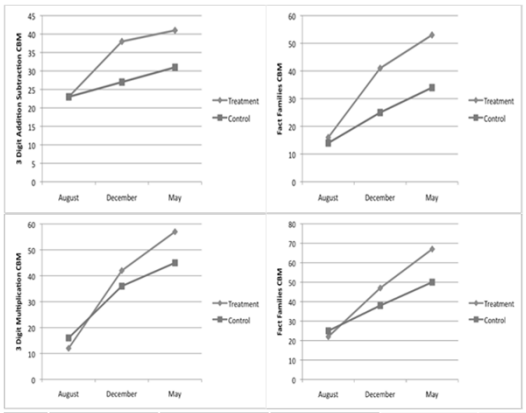


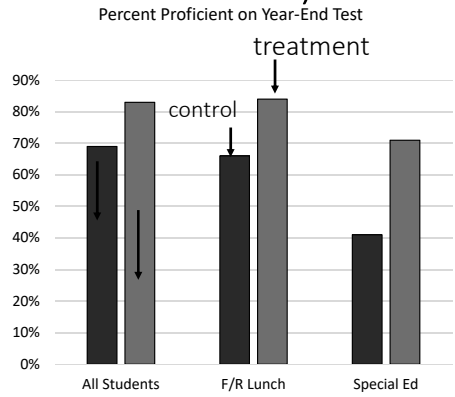
Post →



Use Classwide Intervention

Classwide Intervention Works (when used well)





All	Title	Study	Study Type	Participants	Design	Fidelity of Impl.	Measures (Targeted)	Measures (Broader)
☐	Spring Math	Cobbing, VanDerHeyden, Martin, & Perrault (2016)	Group Design	●	◒	●	●	●
☐	Spring Math	VanDerHeyden, McLaughlin, Algina, & Snyder (2012)	Group Design	●	●	●	●	●

ES = .68 CBMs
ES = .18 Gr 4
ES = .79 for at-risk

http://www.intensiveintervention.org/chart/instructional-intervention-tools (NCII)

Use Classwide Intervention

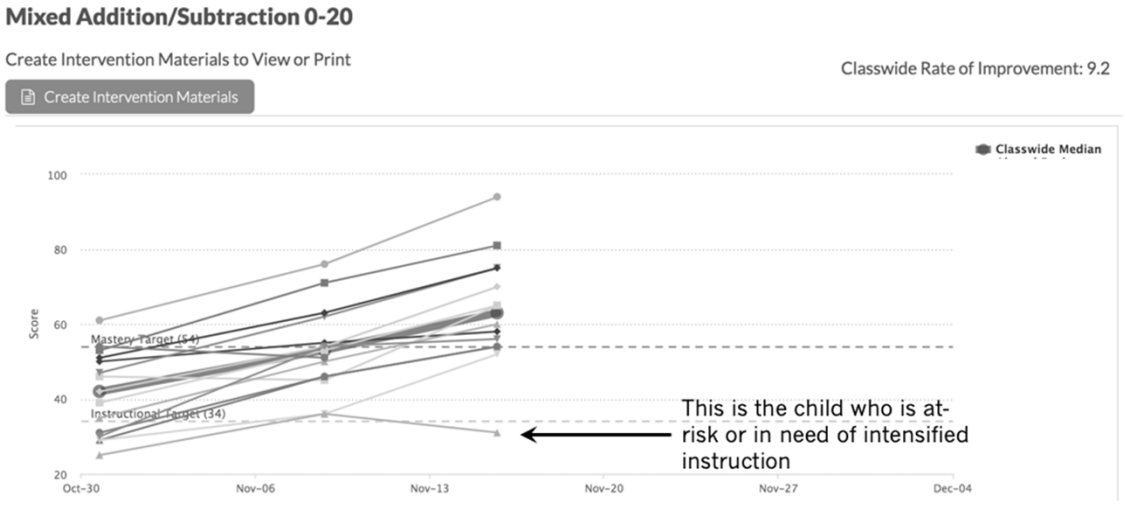
When Managed, Classwide Intervention Works!

	Absolute Risk Reduction	Number Needed to Treat
All Students	15%	7
Students receiving F/R Lunch	18%	6
Students receiving Special Education Services	39%	3
Low-Performing Students	44%	2

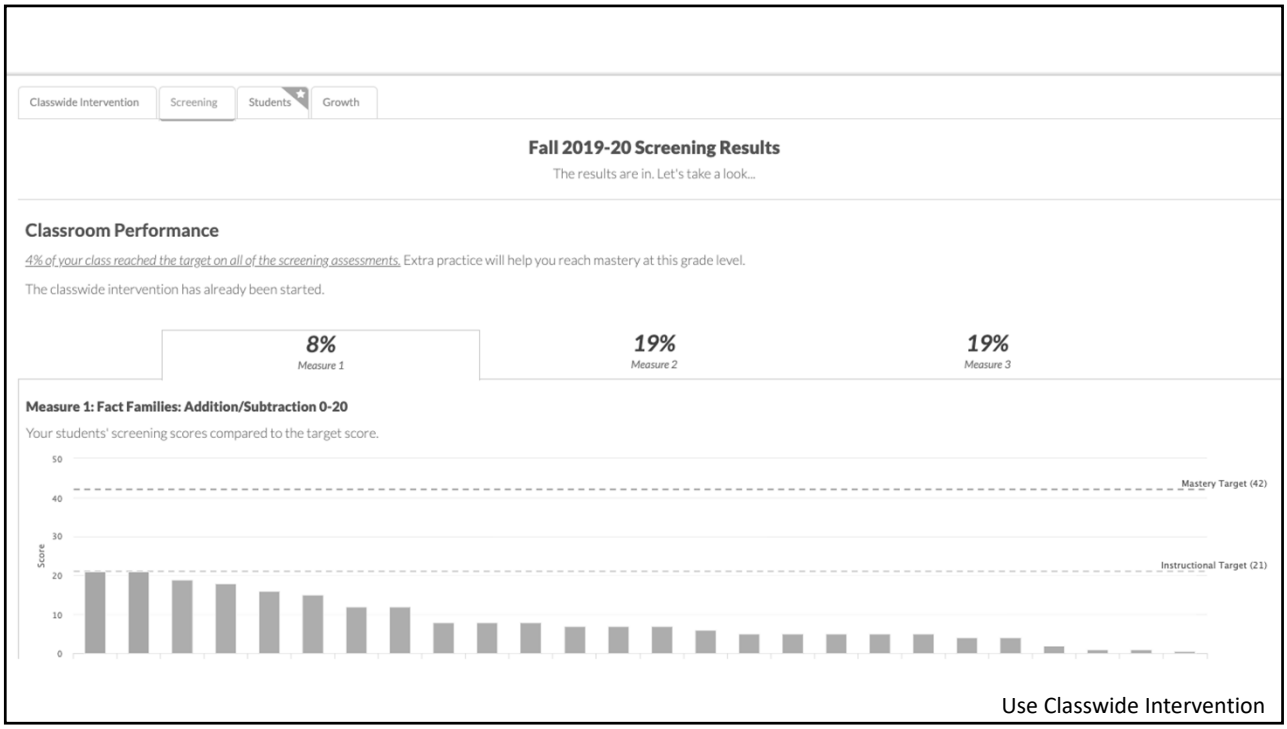
Source: VanDerHeyden, McLaughlin, Algina, & Snyder, 2012; VanDerHeyden & Codding, 2015

Use Classwide Intervention

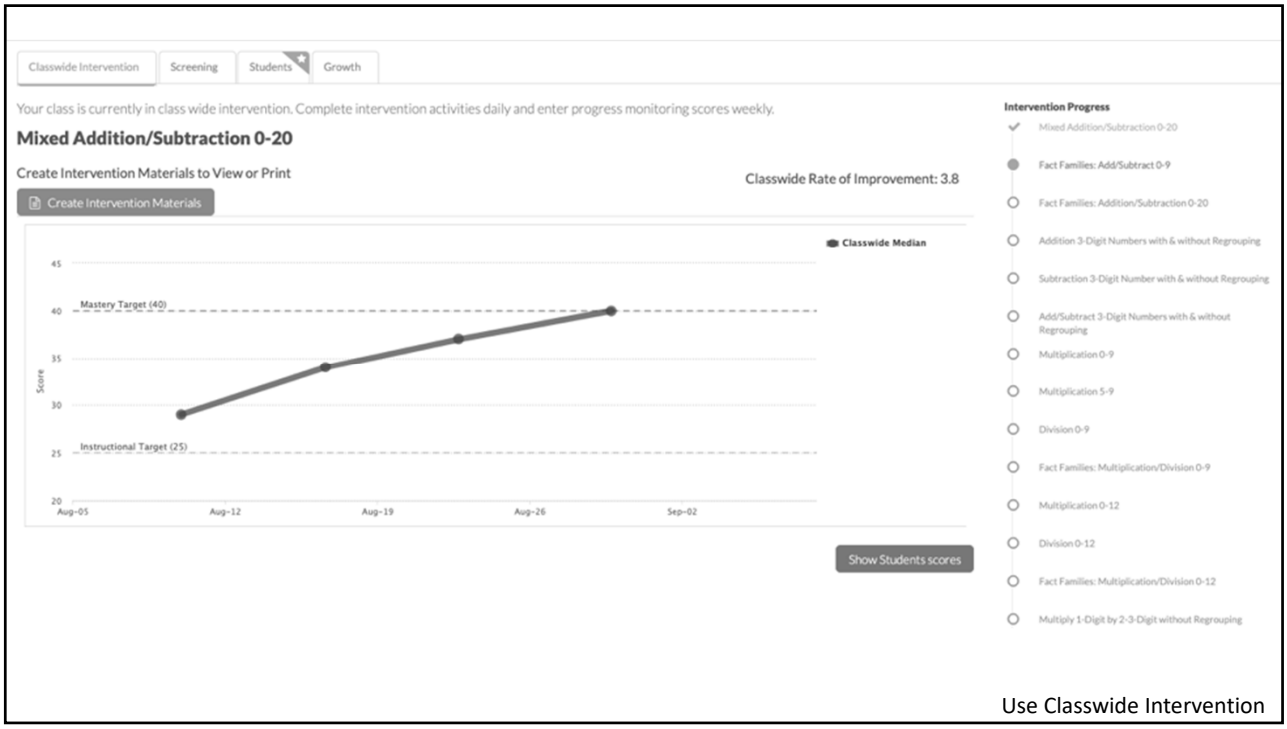
Use Classwide Intervention as Gate in Screening



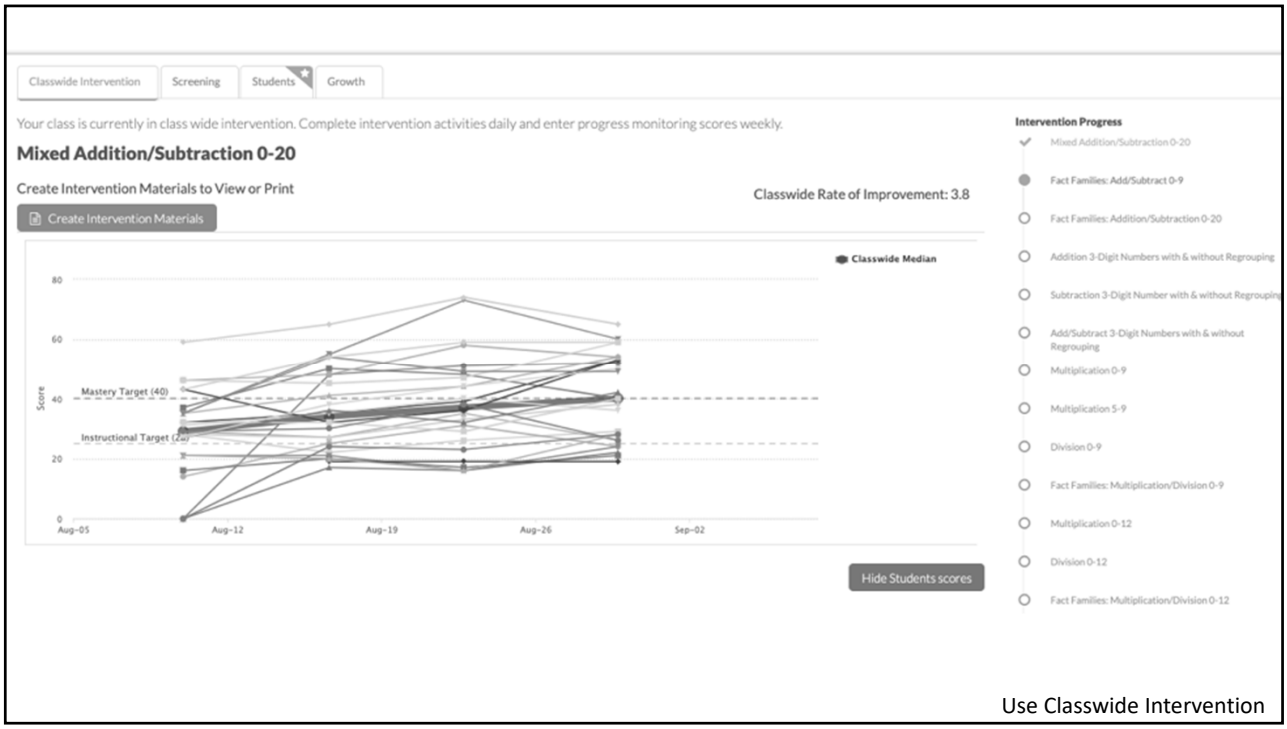
Use Classwide Intervention



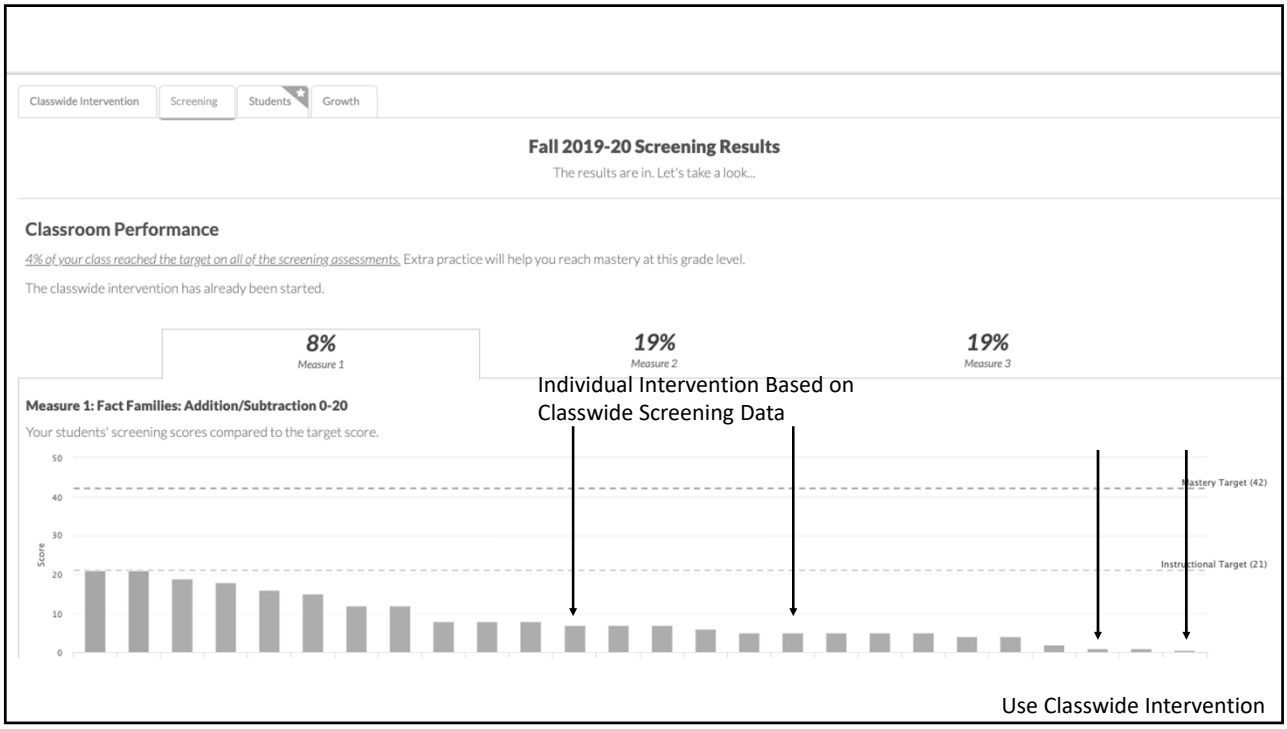
Use Classwide Intervention



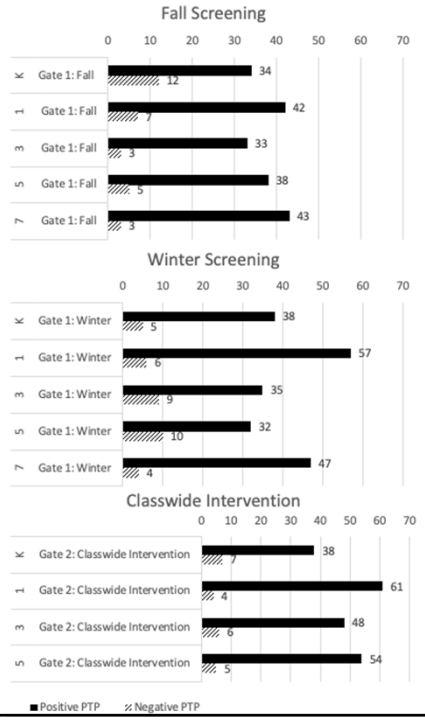
Use Classwide Intervention



Use Classwide Intervention



Use Classwide Intervention



Classwide Intervention Lowers Base Rate of Risk & Improves Decision Accuracy

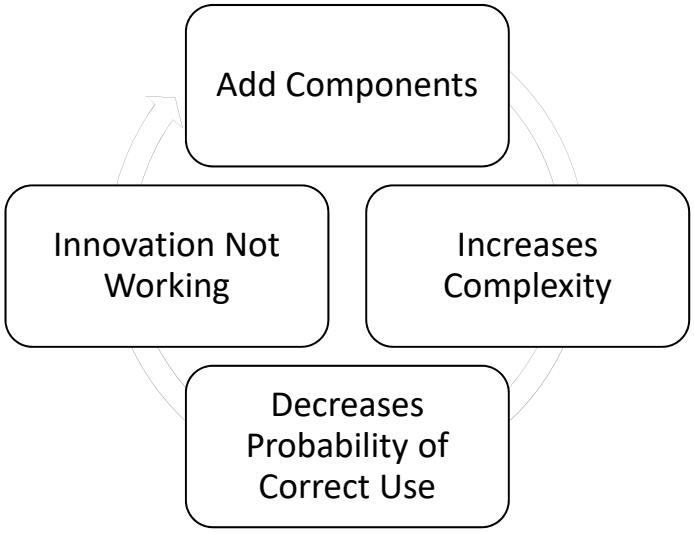
VanDerHeyden, Broussard, & Burns (2019). Classification Agreement for Gated Screening in Mathematics: Subskill Mastery Measurement and Classwide Intervention. Assessment for Effective Intervention.

https://www.researchgate.net/publication/336702020_Classification_Agreement_for_Gated_Screening_in_Mathematics_Subskill_Mastery_Measurement_and_Classwide_Intervention

Use Classwide Intervention

Lesson 4: Manage Intervention

Don't Do This



Manage Intervention

Use Implementation Science

- Plan to be present when intervention is started.
- Track intervention effects weekly.
- When growth is weak, check-in with teacher by watching intervention being implemented.
- Help troubleshoot any barriers and say that you will check in again next week.
- Wash, Rinse, Repeat.

Manage Intervention

Signs of an Effective Intervention

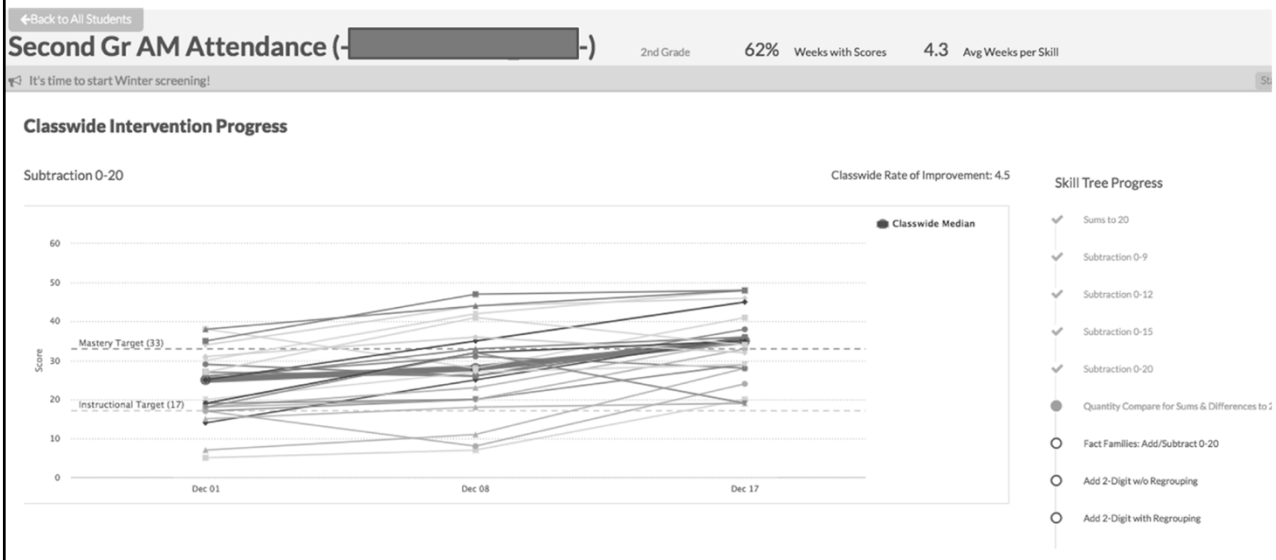
- Scores available for each week.
- Median increases each week within instructional groupings.
- Most students grow week over week.
- Very few students remain in the frustrational range.
- Few students require more intensive intervention.

Activity: NCII DBI Implementation Rubric

https://intensiveintervention.org/resource/dbi-implementation-rubric-and-interview

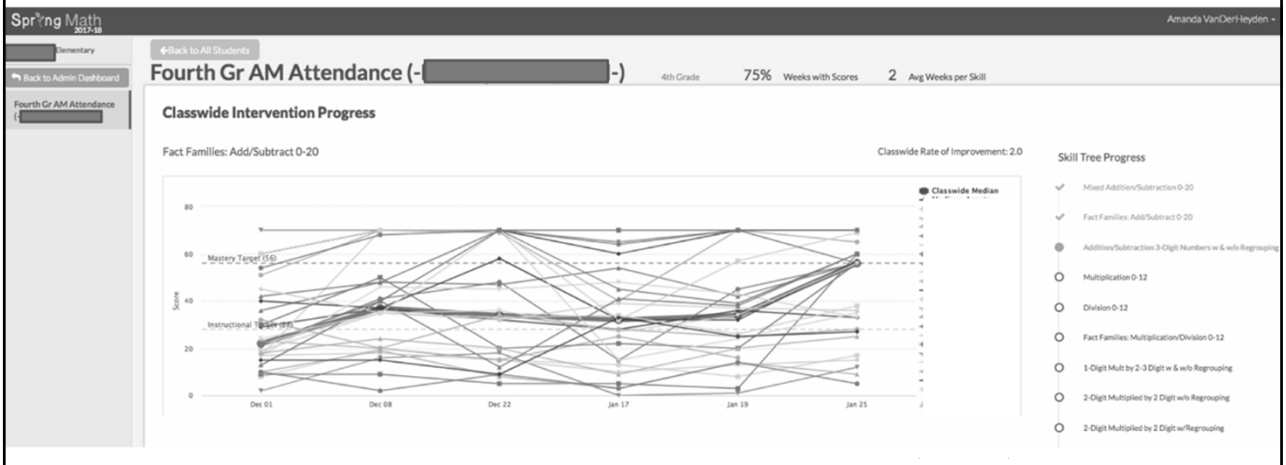
Manage Intervention

This is a High-Integrity Intervention



Manage Intervention

This Growth Indicates a Problem



Manage Intervention

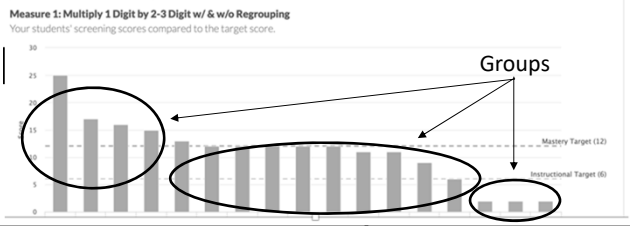
Most Typical Intervention "Fixes"

- ✓ Watch the intervention session.
- ✓ Pay attention to dosage.
- ✓ Tighten up rewards.
- ✓ Make sure error correction occurs with high quality everyday.
- ✓ If students are making errors, use pre-teach protocol in support.
- ✓ Integrate review of prerequisite skills and current skills into games and practice opportunities during the school day.
- ✓ Know that some skills take TIME!

Manage Intervention

Lesson 5: Align Intervention (Instruction) with Student Needs Using the Instructional Hierarchy/Stages of Learning

Differentiation is Not Enough



Differentiated
Matching protocols with small group needs.

Personalized
Delivering assessment-driven lesson content.

Individualized
Management of assessment-driven lesson content and tactical supports.

- Usually accomplished by organizing small groups
- Re-teach & enrich periods
- But, this is HARD to do.

"The results of the study indicate that the MAP program was implemented with moderate fidelity but that MAP teachers were not more likely than control group teachers to have applied differentiated instructional practices in their classes. Overall, the MAP program did not have a statistically significant impact on students' reading achievement in either grade 4 or grade 5." (Cordray et al., 2012)

Full report here: https://files.eric.ed.gov/fulltext/ED537982.pdf

Align Tactic w Proficiency

How to Plan Instruction Using Science (We will talk about this in Workshop 2)

Acquisition

Child response is inaccurate: Frustrational Performance.

Goal of instruction is to build accurate understanding. Tactics should include: salient cues, frequent & high-level prompting, immediate feedback, more elaborate feedback, sufficient exemplars of correct/incorrect responses, controlled task presentation.

Fluency

Child response is accurate but slow: Instructional Performance

Goal of instruction is to build fluency (accuracy + speed). Tactics should include: intervals of practice, opportunities to respond, delayed feedback, goals & reinforcement for more fluent performance.

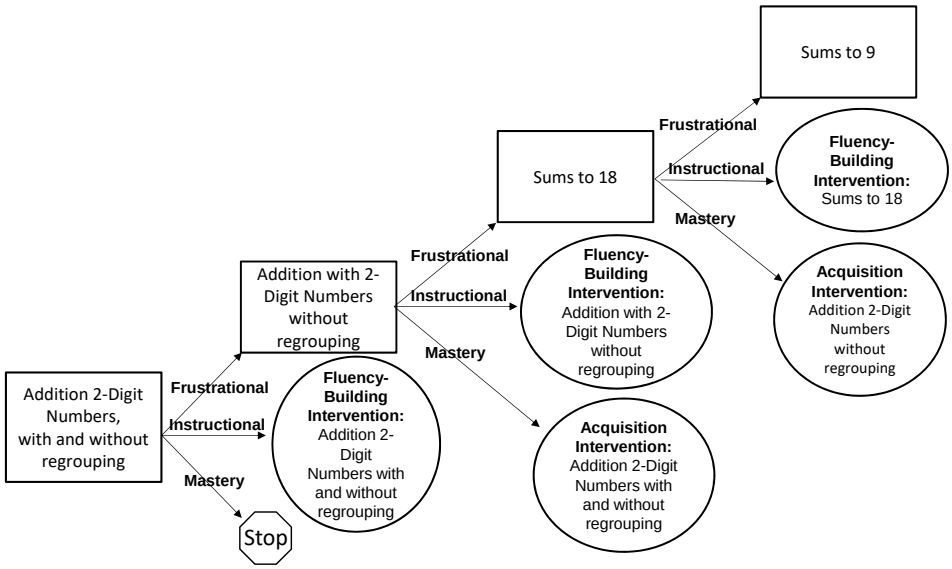
Generalization & Adaptation

Child response is fluent: Mastery Performance

Goal is to promote generalization. Tactics should include: cues to generalize, corrective feedback for application and problem-solving, systematic task variation, fading of support.

Haring, N. G., & Eaton, M. D. (1978). Systematic instructional procedures: An instructional hierarchy. In N. G. Haring, T. C. Lovitt, M. D. Eaton, & C. L. Hansen (Eds.), *The fourth R: Research in the classroom* (pp. 23–40). Columbus, OH: Merrill.

Align Tactic w Proficiency



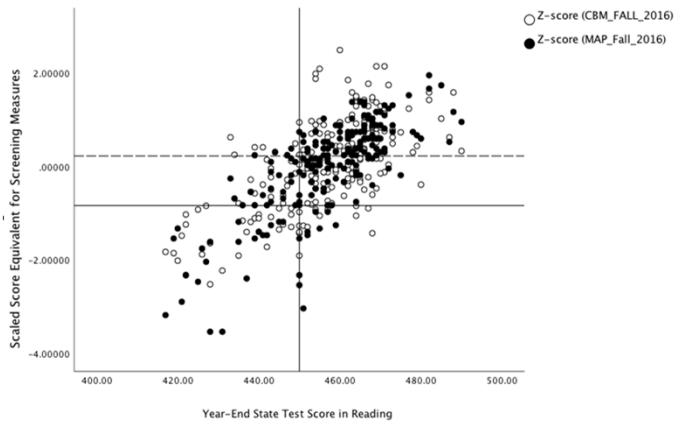
Align Tactic w Proficiency

Lesson 6: Assess More Efficiently

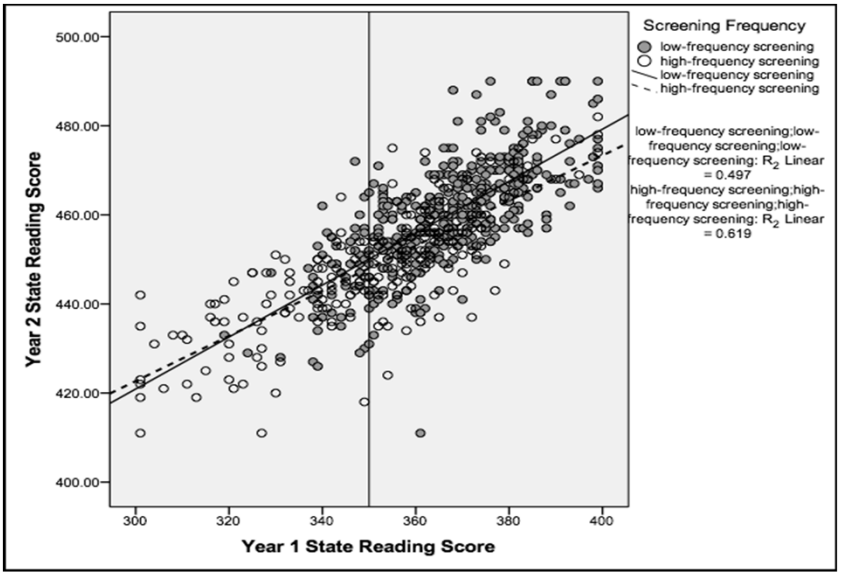
More Assessment Does Not Make You More Accurate.

It Has Been Associated with Decreased Performance for All but the Most At-Risk Students.

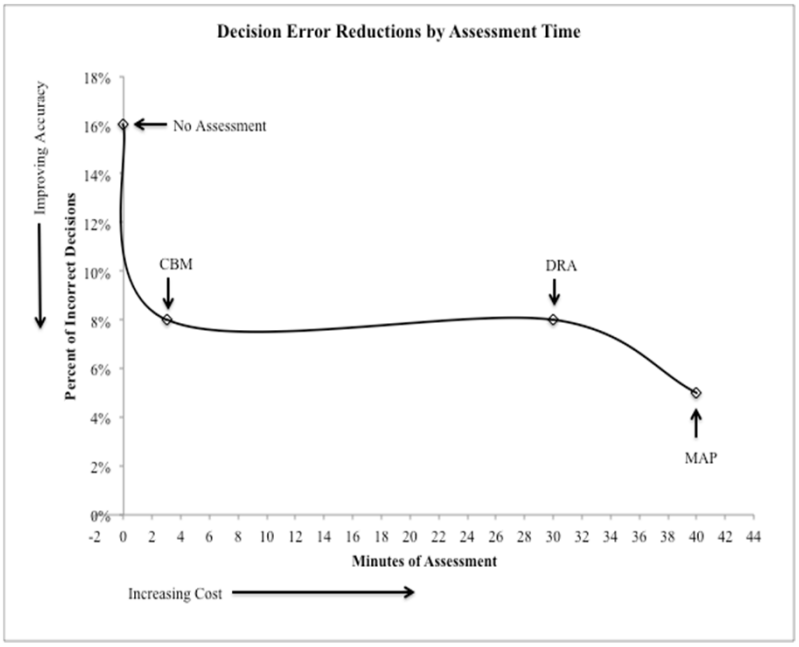
Concurrent Correlated Measures Do Not Increase Accuracy of Risk Decision



Assess Efficiently



Assess Efficiently



Assess Efficiently

Lesson 7: Lead more efficiently/effectively (Learner Objective 3)

Your Role as an Adaptive Leader: Technical Leaders v. Adaptive Leaders

- Technical leaders are good managers. They are:
  - Engaged
  - Quick to recognize and respond to issues that arise
  - Organize groups to solve problems
  - Regularly produce desired results

Technical Leadership	Adaptive Leadership
Zone of Less Complexity; Tactics are clear	Zone of Greater Complexity where tactics are not known & agreed upon

http://nirn.fpg.unc.edu/learn-implementation/implementation-drivers

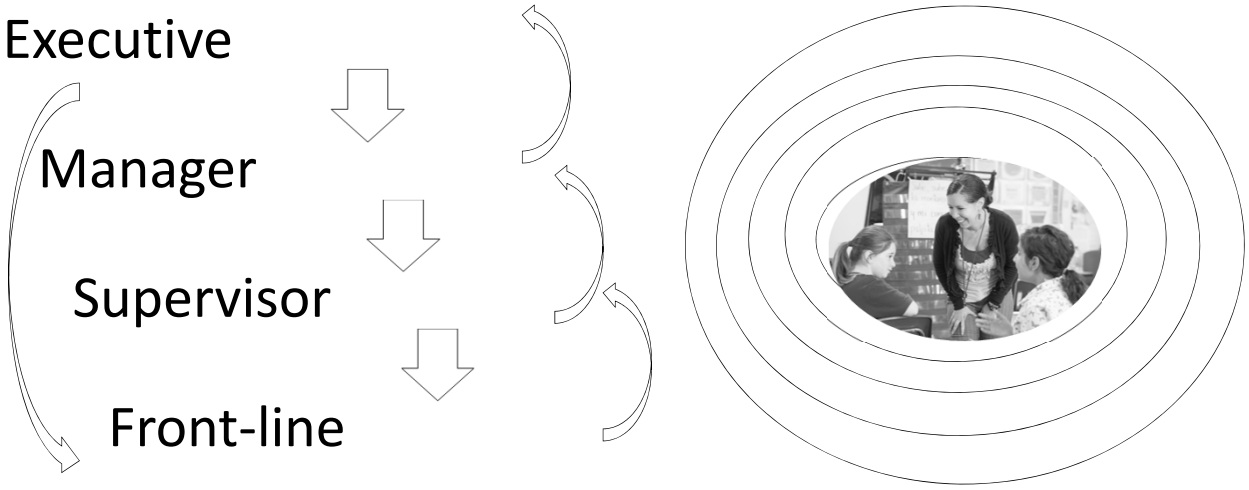
Lead More Effectively

Change Requires Adaptive Leaders

"When systems undergo change, the natural tendency of those in the system is to look to those in authority to minimize the tension of change and regain stability. However, when change is the goal, formal authority can get in the way of leadership because it is designed to maintain systems, not to help people overcome their natural tendencies to maintain the status quo. When organizations and systems are being changed on purpose, adaptive leadership is needed to manage the change process." (National Implementation Research Network).

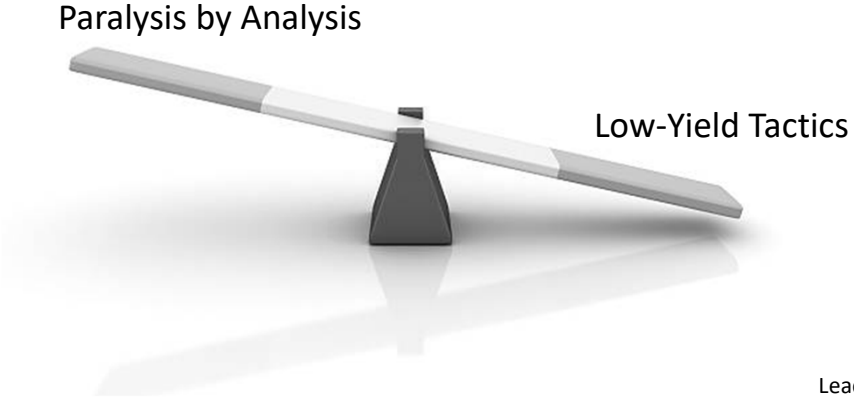
Lead More Effectively

Your Role in Setting Priorities: Traditional Accountability v. Reverse Behavioral Engineering



Lead More Effectively

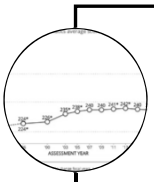
Your Role in the Feedback Loop: Don't Do This



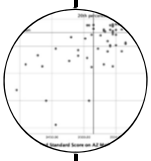
Lead More Effectively

Instead, Do This

Strategic Vision



Data Sources



Needs

Costs/Benefits

Tactics (Implementation Management)

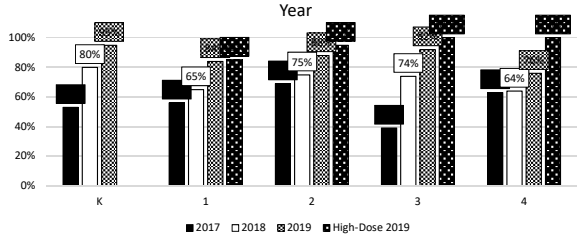
Lead More Effectively

Report to Leaders

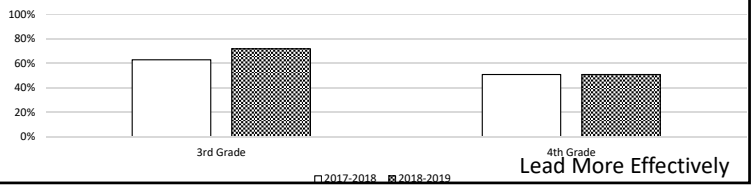
- Dose, Growth on Proximal, Growth on Distal

	Percentage of Skills Mastered (2017-2018)	Percentage of Skills Mastered (2018-2019)
Kindergarten	58%	100%
1st Grade	60%	80%
2nd Grade	62%	88%
3rd Grade	35%	68%
4th Grade	22%	49%

Percent Proficient on Winter DIBELS Composite by Grade & Year

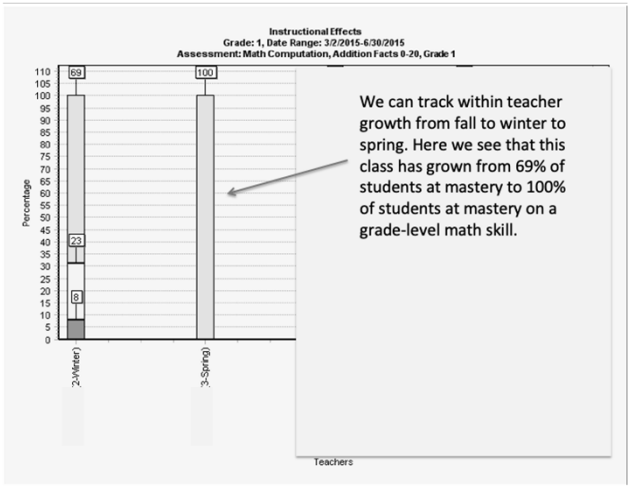


Percent Proficient on PSSA (State Year-End Test) for Grades 3 and 4

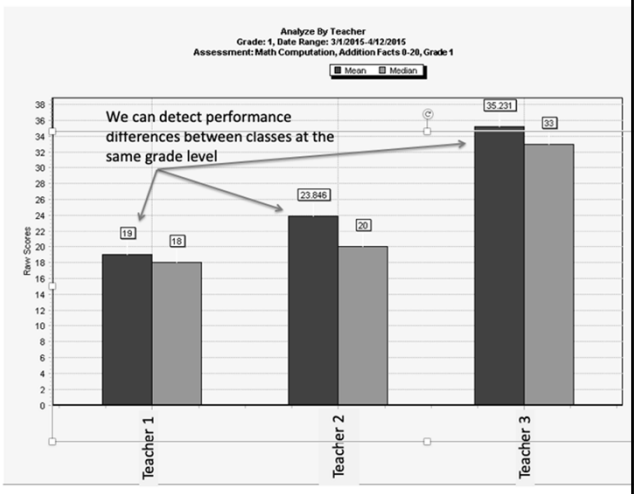


Lead More Effectively

Within-Class, Within-Year Improvements

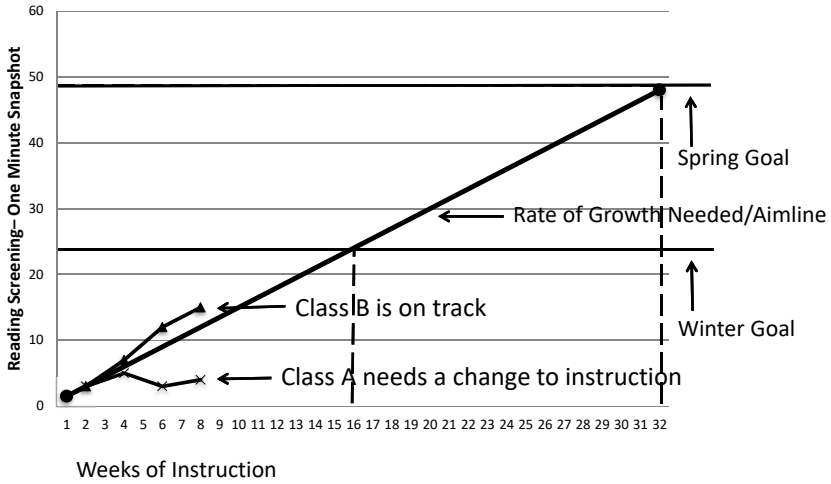


Across-Class Differences



Lead More Effectively

Weekly Monitoring of Learning to Assure Milestones



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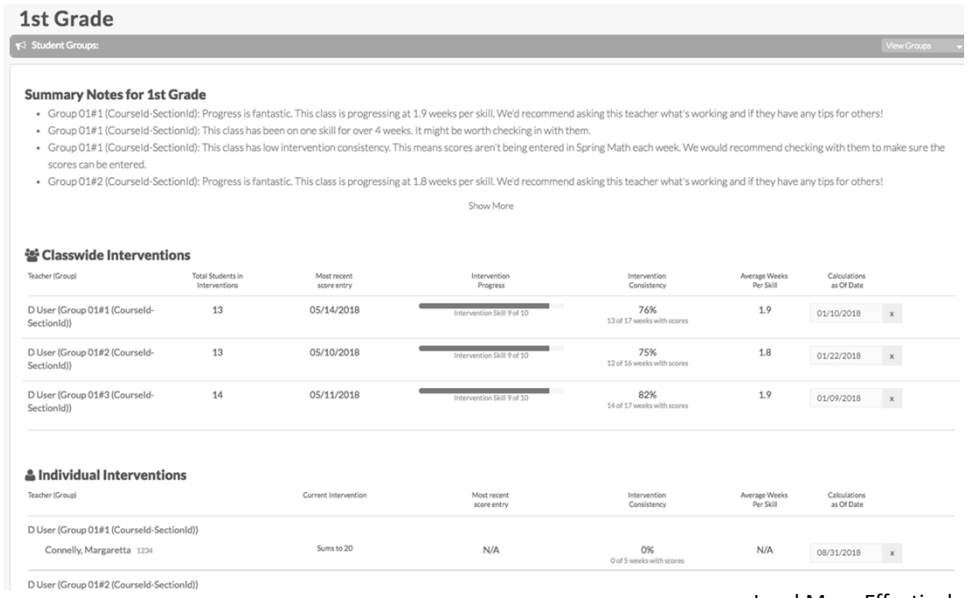
What Must Leaders Know?

- What actions are underway?
- What are the results right now?
- Where is support needed?
- Are proximal indicators headed in the right direction?
- What are the barriers we can troubleshoot?



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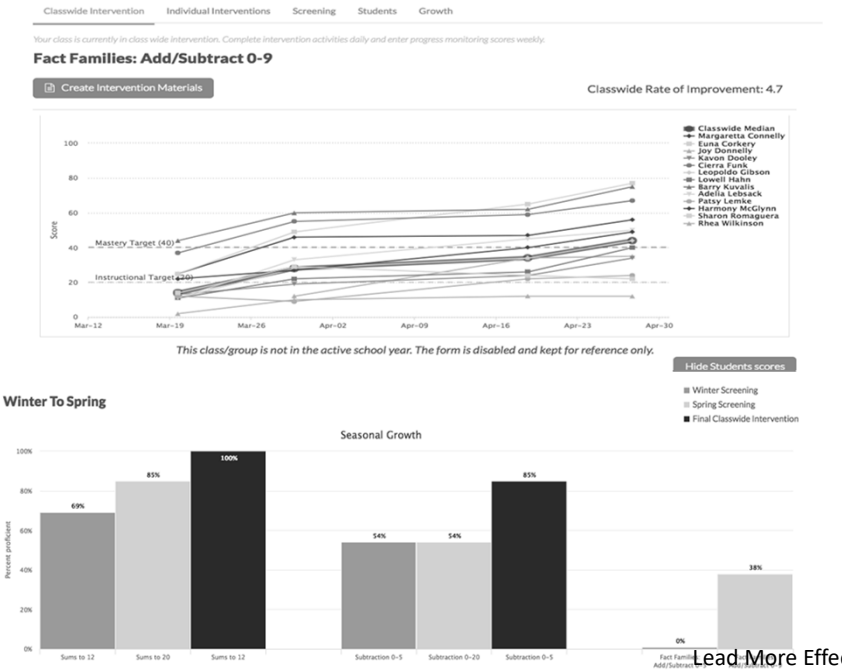
Teacher: Are Students Growing?

Teacher: Does Growth Transfer?



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