

Using the Outcomes-Driven Model and DIBELS for Response to Intervention

Dynamic Measurement Group, Inc.

Roland H. Good III
Ruth Kaminski
Kelli Cummings
Kelly Powell-Smith
Kristen MacConnell



1

Overview of the Day

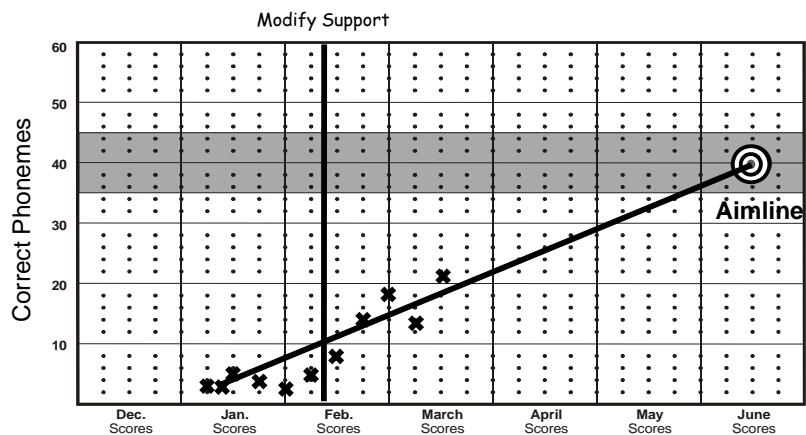


- Introduction
 - Overview of DIBELS
 - Overview of Response to Intervention
- Using DIBELS
 - Identify Need for Support
 - Validate Need for Support
 - Plan Support
 - Evaluate Support
 - Review Outcomes

© 2009, Dynamic Measurement Group

2

Why DIBELS®?

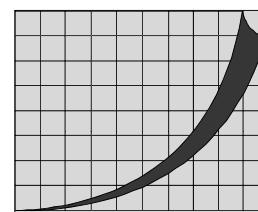


© 2009, Dynamic Measurement Group

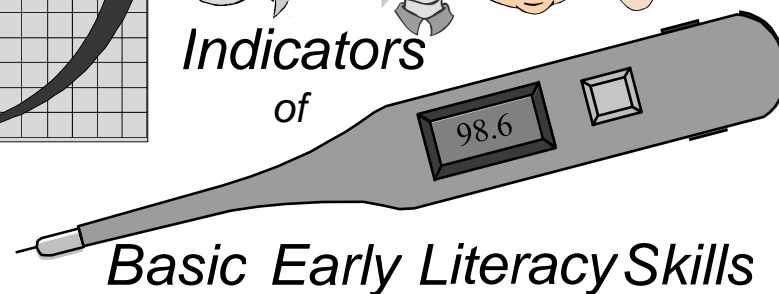
3

What Are DIBELS®?

Dynamic



Indicators
of



© 2009, Dynamic Measurement Group

4

Relevant Features of DIBELS®



- Measure *Basic Early Literacy Skills*: Big Ideas of early literacy
- Efficient and economical
- Standardized
- Replicable
- Familiar/routine contexts
- Technically adequate
- Sensitive to growth and change over time and to effects of intervention

Data on DIBELS®



Measure	Alternate Form Reliability	Criterion-Related Validity
Phoneme Segmentation Fluency	1 probe: .88 3 probes ^a : .96	.73 - .91
Initial Sound Fluency	1 probe: .65 5 probes: .90	.44 - .60
Nonsense Word Fluency	1 probe: .92 3 probes: .98	.84
Word Use Fluency	1 probe: .65 5 probes: .90	.42 - .71
Oral Reading Fluency	1 probe: .90	.70-.80
Retell Fluency	.68 - .72	.73-.81
Letter Naming Fluency	1 probe: .93 3 probes: .98	.72 - .98

Summary of Research



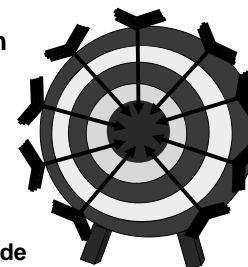
- Correlations between DIBELS® scores and other measures are moderate to strong. In a variety of studies, students' performance on DIBELS® has been compared to their performance on standardized norm-referenced tests of:
 - reading readiness, e.g., Metropolitan Readiness Test
 - reading achievement, including comprehension, e.g., Stanford Diagnostic Reading Test, Woodcock Johnson
 - intelligence, e.g., Stanford-Binet, McCarthy Scales
 - specific skills, e.g., Test of Phonological Awareness (TOPA), Test of Language Development (TOLD), Language Sample, Reading Comprehension subtest of WJ
- Reliability and validity of DIBELS® are as high as or higher than that of other tests (most of which take substantially longer to administer and score and are not sensitive to small increments in child change over small periods of time).

DIBELS® Benchmark Goals

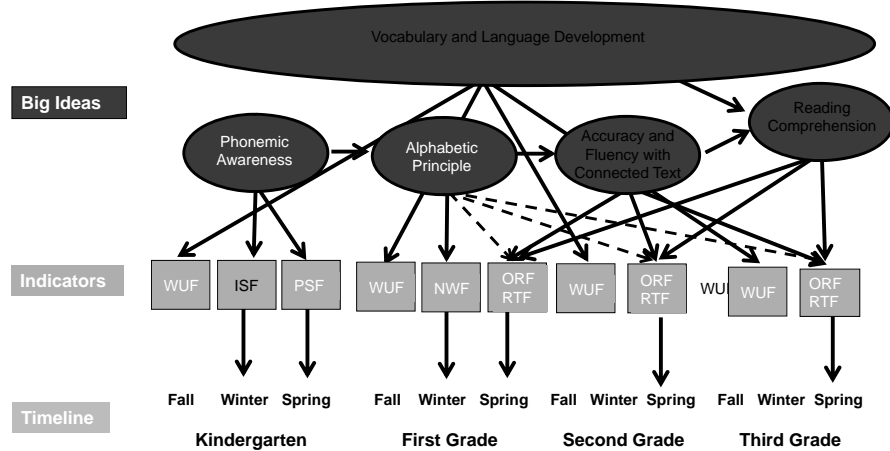
80% - 100% Chance of Getting to Next Goal



- Initial Sound Fluency:
 - **25** sounds per minute by **winter Kindergarten**
- Phoneme Segmentation Fluency:
 - **35** sounds per minute by **spring Kindergarten**
- Nonsense Word Fluency:
 - **50** sounds per minute *with at least 15 words recoded* by **winter First Grade**
- DIBELS® Oral Reading Fluency:
 - **40** words correct per minute by **spring First Grade**
 - **90** words correct per minute by **spring Second Grade**
 - **110** words correct per minute by **spring Third Grade**
 - **118** words correct per minute by **spring Fourth Grade**
 - **124** words correct per minute by **spring Fifth Grade**
 - **125** words correct per minute by **spring Sixth Grade**



Model of Big Ideas, Indicators, and Timeline



Adapted from Good, R. H., Simmons, D. C., & Kame'enui, E. J. (2001).

Probability of Meeting Goals and DIBELS® Descriptors



Three Categories:

Probability of achieving subsequent goals	Greater than 80%	50%	Less than 20%
Probability of need for support (<i>Instructional Recommendation</i>)	Low	Some	High
DIBELS® descriptor of risk	Low	Some	High
DIBELS® descriptor for need for support	Benchmark	Strategic	Intensive
DIBELS® descriptor of status	Established	Emerging	Deficit

What is Response to Intervention?



1. An alternative approach to determine eligibility for learning disability under IDEA 2004:
 - Response to intervention (RTI) functions as an alternative for learning disability (LD) evaluations within the general evaluation requirements of IDEA 2004 (20 U.S.C 1414 (B)(6)(A)) .
 - IDEA 2004 adds a new concept in eligibility that prohibits children from being found eligible for special education if they have not received instruction in reading that includes the five essential components of reading instruction identified by the Reading First Program. RTI is included under this general umbrella.

What is Response to Intervention?



2. An approach for maximizing student learning/progress through sensitive measurement of effects of instruction:
 - Diagnostic teaching
 - Precision teaching
 - Problem-solving model
 - Outcomes-driven model

Description of RTI



- Students are provided with generally effective instruction by classroom teacher.
- Progress of students receiving general education is monitored.
- Students who are not making adequate progress are identified early.
- Students who need more than general education instruction receive something else or something more, either from their teacher or someone else.
- The progress of students receiving something else/more is monitored and instruction is adjusted.

1. Eligibility approach: Those who display serious, stubborn, lack of adequate progress qualify for special education services.

© 2009, Dynamic Measurement Group

2. Maximize learning approach: Those who continue to make less than adequate progress get something else/more until they respond.

19

Underlying Assumptions of RTI



- 1. Eligibility Model
 - Disabilities are due to within child factors and are intractable.
 - There are children who are “non-responders” or “treatment resisters”.
 - Starting point of the model is when the student is referred for special education evaluation.
 - Goal/end point of the model is a special education eligibility decision.
- 2. Maximize Learning Model
 - Most children can learn when provided with effective instruction.
 - There are children for whom we have not yet found an effective intervention.
 - Starting point of the model is before there are serious learning problems.
 - Goal is to find the “match,” i.e., the instructional approach or strategies that are effective for the individual student.

© 2009, Dynamic Measurement Group

20

Our View on RTI:



- Referral for special education eligibility evaluation because of academic difficulty is not an appropriate starting point.
- Eligibility based on lack of adequate progress is NOT a defensible endpoint.
- Response to intervention (RTI) in a prevention-oriented system of generally effective instruction (e.g., a three-tier model) IS a defensible means to maximize student learning and progress.

© 2009, Dynamic Measurement Group

21

What is Rtl?



- Rtl is a “process of instruction, assessment, and intervention, that allows schools to identify struggling students early, provide appropriate instructional interventions, and increase the likelihood that the students can be successful and maintain their class placement” (Mellard & Johnson, 2009, p.1)

© 2009, Dynamic Measurement Group

22

Three General Purposes of Rtl (Mellard & Johnson, 2009)



1. Screening and prevention of academic failure
2. Early Intervention
 - IDEA(2004) allows for 15% of Part B funds to be allocated to early intervention services
3. Evaluation for special education
 - Can serve as one component of disability determination.
 - States can adopt, states cannot prohibit.

Multiple Specific Purposes: Which Purpose(s) Do You Want?



- Maximize learning for students in general education.
- Maximize learning for students in special education.
- Prevent learning difficulty for students in general education.
- Prevent Learning Disabilities for students at risk of needing special education.
- Target early intervention for students with learning difficulty in general education.
- Target early intervention for students with Learning Disabilities before they are identified.
- Accurate and Defensible Identification of students with Learning Disabilities for special education.
- Lose weight, cure baldness, and prevent gout.

Eligibility is a High Stakes Decision



- High Stakes Decisions - Eligibility
 - One-time decision point that is not easily modified.
 - Immediate life impact is likely.
 - Positive consequences – support, intervention.
 - Unintended negative consequences are likely – more restrictive environment, stigmatization.
 - High stakes decisions require a higher degree of rigor in evidentiary considerations.
- Low Stakes Decisions – Maximizing learning
 - Set of ongoing decisions
 - Self-correcting decisions. Initial decisions are monitored and re-evaluated on an ongoing basis with adjustments as necessary.
 - Gradual life impact is likely.
 - Gradual onset of positive consequences
 - Minimize unintended negative consequences
 - Low stakes decisions may be made with a lower degree of rigor in evidentiary considerations.

Three Crucial Measurement Decisions in RTI



1. Is the student making adequate year-to-year progress?
 - Maximize learning: Is the student making adequate progress toward meaningful long term goals?
 - Eligibility: Does the student have severe low achievement that may indicate learning difficulty?
2. Is the student receiving generally effective instruction?
3. Is the student making adequate week-to-week progress?
 - Maximize Learning: Is the student making adequate progress?
 - Eligibility: Does the student display a serious, stubborn, sustained lack of adequate progress when provided with generally effective instruction?

Reliability Evidence Required for Defensible Educational Decisions



- Reliability – Decisions should be reasonably stable across trivial changes in conditions.
- Thou shalt not make capricious decisions about children.
 - Maximize Learning: lower standard because decisions are self-correcting and low stakes.
 - Eligibility: Rigorous standards because high stakes decisions.
 - Decisions about Level: reliability of .90 or higher.
 - Decisions about Rate of Progress: No specific standards or criteria are generally accepted. More reliable is important.

Normative Context Required for Defensible Educational Decisions



- Normative context – How well is the student performing compared to a relevant comparison group.
 - Local norms compare performance other children in the student's classroom, school, or district.
 - National norms compare performance to other children around the nation.
 - Other specific comparison groups.
- Maximizing Learning: What are reasonable expectations for grade level peers?
- Eligibility: If almost everyone has it, doesn't have it, does it, or can't do it, then it is not a disability and not evidence for eligibility for special education.

Defensible Educational Decisions Require Evidence the Skills are Valid/Meaningful



- Includes but is more than conventional validity coefficients.
- Meaningful evidence links decisions to outcomes. Reschly would call this the Outcomes Criterion.
 - Prognosis: Students with a particular level of skills or educational needs have lower likelihood of favorable outcomes.
 - Dosage: Students with lower likelihood of favorable outcomes benefit from more instructional time.
 - Intervention: When students with a particular set of skills or educational needs are provided with a specific intervention their outcomes are better than if they receive a different intervention.
- How important is the difference in outcomes. Would a parent care?

Evidentiary Requirements for RTI



Evidentiary Considerations for the Educational Decisions Required for Response to Intervention Models

Educational Decision	Evidentiary Consideration		
	Reliable	Normative Context	Valid/ Meaningful
1. Is the student making adequate year-to-year progress?	X	X	X
2. Is the student receiving generally effective instruction?	?	?	?
3. Is the student making adequate week-to-week progress?	+/-	+/-	+/-

Note. X = generally strong and persuasive evidence. ? = level of evidence is unestablished. +/- = emerging evidence base.

Shouldn't we just wait until the research/science evidence base is complete before using RTI for eligibility decisions?



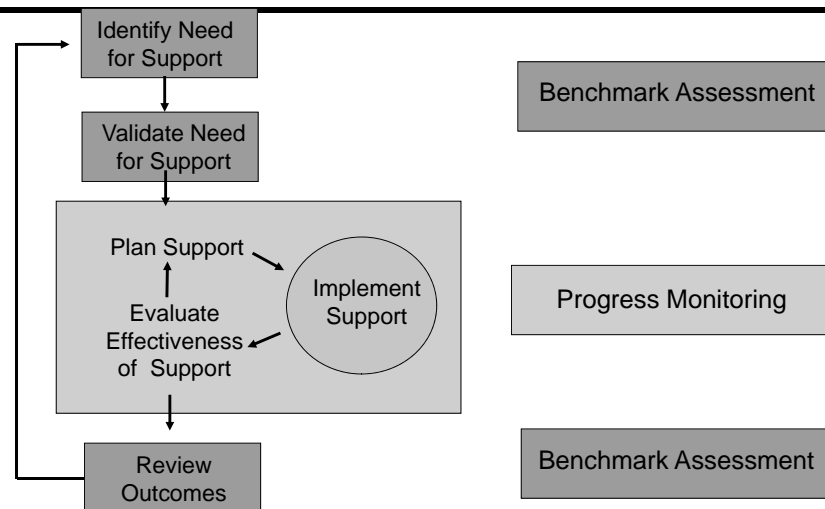
- Of course, one alternative is to keep using an ability-achievement discrepancy to identify learning disability – there is substantial research on the approach.
 - No evidence that an ability-achievement discrepancy is educationally meaningful.
 - Evidence that an ability-achievement discrepancy does not correspond well to the decisions educators make in practice.
- Or we could rely on individual judgment: "I know them when I see them".
- Or we could suspend eligibility decisions until the scientific basis is completely established.

Potential of Utility RTI



- Requires measures that accurately identify risk early, that provide meaningful and important goals, and that evaluate adequate progress toward those goals.
- Used within a *prevention-oriented* system of *progress monitoring* and *evaluating system-wide effectiveness*: *Outcomes Driven Model*
- Used for all students to maximize learning.

Use DIBELS® For RTI Within an Outcomes-Driven Model



Outcomes-Driven Model Decision Steps

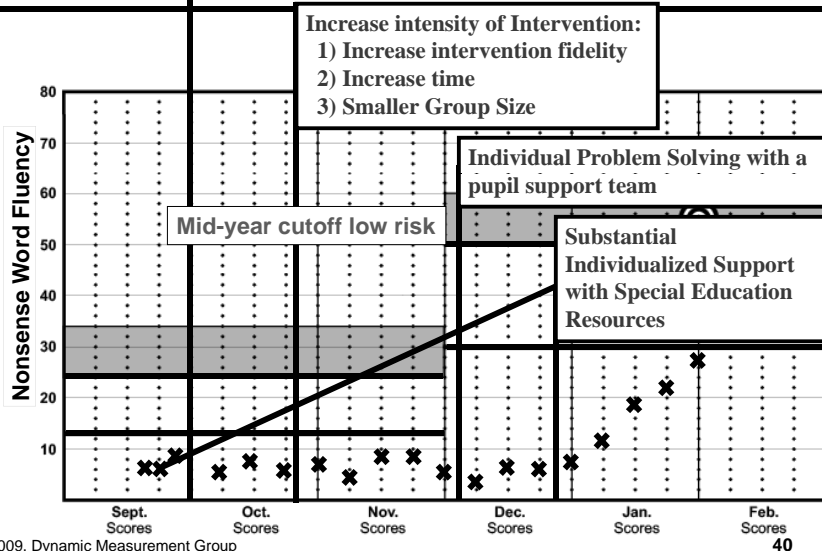


ODM Step	Question(s)	Data
1. Identify Need	Are there students who may need support? How many? Which students?	Benchmark data: Histograms, Box Plots, Class List Report
2. Validate Need	Are we confident that the identified students need support?	Benchmark data and additional information: Repeat assessment, use additional data, knowledge of/information about student
3. Plan Support	What level of support for which students? How to group students? What goals, specific skills, curriculum/program, instructional strategies?	Benchmark data and additional information: Individual student booklets, additional diagnostic information, knowledge of/information about student
4. Evaluate Support	Is the support effective for individual students?	Progress Monitoring data: Individual student progress graphs, class progress graphs
5. Evaluate Outcomes	As a school/district: How effective is our core (benchmark) support? How effective is our supplemental (strategic) support? How effective is our intervention (intensive) support?	Benchmark data: Histograms, Cross-Year Box Plots, Summary of Effectiveness Reports

Outcomes Driven Model and RTI



Implement a Research-Based Intervention

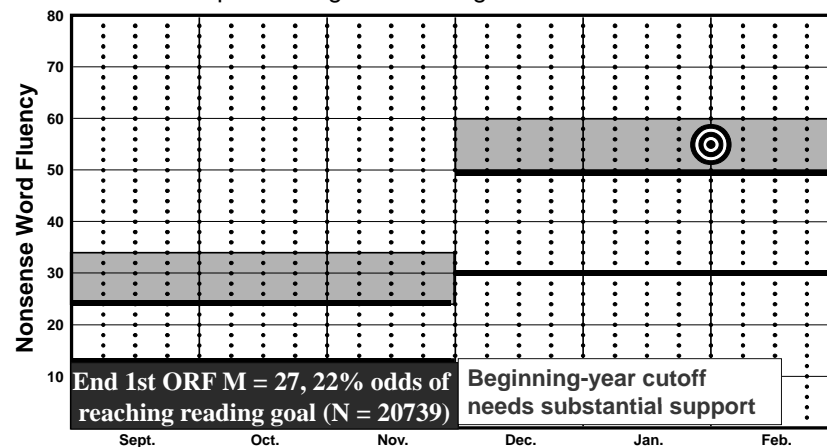


40

Accurately Identify Need for Support Early



- Students with low skills are likely to need substantial support to achieve adequate first grade reading outcomes.

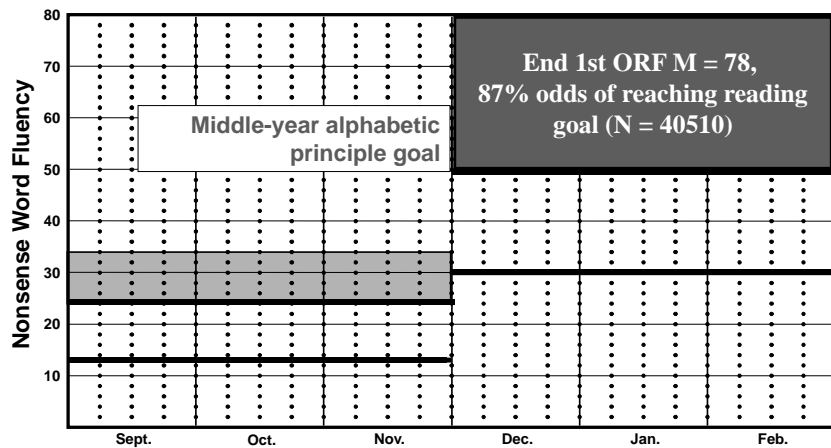


41

Provide Meaningful and Important Goals



- Most students reaching alphabetic principle goal in mid first grade achieve adequate first grade reading outcomes.

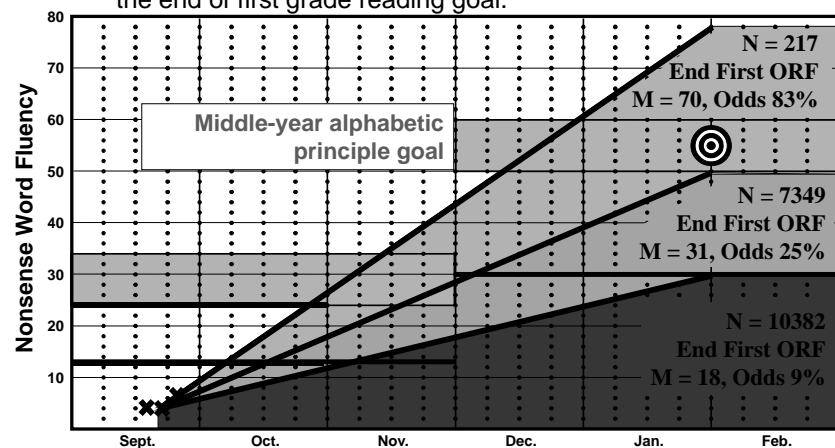


42

Evaluate Adequate Progress toward Goals

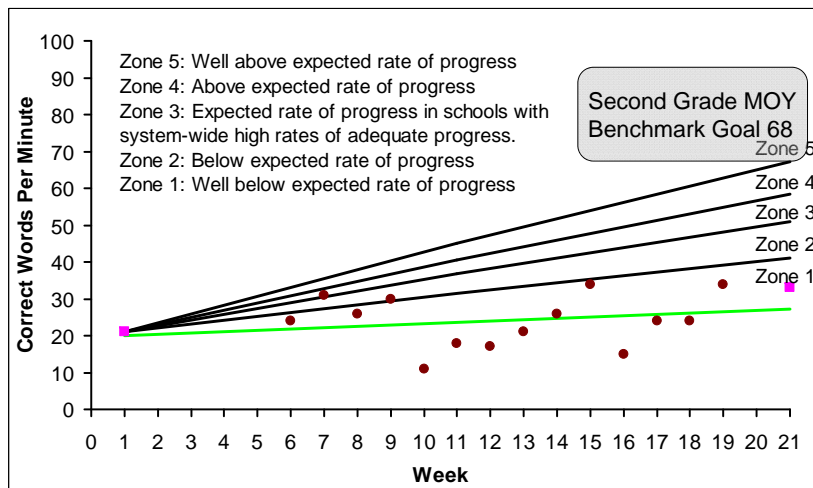


- Adequate progress toward instructional goals has a meaningful impact on first grade reading outcomes and the odds of reaching the end of first grade reading goal.



43

Normative Zones of Growth for Second Grade Beginning of Year to Middle of Year DIBELS Oral Reading Fluency: 20th, 40th, 60th, 80th percentiles



© 2009, Dynamic Measurement Group

44

RTI or PORTEI?

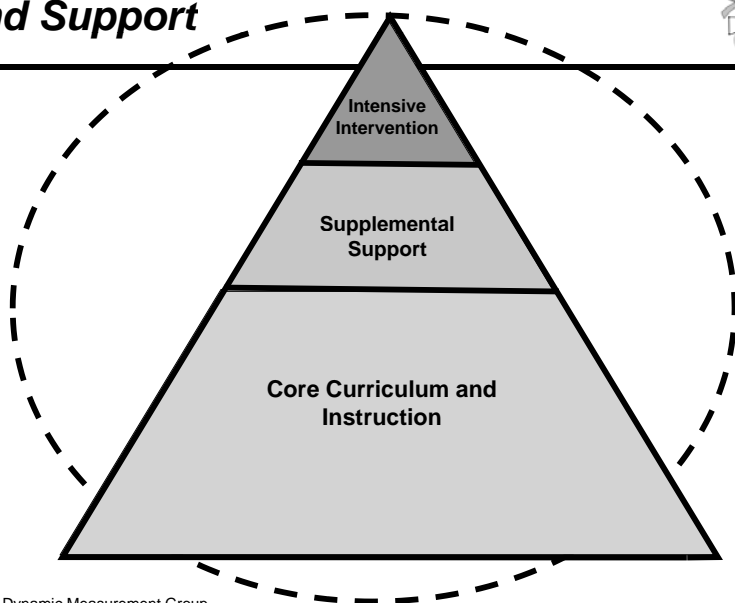


- RTI logic requires that the intervention is effective – otherwise it indicates a teaching problem rather than a learning problem.
- Requires expertise in instruction and intervention as well as in assessment.
- **We need to spend as much time assessing the quality of instruction as we spend assessing the response to the instruction.**

© 2009, Dynamic Measurement Group

45

Schoolwide System of Instruction and Support



© 2009, Dynamic Measurement Group

46

What is Generally Effective Instruction?

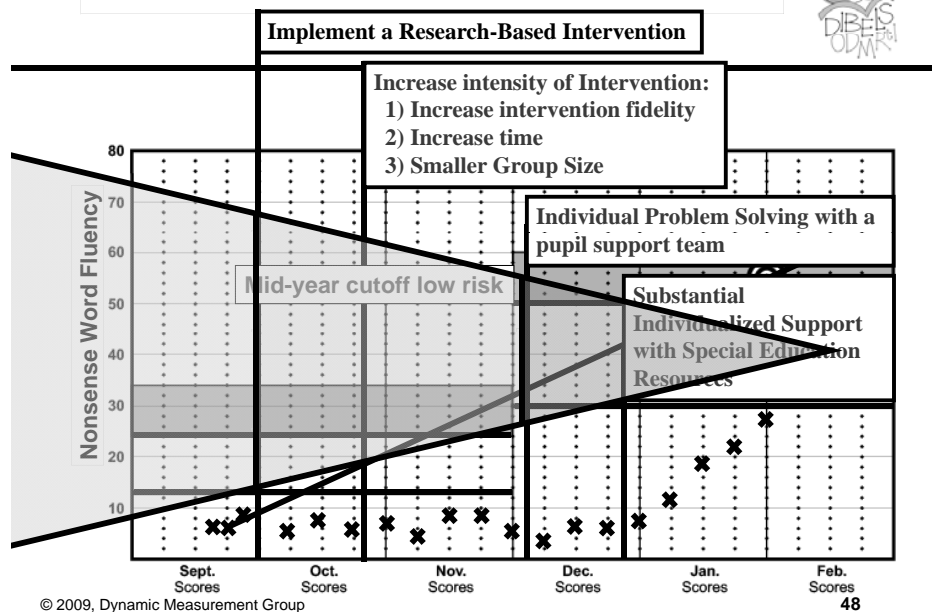


- **Benchmark Students**
 - **Generally Effective core curriculum & instruction** should:
 - support **95%** of benchmark students to achieve each literacy goal.
- **Strategic Students**
 - **Generally Effective supplemental support** should:
 - support **80%** of strategic students to achieve each literacy goal.
- **Intensive Students**
 - **Generally Effective interventions** should:
 - support **80%** of intensive students to achieve the goal or achieve emerging or some risk status.

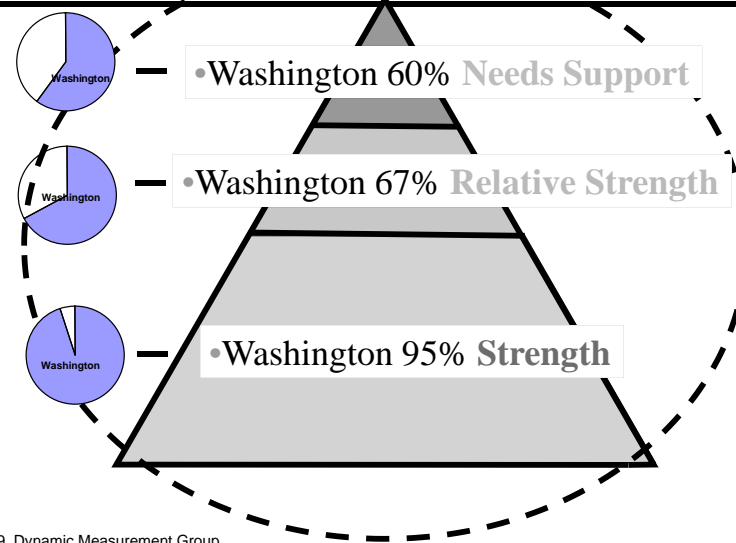
© 2009, Dynamic Measurement Group

47

Outcomes Driven Model and RTI



Schoolwide System of Instruction and Support - Washington



RTI or PORTEI?

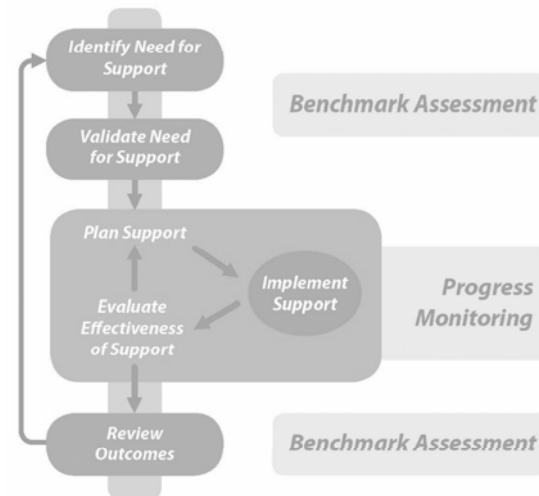


- RTI is most appropriate in a prevention-oriented framework.
- Previous disability models have been reactive and not proactive.
 - Reactive approaches waste time, effort, and resources before investing in interventions for children.
- Prevention oriented RTI is consistent with a continuum of support across general and special education like a three tier model.
- RTI should result in rapidly escalating support.
- The goal of RTI is to provide sufficient support so that each student makes adequate progress.

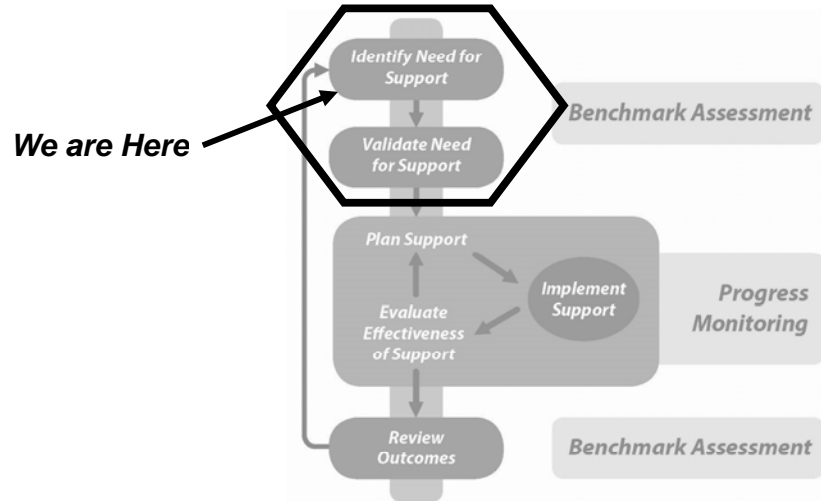
A Prevention-Oriented, Response to Effective Intervention Model



- Outcomes Driven Model provides a framework for
- Universal screening
- System-level and individual plans for support.
- Formative progress monitoring of progress toward meaningful goals.
- Review of outcomes at a systems level and for individual students.



Outcomes-Driven Model: Identify and Validate Need for Support



© 2009, Dynamic Measurement Group

1

Identify Need for Support: System



- Are there students who may need support?
- How many students may need support?

© 2009, Dynamic Measurement Group

2

Identify Need for Support: Which Students May Need Support?



- The *Class List* report provides information on individual students at a given assessment period. The Class List report includes all the students from one class.
- The Class List Report shows:
 - The raw scores of each student's performance on each measure.
 - The status category (i.e., at risk, some risk, low risk or deficit, emerging, established) for the student's score on each measure.
 - Percentile ranks for the student's score on each measure to show the student's performance in relation to all participating students in the district.
 - Instructional recommendations based on a summary of each student's performance on all of the measures.

© 2009, Dynamic Measurement Group

6

DIBELS® Data System Class List Report



Dynamic Indicators of Basic Early Literacy Skills First Grade Class List Report

District: Emerald City School District
School: Riverview School
Date: Fall
Teacher: Mrs. Firzle 1st

Note: Scores provide an indication of performance only. If there is any concern about the accuracy of scores for an individual student, performance should be verified by retesting to validate need for support.

Letter Naming Fluency Goal: 37 letter names			Phoneme Segmentation Fluency Goal: 35 phonemes			Nonsense Word Fluency Goal: 24 letter sounds			Word Use Fluency			Instructional Recommendations
Score	Percentile	Status	Score	Percentile	Status	Score	Percentile	Status	Score	Percentile	Status	
4	3	At risk	27	32	Emerging	0	2	At Risk	7	18		Intensive - Needs Substantial Intervention
8	5	At risk	11	14	Emerging	7	12	At Risk	0	6		Intensive - Needs Substantial Intervention
29	33	Some risk	33	47	Emerging	7	12	At Risk	11	26		Strategic - Additional Intervention
35	47	Some risk	9	11	Deficit	13	20	Some Risk	6	16		Strategic - Additional Intervention
26	25	Some risk	33	47	Emerging	14	22	Some Risk	21	45		Strategic - Additional Intervention
32	40	Some risk	24	26	Emerging	22	40	Some Risk	0	6		Strategic - Additional Intervention
43	65	Low risk	48	87	Established	22	40	Some Risk	40	84		Benchmark - At Grade Level
45	69	Low risk	35	53	Established	23	42	Some Risk	24	53		Benchmark - At Grade Level
30	36	Some risk	24	26	Emerging	31	60	Low Risk	25	55		Benchmark - At Grade Level
52	81	Low risk	30	92	Established	39	72	Low Risk	46	93		Benchmark - At Grade Level
29	33	Some risk	37	58	Established	41	74	Low Risk	22	48		Benchmark - At Grade Level
61	90	Low risk	41	70	Established	54	87	Low Risk	56	98		Benchmark - At Grade Level
61	90	Low risk	36	55	Established	62	90	Low Risk	37	76		Benchmark - At Grade Level
49	76	Low risk	31	41	Emerging	63	91	Low Risk	43	89		Benchmark - At Grade Level
46	70	Low risk	42	73	Established	64	92	Low Risk	61	> 99		Benchmark - At Grade Level
63	92	Low risk	32	43	Emerging	67	92	Low Risk	29	63		Benchmark - At Grade Level
38	54	Low risk	27	32	Emerging	132	99	Low Risk	39	81		Benchmark - At Grade Level
38.3 Mean			31.8 Mean			38.9 Mean			27.5 Mean			

From DIBELS® Data System, ©University of Oregon Center on Teaching and Learning

© 2009, Dynamic Measurement Group

7

mCLASS Class Summary Report



Select a Class

Support Category

Click a student name to open the Student Summary.

Click any **Score** to open its Probe Details.

Class Summary Kindergarten

Class Summary (Middle Benchmark)

Class: Kindergarten

Beginning Benchmark Middle Benchmark End Benchmark Progress Monitoring

Kindergarten : Middle Benchmark

	ISF	LNF	PSF	NWF	WUF
INTENSIVE					
Bord, Aaron	4	10	0	0	69
Vanburen, Chuck	4	0	4	0	40
STRATEGIC					
Builer, Brian	19	46	0	19	46
Carra, Dan	10	10	10	0	20
Iswardicki, Eric	19	37	10	0	51
BENCHMARK					
Choi, Alan	27	35	17	13	52
Marley, David	32	56	20	25	64
Murray, Adam	31	33	20	24	60
Smith, Justin	20	44	20	20	73
Tanahill, Ryan	59	43	35	52	44
NOT COMPLETED					

Click the tabs to view different Assessment Periods or any Progress Monitoring.

Goals for each measure

Percentile

Status/Risk Category

© 2009, Dynamic Measurement Group

© Wireless Generation, Inc 2006

8

Interpreting Class List Reports: Tips and Notes



- ISF and PSF both measure the same Big Idea: phonemic awareness. PSF is the more reliable measure; use PSF in winter of K as the primary measure of phonemic awareness.
 - If child is doing well on PSF can assume skills on ISF.
 - Use ISF if PSF is too difficult and child achieves score of 0.
- Phoneme Segmentation Fluency (PSF) has a threshold effect, i.e., children reach benchmark goal and then scores slightly decrease on that measure as they focus on acquiring new skills, e.g. alphabetic principle, fluency in reading connected text.

Note: ISF = Initial Sound Fluency. PSF = Phoneme Segmentation Fluency.

© 2009, Dynamic Measurement Group

9

Interpreting Class List Reports: Tips and Notes



- PSF and NWF measure different Big Ideas, both of which are necessary (but not sufficient in and of themselves) for acquisition of reading. We teach and measure both.
 - Skills in PA facilitate development of AP; however children can begin to acquire AP and not be strong in PA.
 - If a child seems to be doing well in AP, do not assume PA skills if a child is at risk.
 - Continue to provide support on PA and monitor progress. These children may have difficulty with fluent phonological recoding and with oral reading fluency.

Note: PSF = Phoneme Segmentation Fluency. NWF = Nonsense Word Fluency. PA = Phonemic Awareness. AP = Alphabetic Principle.

© 2009, Dynamic Measurement Group

10

Interpreting Class List Reports: Tips and Notes



- NWF and ORF measure different Big Ideas, both of which are necessary (but not sufficient in and of themselves) for acquisition of reading. We teach and measure both.
 - Skills in AP facilitate development of ORF; however children can begin to acquire ORF and not be strong in AP.
 - If a child seems to be doing well in ORF in the early grades, do not assume AP skills if a child is at risk.
 - Continue to provide support on AP and monitor progress. These children may have difficulty with fluent phonological recoding and with oral reading fluency.

Note: NWF = Nonsense Word Fluency. ORF = Oral Reading Fluency. AP = Alphabetic Principle.

© 2009, Dynamic Measurement Group

11

Interpreting Class List Reports: Tips and Notes



- Letter Naming Fluency (LNF) is an added indicator of risk. Use it in conjunction with scores on other DIBELS® measures.
 - Example: In a group of children with low scores on ISF at the beginning of Kindergarten, those with low scores also on LNF are at higher risk.
- LNF is not our most powerful instructional target.

Note: ISF = Initial Sound Fluency. LNF = Letter Naming Fluency.

What are the Critical Skills/Measures? Which Children Need Support?



Student	Letter Naming Fluency		Phoneme Segmentation Fluency Phonemic Awareness		Nonsense Word Fluency Alphabetic Principle		Instructional Recommendations
	Score	Percentile	Score	Percentile	Score	Percentile	
Amy	0	<1	At Risk	0	2	Deficit	Intensive
Ben	3	2	At Risk	0	2	Deficit	Intensive
Cameron	25	30	Some Risk	0	2	Deficit	Intensive
Dakota	17	14	At Risk	26	23	Emerging	Intensive
Estafan	12	8	At Risk	35	44	Established	Intensive
Felicia	23	25	At Risk	43	61	Established	Intensive
Grace	36	54	Some Risk	18	15	Emerging	Strategic
Hunter	25	30	Some Risk	29	28	Emerging	Strategic
Imogene	19	19	At Risk	56	90	Established	Strategic
Jordan	25	30	Some Risk	41	55	Established	Strategic
Kira	10	5	At Risk	28	27	Emerging	Strategic
Letisha	10	5	At Risk	23	20	Emerging	Strategic
Megan	17	14	At Risk	43	61	Established	Strategic
Nancy	32	46	Some Risk	46	69	Established	Benchmark
Patricia	37	56	Low Risk	18	15	Emerging	Benchmark
Rylee	35	52	Some Risk	32	35	Emerging	Benchmark
Savannah	40	64	Low Risk	43	61	Established	Benchmark
Theo	18	17	At Risk	9	8	Deficit	Strategic
Walker	43	70	Low Risk	39	51	Established	Benchmark
Zoe	25	30	Some Risk	45	67	Established	Benchmark
Zachary	30	43	Some Risk	13	11	Emerging	Benchmark

From DIBELS® Data System, ©University of Oregon Center on Teaching and Learning

Focus on Three Children



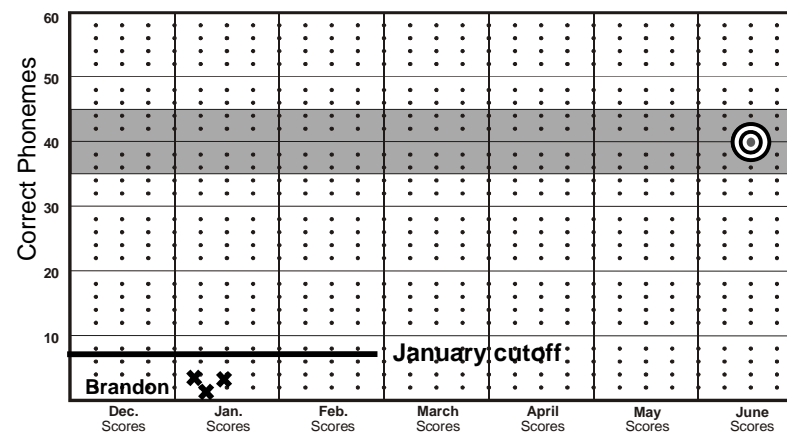
	ISF	%ile	Status	PSF	%ile	Status
T., Sandra	0	<1	Deficit*	3	3	At risk*
W., Brandon	7	3	Deficit*	4	4	At risk*
M., Danielle	8	5	Deficit*	1	2	At risk*

* = needs intensive support

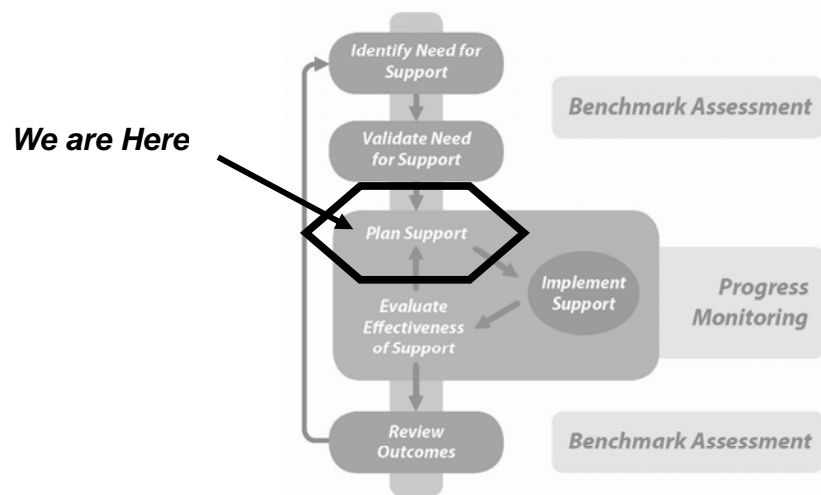
Validate Need for Support: Brandon



Verify need for instructional support by retesting with different forms until we are reasonably confident.



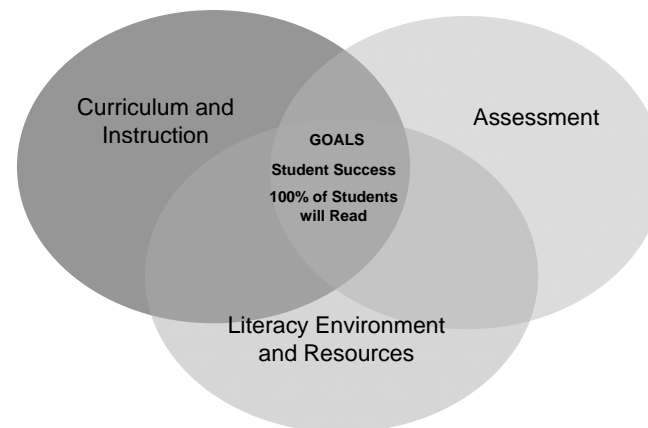
Outcomes-Driven Model: Plan and Implement Support



© 2009, Dynamic Measurement Group

1

DIBELS® is *One Part* of an Effective School-wide Literacy System



© 2009, Dynamic Measurement Group

2

How Do I know Which Programs are Effective?



- Florida Center for Reading Research
 - <http://www.fcrr.org>
- Oregon Reading First
 - <http://oregonreadingfirst.uoregon.edu>
- Consult Consumer's Guides
 - http://reading.uoregon.edu/curricula/con_guide.php



© 2009, Dynamic Measurement Group

3

High-Priority Skills: Consult Curriculum Maps



"Big Idea" Mapping of Instruction to Achieve Instructional Priorities Second Grade

		Months								
Instructional Priority: Alphabetic Principle		1	2	3	4	5	6	7	8	9
Focus 1: Letter-Sound Knowledge										
* 1a: Produces diphthongs and digraphs		X	X							
Focus 2: Decoding and Word Recognition										
* 2a: Uses advanced phonic elements to recognize words		X	X	X	X					
* 2b: Reads compound words, contractions, possessives, inflectional endings				X	X	X	X			
* 2c: Reads multisyllabic words						X	X	X		
Focus 3: Sight-Word Reading										
* 3a: Reads more sight words accurately		X	X	X	X	X	X	X	X	X
Focus 4: Reading Connected Text										
* 4a: Reads 90-100 wpm		X	X	44	X	X	68	X	X	90-100
4b: Reads with phrasing and expression				X	X	X				
4c: Listens to fluent oral reading and practices increasing oral reading fluency		10 ^a	10	10	15	15	20	20	20	20
4d: Reads and rereads to increase familiarity		X	X	X	X	X	X	X	X	X
4e: Self-corrects word recognition errors		X	X							

© 2009, Dynamic Measurement Group

4

Key Issues for System-Wide Plans



- Teaching Strategies

- Explicit Teaching Strategies
- Scaffolded
- Systematic
- Feedback provided



© 2009, Dynamic Measurement Group

5

Explicit Teaching Strategies



Model Guided Practice Independent Practice

Example:

1. Teacher points to individual letters and says "Watch me sound out this word and say the whole word:
mmmmm...aaaaa...t. Mat"
2. "This time you try it with me:
mmmmm...aaaa...t. Mat"
3. "This time you try it on your own"

mat

sat

rat

© 2009, Dynamic Measurement Group

6

Example: Explicit Advanced Phonics Lesson



Source: www.Free-Reading.net

Activity Focus: Advanced Phonics - Compound Words (e.g., bedbug)

Goal: Given a written compound word, the student can say the word.

Format: Teacher writes a compound word on the board or uses index cards and discusses that compound words are comprised of two shorter words "glued" together. Teacher sounds out the first word with students. Then they sounds out the second word. Finally, they put the two words together to form the compound word.

Sample teacher script: "Here's a weird word. It's weird because it's made up from two shorter words glued together. Here's the first word. Sound it out with me: beeeeed. Now say it fast: *bed*." (Continue with second part and put the parts together for the compound word.)

© 2009, Dynamic Measurement Group

7

Planning Support: What Skills Should we Teach?



Focus on the Big Ideas:

- Low on Initial Sound Fluency and Phoneme Segmentation Fluency?
 - Teach Phonemic Awareness
- Low on Nonsense Word Fluency?
 - Teach Beginning Phonics
- Low on Oral Reading Fluency? Why?
 - Teach Accuracy (higher level phonics skills)
 - Teach Fluency with Connected Text
 - Teach Comprehension strategies
 - Teach Vocabulary and Background knowledge
- Low on ORF + Retell Fluency?
 - Teach Comprehension
- Low on Word Use Fluency?
 - Teach Vocabulary

© 2009, Dynamic Measurement Group

8

Examining Patterns of Responding DIBELS Measures...



- Initial Sounds Fluency
 - Provides incorrect sound
 - Repeats sound or word
 - Points to or says name of picture with incorrect sound
 - Self-corrects
- Phoneme Segmentation Fluency
 - Repeats entire word
 - Omits or adds phonemes
 - onset & rime only
 - Errors on phonemes
 - Beginning, middle or end sounds
 - Does not segment blends
 - Self-corrects

Examining Patterns of Responding: NWF



- Substitutes real words for nonsense words
- Can identify some letter-sound correspondences but lacks a systematic strategy for attacking unknown words
- Produces sounds correctly sound-by-sound, but
 - does not recode
 - recodes sounds out of order
- Produces correct consonant sounds; incorrect vowel sounds
- Consistent error for a specific consonant or vowel sound
- Frequent sound additions
- Frequent sound omissions
- Frequent self-corrections

Examine Qualitative & Quantitative Data: DORF



DIBELS ORF Provides More Than Just a Number!

- Reads with appropriate phrasing & expression
- Observes punctuation
- Adjusts pace for difficult text
- Self-corrects/monitors meaning
- Shows automaticity on re-read words
- Uses effective decoding strategies
- Errors preserve vs. violate passage meaning
- Specific error types
 - Irregular words
 - Regular words
 - Specific phonics patterns
 - Omits words/letters
 - Adds words/letters

Patterns of Responding: RTF



- Summarizes instead of “tells everything...”
- Repeats the same detail; e.g., “It’s about going to the library. They go to the library. And they go to the library. It’s about a library.”
- Retells the passage verbatim
- “Speed reads” the passage and has no or very limited retell; e.g., reads 75 words in 1 minute and says, “It’s about a bird.”
- Talks about events in own life related to the passage; e.g., “I have a dog and his name is Sam...” in a passage about a dog

Examining Patterns of Responding: WUF



- Common WUF Error Patterns:

- Stereotypical response pattern, e.g., “I like to ____.”
- Short response
- Shy and reticent to talk
- Use of similar sounding word
- Asks for the word to be repeated

DIBELS Survey Procedures: Overview



- Where to start:
 - Begin with student’s grade level if you need to validate need for support from benchmark test score(s)
- Skipping Levels in DORF
 - If the student earns a score of 10 or less WRC on the first passage given, then the other two passages at that grade level may be skipped. Drop down another grade level.
 - For students in 3rd grade and above, if the their median score is 20 WRC or less in any level of DORF material, drop down two levels.

Determining Goals and Progress Monitoring Guidelines



- **Mastery Level:** The level at which the child’s median score is within the benchmark or low risk range and the child is reading with 95% accuracy or greater with adequate comprehension.
- **Instructional Level:** The lowest level at which the student has not generally mastered the skills necessary for grade level performance-- typically one level above the mastery level.
- **Progress Monitoring Level:** The optimal progress monitoring material is the highest level of material where the child reads with at least 90% accuracy and their median fluency is at least 20 WRC for first grade, at least 40 WRC for second grade, and at least 50 WRC in third grade and above.

Components of Effective Goals



- Timeline: When do you want the goals to be reached? (accelerate progress)
- Behavior: What do you want the student to do? (fluency, accuracy, and comprehension)
- Materials: What measurement material will be used? (e.g., second grade material, third grade material)
- Criterion: How much of the behavior does the student have to do?

Example: *By the Winter Benchmark testing, Susie will read 90 WRC with 4 or fewer errors and adequate comprehension in 2nd grade DORF passages.*

Considerations...



- Goal ambitiousness is related to higher achievement (Fuchs, 1993).
- Interventions should be targeted to catch students up to their grade-level peers.
- Learning needs to be accelerated for students with significant learning needs if the discrepancy is to be reduced.

Case Example: Ian - 4th Grade Student



DIBELS® Measure	Median Score	Status	Median Accuracy
Grade 6 - Oral Reading Fluency		Low Risk/Benchmark Some Risk/Strategic At-Risk/Intensive	
Grade 5 - Oral Reading Fluency		Low Risk/Benchmark Some Risk/Strategic At-Risk/Intensive	
Grade 4 - Oral Reading Fluency	33	Low Risk/Benchmark <u>Some Risk/Strategic</u> At-Risk/Intensive	70%
Grade 3 - Oral Reading Fluency	40	Low Risk/Benchmark <u>Some Risk/Strategic</u> At-Risk/Intensive	78%
Grade 2 - Oral Reading Fluency	45	Low Risk/Benchmark <u>Some Risk/Strategic</u> At-Risk/Intensive	90%
Grade 1 - Oral Reading Fluency	57	Low Risk/Benchmark <u>Some Risk/Strategic</u> At-Risk/Intensive	95%
Nonsense Word Fluency		Low Risk/Benchmark Some Risk/Strategic At-Risk/Intensive	
Phoneme Segmentation Fluency		Low Risk/Benchmark Some Risk/Strategic At-Risk/Intensive	

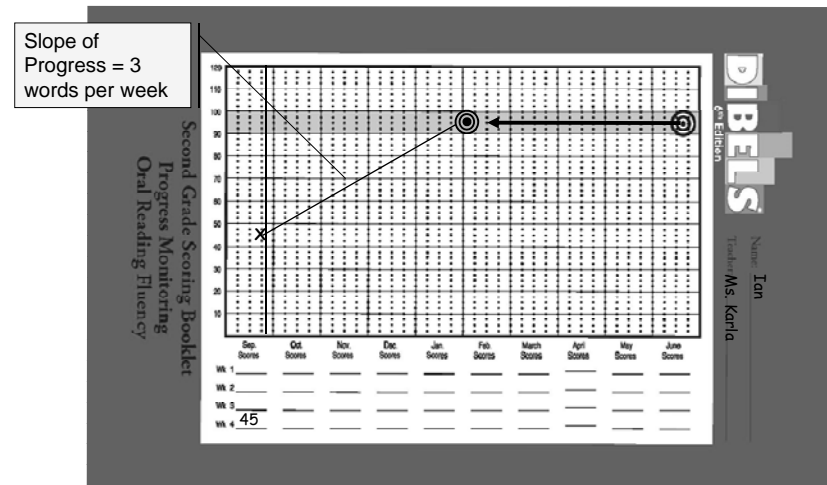
Setting Progress Monitoring Goals



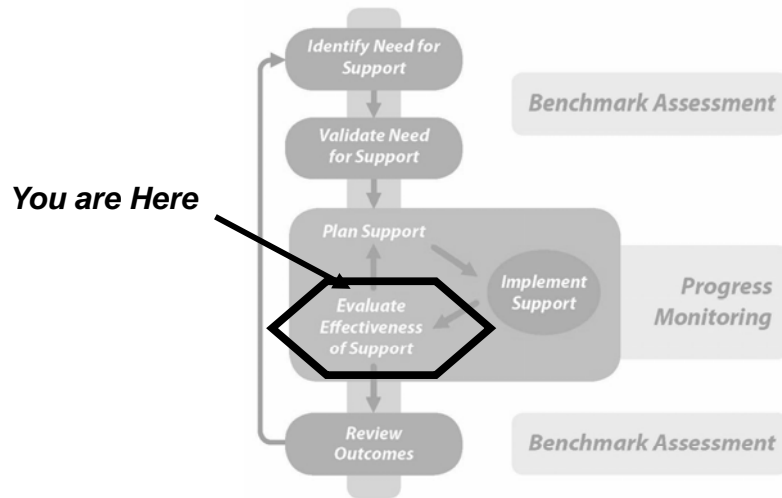
1. Determine students current level of performance (e.g., 45 WRC on 2nd grade material)
2. Determine outcome goal (e.g., 90 WRC 2nd grade material)
3. Set the goal to be achieved by the next benchmark testing. For out of grade level progress monitoring, accelerate target progress by reducing time to achieve the goal.
4. Draw aimline connecting current performance to goal.

Example of Out-of-Grade Monitoring

Ian, fourth grader progress monitored in second grade materials



Outcomes-Driven Model: Evaluate and Modify Support



© 2009, Dynamic Measurement Group

1

Evaluate and Modify Support



- What do you need to know?
 - Is the additional instructional support effective in getting students on track to achieve the next benchmark goal?
- What data can you use?
 - Progress Monitoring Booklets
 - Individual Student Performance Profiles
 - Class progress graph

© 2009, Dynamic Measurement Group

2

Data to use to evaluate the question



- Individual progress monitoring booklets at monthly data team meetings.
- If significant portions of our students are struggling, the most effective level of intervention is at the systems level

© 2009, Dynamic Measurement Group

3

Effects of Progress Monitoring: Any intervention is more effective



- Fuchs and Fuchs (1986) found the average effect size associated with progress monitoring was:
 - +0.70 for *monitoring progress*
 - +0.80 when *graphing of progress* was added
 - +0.90 when *decision rules* were added
- A student at the 50th percentile would be expected to move to the 82nd percentile (i.e., a score of 100 would move to a score of 114)
- Students with more ambitious goals achieve better.

Fuchs, L. S., & Fuchs, D. (1986). Effects of systematic formative evaluation: A meta-analysis. *Exceptional Children*, 53, 199-208.

© 2009, Dynamic Measurement Group

Good (2004)

5

Using Zones of Growth Normative Context to Graph Individual Zones



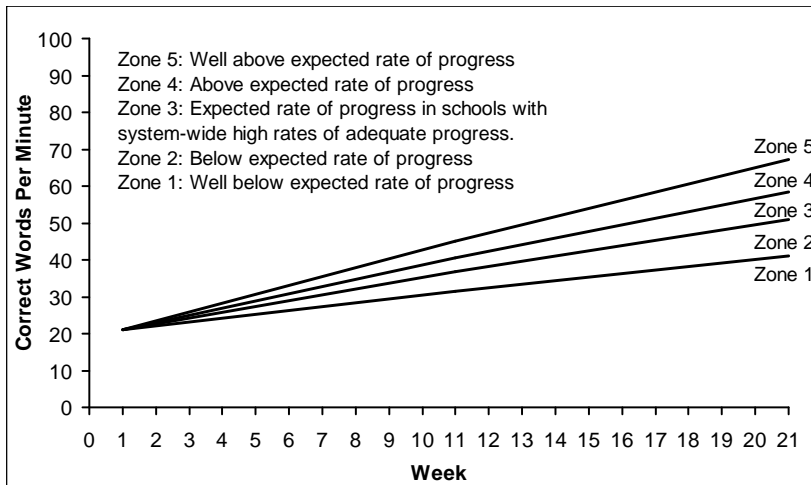
1. Start with the student's BOY level of skills. If multiple assessments are given to verify need for support, the median score would generally be a good estimate of initial skills.
2. Identify the band of initial performance in the Zones of Growth Norms table for the target grade and semester.
3. Count out 10 weeks from the initial assessment.
4. Multiply the growth rates by 10 (move the decimal 1 place to the right) and add to initial skill level.
5. Plot the points and use a ruler to draw lines dividing the zones of growth.

Table 23

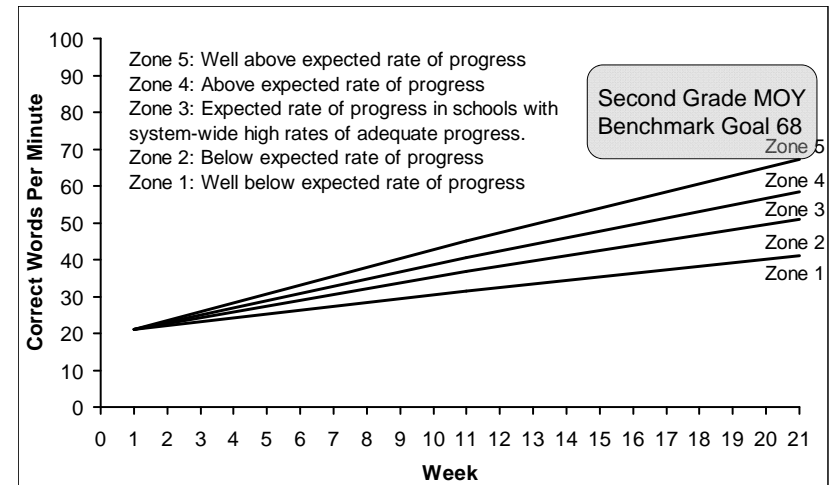
Zones of Growth by Level of Initial ORF Score in Beginning of Year Second Grade to Middle of the Year for Schools with 40 or More Students with High Rates of Adequate Progress for All Three Tiers (Conditional Probability of Intensive Reaching Strategic or Benchmark ≥ 23 and Conditional Probability of Strategic Reaching Benchmark ≥ 54 and Conditional Probability of Barely Benchmark Staying at Benchmark ≥ 95)

BOY - MOY growth percentile					
BOY ORF	<i>n</i>	20 th percentile	40 th percentile	60 th percentile	80 th percentile
Intensive					
0 to 5	934	0.11	0.33	0.56	0.98
6 to 15	3145	0.40	0.70	1.05	1.53
16 to 25	6270	0.95	1.43	1.78	2.20
Strategic					
26 to 34	7862	1.30	1.73	2.06	2.43
35 to 43	7415	1.50	1.83	2.11	2.50

Zones of Progress for a student with 21 words correct at Beginning of Year Second Grade

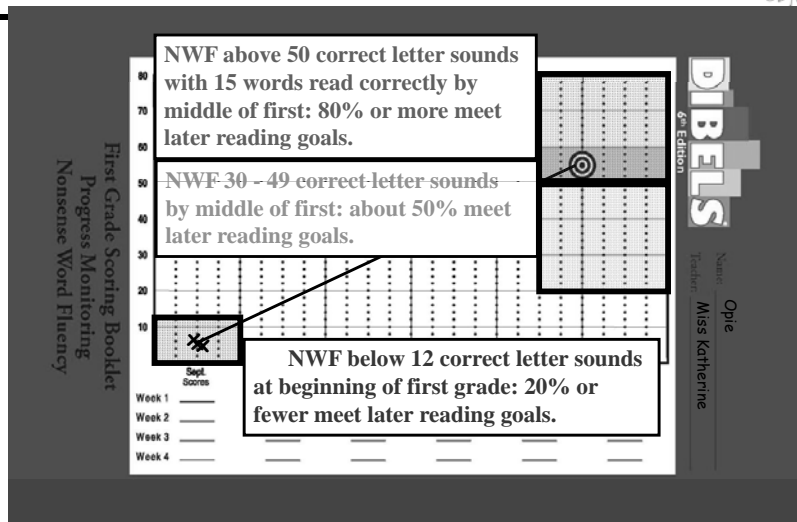


Consider Benchmark Goals and When Possible Establish a Goal to Achieve the Benchmark



Progress Monitoring Booklet: Opie

Set and Goal and Aimline for Adequate Progress

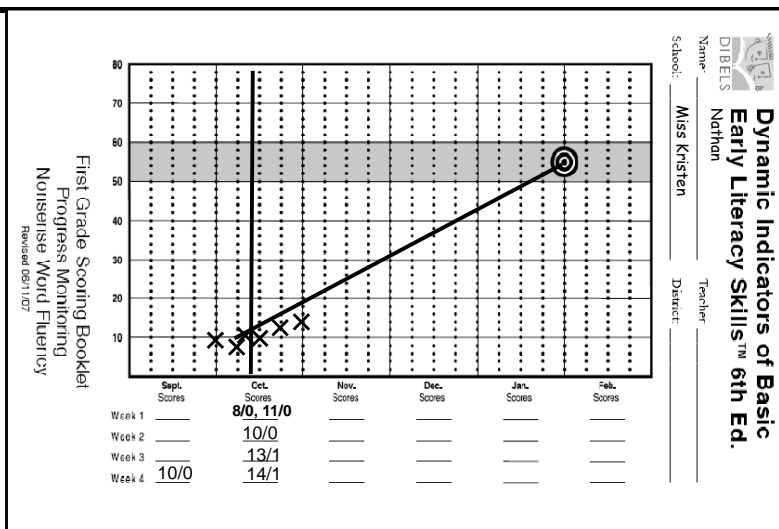


Guideline for Decision Making



- Monitor progress toward DIBELS® benchmark goals and progressive benchmarks
- Decision rule
 - When 3 consecutive data points are below the aimline. . .
 - *have a conversation;*
 - *consider making a change.*
 - Thinking is required!

Indigo's NWF Progress Monitoring

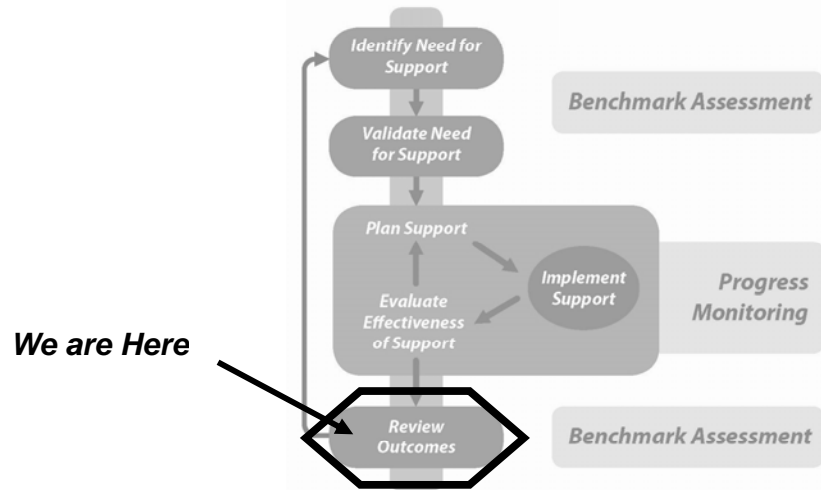


Analyzing Indigo's Progress



1. Is the current intervention effective in improving the child's alphabetic principle skills?
 - *No.*
2. What are the student's error patterns?
 - *Indigo only says the letter sounds that she knows. Currently is not recoding as whole words.*

Outcomes-Driven Model: Review Outcomes



© 2009, Dynamic Measurement Group

1

Review Outcomes: System Level



- What proportion of students at each grade level have achieved the benchmark and are on track for reading success?
- Have we reached our system goal at each grade level?
- Is each tier of our system of support generally effective?

© 2009, Dynamic Measurement Group

2

How Effective is our Core (Benchmark) Program?



- Indicators of a generally effective core program :
 - **80%** of all students in the school achieve each benchmark goal.
 - **Almost all students who start at benchmark** (95-100%) of students to make adequate progress and achieve the next benchmark goal.

© 2009, Dynamic Measurement Group

4

How Effective is our Supplemental (Strategic) Support?



- Indicators of a generally effective supplemental program:
 - Meets the needs of students in the school who will need more support than the core curriculum and instruction can provide.
 - 10% to 15% or less of students
 - Supports **80% - 100%** of students who need **strategic** support to achieve the next benchmark goal.

© 2009, Dynamic Measurement Group

5

How Effective is our Intervention (Intensive) Support?



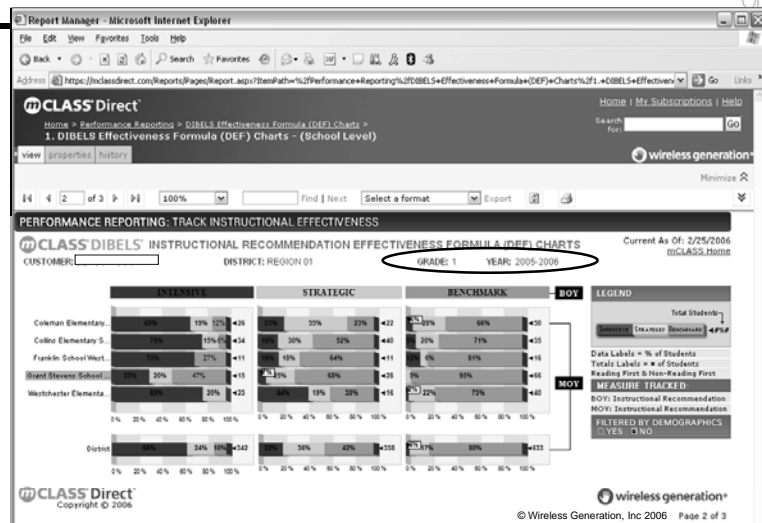
- Indicators of a generally effective Intervention Program:
 - 5% or fewer students need intensive support
 - Meets the needs of the 5% of students in the school who will need very intensive intervention to achieve literacy goals.
 - Supports **80% - 100%** of **intensive** students to reduce their risk of reading difficulty to strategic or achieve the benchmark goal. That is, students move from red to yellow or green status.

How Effective is our School-wide, Three-Tier System of Support?



- Rating each Tier of our School-wide System of Support:
 - Strength:** Meets the standard of generally effective core (Tier I), supplemental (Tier II), or intervention (Tier III) support.
 - Relative Strength:** *Upper third* compared to other schools in supporting students needing that level of support.
 - Needs Support:** *Middle third* compared to other schools in supporting students needing that level of support.
 - Needs Substantial Support:** *Lower third* compared to other schools in supporting students.

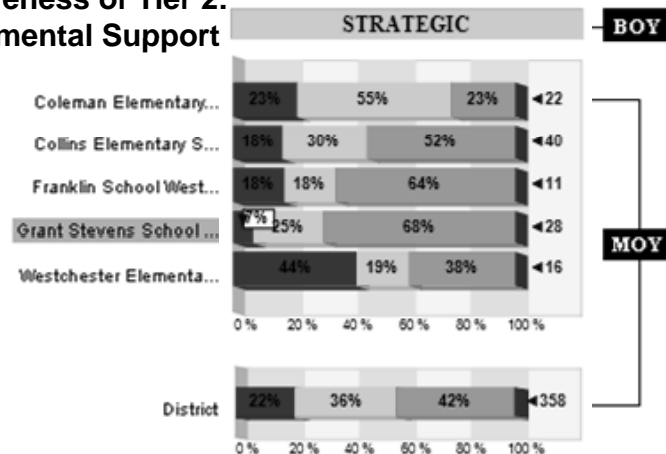
mCLASS Instructional Recommendation Effectiveness Formula



mCLASS Instructional Recommendation Effectiveness Formula



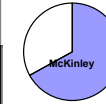
Effectiveness of Tier 2: Supplemental Support



Evaluating the School-Wide System of Support for McKinley



Benchmark at Beginning of Year to		
Mid-Year Deficit	Mid-Year Emerging	Mid-Year Established
33 Students Benchmark at Beginning of 1st		
60% of Total Students		
1	10	22
3%	30.3%	66.7%



At McKinley, 67% of students who were benchmark at the beginning of first grade achieved the middle of first grade goal.

Tier 1 rated as **Needs Support**

Strategic at Beginning of Year to		
Mid-Year Deficit	Mid-Year Emerging	Mid-Year Established
12 Students Strategic at Beginning of 1st		
21.8% of Total Students		
1	10	1
8.3%	83.3%	8.3%



At McKinley, 8% of students who were strategic at the beginning of first grade achieved the middle of first grade goal. Tier 2 rated as **Needs Substantial Support**

Intensive at Beginning of Year to		
Mid-Year Deficit	Mid-Year Emerging	Mid-Year Established
10 Students Intensive at Beginning of 1st		
18.2% of Total Students		
5	4	1
50%	40%	10%



At McKinley, 50% of students who were intensive at the beginning of first grade reduced their risk in the middle of first grade.

Tier 3 rated as **Needs Support**

© 2009, Dynamic Measurement Group

17

Report	WEB	PDF	Purpose	Description
Combined PDF Report		PDF		Histograms, Yearly Box Plots, Class Lists, Scatterplots, and Norms
Cross-Year Box Plot	WEB		Outcome	Grade-level percentiles over time by measure
Distribution Report	WEB	PDF	Screening; Outcome	Disaggregated results by project, school, class, or demographics
District- or Project-Wide Norms	WEB	*		Percentile Scores
Grade List Report	WEB		Screening; Outcome	Scores, percentiles, and instructional recommendations for all students within a grade
Histogram	WEB	*	Screening; Outcome	Distribution of scores for a single measure and assessment period by district or school
Participation Summary	WEB			Number of students tested in a given assessment period by class
Scatter Plot	WEB	*		Relation between measures at two points in time
Summary of Effectiveness by School, District, or Project		PDF	PM; Outcome	Progress of students by Instructional Recommendation over time
Summary of Effectiveness Worksheets		PDF	PM; Outcome	Used for interpreting Summary of Effectiveness Information
Yearly Box Plot	WEB	*		Grade-level percentiles over time by measure (see picture).

*Available as part of the Combined PDF Report

Summary: RTI – A Viable Alternative



- An emerging alternative to traditional eligibility models that is encouraged (but not required) by the recent reauthorization of IDEA.
 - “Must permit the use of a process that determines if the child responds to scientific, research-based interventions as part of the evaluation procedures”
- Logic: Serious, sustained, stubborn lack of adequate progress **when provided with generally effective instruction or intervention** may be indicative of a serious learning difficulty requiring special education support.
- We must spend as much time and effort evaluating the effectiveness of instruction or intervention as we spend evaluating the student's response if the logic of RTI is to be defensible for identifying a learning problem.

This May Require Some New Skills...



- It is a different way of doing business
- It requires an expanded set of assessment skills
- We need to assess the quality of instruction and assess the student's response to the instruction.
- It requires an expanded set of instructional options and interventions
- It requires a tighter linkage between assessment and instruction

Dynamic Indicators of Basic Early Literacy Skills

Summary of Effectiveness by District

District: Test District
 School: All Schools
 Date: 2001-2002
 Step: Beginning of 1st Grade to Middle of 1st Grade

Beginning of First Instructional Recommendation to Middle of First Benchmark Status on NWF	Intensive at Beginning of Year to			Strategic at Beginning of Year to			Benchmark at Beginning of Year to			Benchmark Status on NWF in Middle of First (Totals)
	Mid-Year Deficit	Mid-Year Emerging	Mid-Year Established	Mid-Year Deficit	Mid-Year Emerging	Mid-Year Established	Mid-Year Deficit	Mid-Year Emerging	Mid-Year Established	
Test District	49 Students Intensive at Beginning of 1st 12.1% of Total Students			101 Students Strategic at Beginning of 1st 24.9% of Total Students			256 Students Benchmark at Beginning of 1st 63.1% of Total Students			N = 406
Count	16	18	15	11	44	46	4	43	209	Deficit 7.6%
% of Instructional Recommendation	32.7%	36.7%	30.6%	10.9%	43.6%	45.5%	1.6%	16.8%	81.6%	Emerging 25.9%
% of Total	3.9%	4.4%	3.7%	2.7%	10.8%	11.3%	1%	10.6%	51.5%	Established 66.5%
Adams	5 Students Intensive at Beginning of 1st 6.8% of Total Students			18 Students Strategic at Beginning of 1st 24.7% of Total Students			50 Students Benchmark at Beginning of 1st 68.5% of Total Students			n = 73
Count	1	3	1	3	11	4	1	8	41	Deficit 6.8%
% of Instructional Recommendation	20%	60%	20%	16.7%	61.1%	22.2%	2%	16%	82%	Emerging 30.1%
% of Total	1.4%	4.1%	1.4%	4.1%	15.1%	5.5%	1.4%	11%	56.2%	Established 63%
Garfield	5 Students Intensive at Beginning of 1st 9.8% of Total Students			12 Students Strategic at Beginning of 1st 23.5% of Total Students			34 Students Benchmark at Beginning of 1st 66.7% of Total Students			n = 51
Count	2	2	1	0	3	9	0	7	27	Deficit 3.9%
% of Instructional Recommendation	40%	40%	20%	0%	25%	75%	0%	20.6%	79.4%	Emerging 23.5%
% of Total	3.9%	3.9%	2%	0%	5.9%	17.6%	0%	13.7%	52.9%	Established 72.5%
Jefferson	14 Students Intensive at Beginning of 1st 20.6% of Total Students			18 Students Strategic at Beginning of 1st 26.5% of Total Students			36 Students Benchmark at Beginning of 1st 52.9% of Total Students			n = 68
Count	3	2	9	2	7	9	1	7	28	Deficit 8.8%
% of Instructional Recommendation	21.4%	14.3%	64.3%	11.1%	38.9%	50%	2.8%	19.4%	77.8%	Emerging 23.5%
% of Total	4.4%	2.9%	13.2%	2.9%	10.3%	13.2%	1.5%	10.3%	41.2%	Established 67.6%
Lincoln	10 Students Intensive at Beginning of 1st 13.9% of Total Students			17 Students Strategic at Beginning of 1st 23.6% of Total Students			45 Students Benchmark at Beginning of 1st 62.5% of Total Students			n = 72
Count	3	4	3	2	8	7	0	9	36	Deficit 6.9%
% of Instructional Recommendation	30%	40%	30%	11.8%	47.1%	41.2%	0%	20%	80%	Emerging 29.2%
% of Total	4.2%	5.6%	4.2%	2.8%	11.1%	9.7%	0%	12.5%	50%	Established 63.9%
McKinley	10 Students Intensive at Beginning of 1st 18.2% of Total Students			12 Students Strategic at Beginning of 1st 21.8% of Total Students			33 Students Benchmark at Beginning of 1st 60% of Total Students			n = 55
Count	5	4	1	1	10	1	1	10	22	Deficit 12.7%
% of Instructional Recommendation	50%	40%	10%	8.3%	83.3%	8.3%	3%	30.3%	66.7%	Emerging 43.6%
% of Total	9.1%	7.3%	1.8%	1.8%	18.2%	1.8%	1.8%	18.2%	40%	Established 43.6%
Washington	5 Students Intensive at Beginning of 1st 5.7% of Total Students			24 Students Strategic at Beginning of 1st 27.6% of Total Students			58 Students Benchmark at Beginning of 1st 66.7% of Total Students			n = 87
Count	2	3	0	3	5	16	1	2	55	Deficit 6.9%
% of Instructional Recommendation	40%	60%	0%	12.5%	20.8%	66.7%	1.7%	3.4%	94.8%	Emerging 11.5%
% of Total	2.3%	3.4%	0%	3.4%	5.7%	18.4%	1.1%	2.3%	63.2%	Established 81.6%

School: _____

First Grade - First Semester
Evaluating Effectiveness of Schoolwide System Worksheet

1. *First Semester Goal:* What is the primary instructional goal for the first half of first grade?

Core Component or Big Idea: _____

DIBELS Measure: _____

Goal Skill Level: _____

Goal Timeline to Achieve: _____

2. *First Semester Outcome:* In the middle of first grade, on NWF, what percent are:

Established: _____ Emerging: _____ Deficit: _____

Is the outcome criterion (95% Established) met?

Yes. Schoolwide
System is a Strength

No. Go to 3 &
evaluate progress

If Schoolwide System Strength you do not need to complete numbers 3 – 10.

3. *Initial Skills:* In the beginning of first grade, what percentage of students schoolwide are

Benchmark: _____ Strategic: _____ Intensive: _____

4. *Adequate Progress of Benchmark Students:* Of the students who were Benchmark at the beginning of first grade, what percent achieved the NWF goal of 50 for the middle first grade? _____

5. How would you rate the effectiveness of the core curriculum and instruction?

- ☐ Strength – 95% to 100% of benchmark students achieve NWF goal.
- ☐ Relative Strength – 73% to 94% of benchmark achieve NWF goal
- ☐ Needs Support – 56% to 72% of benchmark students achieve NWF goal.
- ☐ Substantial Support – 0% to 55% of benchmark students achieve NWF goal.

6. *Adequate Progress of Strategic Students:* Of the students who were Strategic at the beginning of first grade, what percent achieved the NWF goal of 50 for the middle first grade? _____

7. How would you rate the effectiveness of the schoolwide system of supplemental support?

- ☐ Strength – 80% to 100% of strategic students achieve NWF goal.
- ☐ Relative Strength – 40% to 79% of strategic achieve NWF goal
- ☐ Needs Support – 20% to 39% of strategic students achieve NWF goal.
- ☐ Needs Substantial Support – 0% to 19% of strategic students achieve NWF goal.

8. *Adequate Progress of Intensive Students:* Of the students who were Intensive at the beginning of first grade, what percent achieved NWF of 30 (emerging) or 50 (established) for the middle of first grade? _____

9. How would you rate the effectiveness of the schoolwide system of intensive intervention?

- ☐ Strength – 80% to 100% of intensive students achieve NWF emerging or established.
- ☐ Relative Strength – 67% to 79% of intensive students achieve NWF emerging or established
- ☐ Needs Support – 40% to 66% of intensive students achieve NWF emerging or established.
- ☐ Needs Substantial Support – 0% to 39% of intensive students achieve NWF emerging or established.

10. Do parts of the schoolwide system *Need Support* or *Need Substantial Support*? What is the plan to improve the effectiveness of the schoolwide system for the first semester of first grade?

Table 14

School Based Percentile Ranks for the Beginning of the Year to the Middle of the Year of 2nd Grade and Schools with More Than 40 Students

School Percentile	Initial Status - BOY			Adequate Progress					Outcome - MOY		
	Percent Intensive	Percent Strategic	Percent Benchmark	Intensive Adequate Progress	Intensive Exceptional Progress	Strategic Adequate Progress	Barely Adequate Progress	Percent Adequate Progress	Percent Deficient	Percent Emerging	Percent Established
1	0	7	19	0	0	0	50	28	1	2	24
5	3	12	28	0	0	11	67	39	4	5	36
10	6	15	34	0	0	17	75	45	7	7	42
15	7	17	38	0	0	21	80	49	9	8	46
20	9	18	41	0	0	25	83	53	10	9	50
25	10	20	43	5	0	29	85	56	12	10	53
30	12	21	46	7	0	31	88	59	13	11	56
35	13	22	48	8	0	33	89	62	15	12	59
40	15	23	51	10	0	37	90	64	16	13	61
45	16	24	53	13	0	40	92	66	18	13	63
50	18	25	55	14	0	43	93	68	20	14	65
55	19	26	57	17	0	45	94	70	21	15	68
60	21	27	60	18	0	48	95	72	23	16	70
65	23	28	62	20	0	50	97	74	25	16	72
70	25	29	64	23	3	54	100	76	27	17	74
75	27	30	67	25	5	57	100	78	30	18	76
80	30	32	69	29	7	60	100	80	32	19	78
85	33	33	73	33	10	64	100	83	36	20	81
90	38	35	76	40	13	69	100	86	40	22	84
95	44	38	82	50	20	77	100	90	47	24	88
99	57	44	89	73	38	90	100	94	60	29	94

Note. Based on 6958 schools with 78176 students with beginning of year second grade ORF scores and middle of year second grade ORF scores.

Table 23

Zones of Growth by Level of Initial ORF Score in Beginning of Year Second Grade to Middle of the Year for Schools with 40 or More Students with High Rates of Adequate Progress for All Three Tiers (Conditional Probability of Intensive Reaching Strategic or Benchmark ≥ 23 and Conditional Probability of Strategic Reaching Benchmark ≥ 54 and Conditional Probability of Barely Benchmark Staying at Benchmark ≥ 95)

BOY ORF	<i>n</i>	BOY - MOY growth percentile			
		20 th percentile	40 th percentile	60 th percentile	80 th percentile
Intensive					
0 to 5	934	0.11	0.33	0.56	0.98
6 to 15	3145	0.40	0.70	1.05	1.53
16 to 25	6270	0.95	1.43	1.78	2.20
Strategic					
26 to 34	7862	1.30	1.73	2.06	2.43
35 to 43	7415	1.50	1.83	2.11	2.50
Benchmark					
44 to 53	7578	1.48	1.80	2.11	2.53
54 to 63	7263	1.35	1.73	2.08	2.53

Note. Based on 63055 students in 783 schools with high rates of adequate progress for intensive, strategic, and barely benchmark students.