Using DIBELS to Differentiate Instruction in a Standards-Based World

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Handouts available at:  
http://darkwing.uoregon.edu/~rhgood/dibels_to_differentiate.pdf

Oral Reading Fluency (ORF) -- What we Know/Don’t Know so far

Know
- Oral Reading Fluency is a remarkably reliable and valid indicator of reading proficiency that is sensitive to instruction and can model progress.
- Oral Reading Fluency can be used to differentiate levels of intensity of instructional support students need to achieve literacy goals.
- Readability of passages can change appropriate benchmark goals and thereby instructional decisions.

Don’t Know
- How to establish passage readability with precision.

Nonsense Word Fluency (NWF) -- What we Know/Don’t Know so far

Know
- Nonsense Word Fluency is a remarkably reliable and valid indicator of early literacy that is sensitive to instruction and can model progress.
- Nonsense Word Fluency can be used to differentiate levels of intensity of instructional support students need to achieve literacy goals.
- Nonsense Word Fluency can measure skills, risk, and progress early – before students can read

Don’t Know
- How to put Nonsense Word Fluency and Oral Reading Fluency on the same scale of measurement.

Beginning Reading Core Components

#1. Phonemic Awareness – The understanding that individual sounds of spoken language (phonemes) work together to make words. This allows readers to hear, identify, and manipulate the individual sounds.

#2. Phonics – The relationship between the sounds of spoken language (phonemes) and the letters representing those sounds in written language (graphemes). Skill in phonics helps students to recognize familiar words and decode unfamiliar ones.

#3. Fluency – The skill of reading texts accurately and quickly, which allows readers to recognize and comprehend words at the same time.

#4. **Vocabulary** – The ability to store information about the meaning and pronunciation of words. There are four types of vocabulary: listening, speaking, reading, and writing.

#5. **Reading Comprehension** – Understanding, remembering, and communicating with others about what has been read. Comprehension strategies help readers to make sense of a text.


The Robin’s Nest

There was a robin’s nest outside our kitchen window. The nest was in a tall bush. The mother robin sat in the nest all day long. One day when I was watching, the mother bird flew away. I saw the eggs she was sitting on. There were four blue eggs.

I watched and watched. The eggs moved. I watched some more. The eggs started to crack. Finally, the eggs hatched. I saw four baby birds. The baby birds opened their beaks wide. I heard them peeping. Soon the mother bird came back. Then the mother robin put worms in their mouths.

Every day I watched the baby birds and their mother. Pretty soon the babies were so fat there was no room for the mother. Then one morning the nest was gone from the bush.

http://DIBELS.uoregon.edu

The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) are a set of standardized, individually administered measures of early literacy development. They are designed to be short (one minute) fluency measures used to regularly monitor the development of pre-reading and early reading skills.

The measures were developed upon the essential early literacy domains discussed in both the National Reading Panel (2000) and National Research Council (1998) reports to assess student development of phonological awareness, alphabetic understanding, and automaticity and fluency with the code. Each measure has been thoroughly researched and demonstrated to be reliable and valid indicators of early literacy development and predictive of later reading proficiency to aid in the early identification of students who are not progressing as expected. When used as recommended, the results can be used to evaluate individual student development as well as provide grade-level feedback toward validated instructional objectives.

The DIBELS measures are FREE to download and use. Just go [here](http://DIBELS.uoregon.edu) to login, or sign up for a materials download account if you do not already have one.

NEW! The Spanish version of DIBELS, Indicadores dinámicos del texto en la lectura (Edición DIBELS), is now available. Log in to the materials download page [here](http://DIBELS.uoregon.edu) and click on the DIBELS link.

We also offer an optional additional service, the DIBELS Data System, which allows you to enter your students’ DIBELS data online and generate automated reports, for $1 per student, per year.

DIBELS Oral Reading Fluency (DORF)

Please read this (point) out loud. If you get stuck, I will tell you the word so you can keep reading. When I say, “stop” I may ask you to tell me about what you read, so do your best reading. Start here (point to the first word of the passage). Begin.

DIBELS Oral Reading Fluency First Grade Benchmark 2 © 2001 Dynamic Measurement Group
Third Grade Oral Reading Fluency to Oregon Statewide Assessment Test

- Odds of “meets expectation” on OSAT given 3rd grade ORF of 110: 90 of 91 or 99%.
- Odds of “meets expectation” on OSAT given 3rd grade ORF below 70: 4 of 23 or 17%.

\[ r = .73 \]
53% of Variance

Odds of “meets standards” on ISAT given Third-Grade TORF of 110 or above: 73 of 74 or 99%.

\[ r = .79 \]
63% of Variance


Linkage of Oral Reading Fluency to State Reading Outcome Assessments

- Above 110, the odds are strong the student will rank “proficient” on the AK State Benchmark.
- Below 70, the odds are low the student will rank “proficient” on the AK State Benchmark.

Readability Estimates Vary Wildly

Table 1
Readability Estimates and Recommended use for First Grade Benchmark DIBELS Oral Reading Fluency Passages

<table>
<thead>
<tr>
<th>Passage</th>
<th>Use</th>
<th>Average Dale-Chall</th>
<th>Flesch</th>
<th>FOG</th>
<th>Powers*</th>
<th>SMOG</th>
<th>FORCAST</th>
<th>Fry</th>
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<th>TASA</th>
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Wilson, unpublished data, 2005

Oral Reading Fluency Challenges

- States have outcome measures of varying degrees of rigor.
- Try to set a general standard that is rigorous, meaningful, and broadly applicable.
- Passage readability affects the benchmark goals and instructional decisions.
- Note: correlation is robustly high across different passages, but levels can change dramatically.
- Must specify material when you specify a goal. For example, 40 on DIBELS Oral Reading Fluency by the end of first grade.

Table 2
Readability Estimates and Recommended use for First Grade Progress Monitoring DIBELS Oral Reading Fluency Passages

<table>
<thead>
<tr>
<th>Passage</th>
<th>Use</th>
<th>Average Dale-Chall</th>
<th>Flesch</th>
<th>FOG</th>
<th>Powers*</th>
<th>SMOG</th>
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<th>Fry</th>
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Readability Challenges: How can we Reduce Variability in Readability?

- No agreed upon standard.
- Things we can count, for example:
  - Frequency of common words.
  - Sentence length or grammatical complexity.
  - Syllables per word.
  - Words per sentence.
- Things we can't count.
  - Background knowledge.
  - Instruction on expository text strategies.
  - Interest.
  - Vacation or other setting factors.

Readability can Affect the Accuracy of Progress Monitoring Decisions

Student reading progress over time based on repeated measurements of oral reading fluency on grade level material.

Reading Trajectory is a general pattern of reading progress over time.

Some Differences in Readability are Idiopathic; Others are Shared

Measuring Below Zero: Evaluating Reading Progress before Reading

- DIBELS Nonsense Word Fluency links tightly to Oral Reading Fluency outcomes.
- Can be used to establish goals, measure adequate progress, and differentiate instruction from middle of kindergarten through beginning of second grade.
DIBELS Nonsense Word Fluency (NWF)
Goal: 50 correct letter sounds and 15 word recoded by Mid First Grade

Here are some more make-believe words (point to the student probe). Start here (point to the first word) and go across the page (point across the page). When I say, “begin”, read the words the best you can. Read the words the best you can. Put your finger on the first word. Ready, begin.

Odds of being on track with ORF in end of first grade when Established with NWF in middle of first grade are 12 out of 18, or 67%
Odds of being on track with ORF in end of first grade when Deficit with NWF in middle of first grade are 3 out of 21, or 14%

Odds of being on track with ORF in end of first grade when Established with NWF in middle of first grade is 117 out of 136, or 86%
Odds of being on track with ORF in end of First Grade when Deficit with NWF in middle of first grade is 5 out of 46, or 11%

Odds of being on track with ORF in end of first grade when Established with NWF in middle of first grade are 5 out of 8, or 63%
Odds of being on track with ORF in end of first grade when Deficit with NWF in middle of first grade are 6 out of 62, or 10%
**Similar Odds, Different Outcome**

- Odds of being on track with ORF in end of first grade when established with NWF in middle of first grade are 88 out of 95, or 93%
- Odds of being on track with ORF in end of first grade when Deficit with NWF in middle of first grade are 0 out of 0, or 0%

**Beginning of First Grade NWF with End of First Grade ORF – Sample School District**

- Odds of being on track with ORF in end of first grade when low risk NWF in beginning of first grade are 119 out of 133, or 89%
- Odds of being on track with ORF in end of first grade when at risk with NWF in beginning of first grade are 9 out of 43, or 21%

**Relation Between Beginning First NWF and End of First DORF (N = 32044, r = .66)**

**Decision Utility Indices for Evaluating the Four Decision Points Illustrated Previous Figure**

<table>
<thead>
<tr>
<th>Decision utility index</th>
<th>Low risk end of first grade reading outcome</th>
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<td>True-positive probability</td>
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<td>Sensitivity</td>
<td>.72 (.77)</td>
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<td>Specificity</td>
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<td>Correct classification</td>
<td>.75 (.75)</td>
<td>.76 (.69)</td>
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*Positive denotes an undesirable outcome.*
Beginning of First Grade

Evaluate and Modify Support – Increase Intensity to make Adequate Progress

Adequate Progress is Essential
“Yes there are two paths you can go by
but in the long run
There’s still time to change the road you’re on”

Focus on Support

- What would it take to help the school achieve literacy goals?
  - Professional development on essential components of early literacy?
  - More powerful interventions or supplemental materials?
  - Coaching to improve fidelity of implementation?
  - Additional resources to meet the needs of challenging students (e.g., ELL, high mobility)?
  - Administrative support to invest substantial time and resources to change outcomes?
DIBELS Steps to Reading Success

One Step per Semester
One Goal per Step
(Keep moving in the direction of the next goal)

Step 1 - ISF
Step 2 - PSF
Step 3 - NWF
Step 4 - ORF 1
Step 5 - ORF 2
Step 6 - ORF 2
Step 7 - ORF 3
Step 8 - ORF 3

G1 ORF 40
G2 ORF 68 90
G3 ORF 92 110
NWF 50
PSF 35
ISF 25

Themes

- Don’t lose track of the bottom line. Are we setting goals and monitoring progress toward important and meaningful outcomes?
- Understanding readability is important to make better decisions that improve outcomes for children.
- Alphabetic Principle is an important middle-of-first grade instructional goal and target for reviewing outcomes.
- DIBELS Nonsense Word Fluency is a valuable indicator of alphabetic principle.
- Start early! Trajectories of reading progress are very difficult to change.

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