



Assessment That Addresses the Complexities of Reading Comprehension

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Dynamic Measurement Group

Voyager Sopris Learning
Leadership Webinar
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Overview

- Introduction
- Complexities of Reading Comprehension
- Purpose of DIBELS Deep CFOL
- Task Domains and Linkages to CCSS
- Testing Procedures & Sample Tasks
- Research to Date
- Questions & Discussion

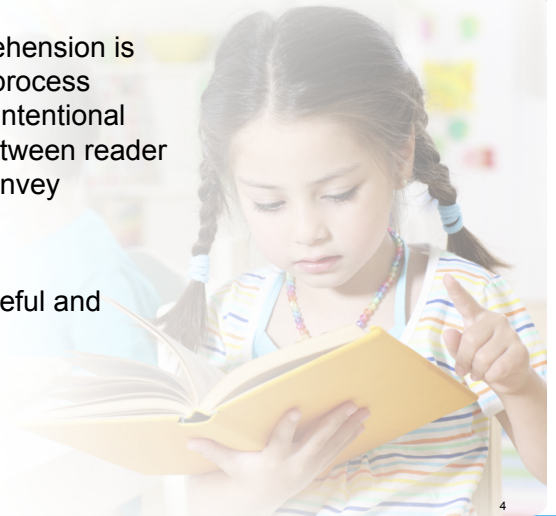


Complexities of Reading Comprehension

What is Reading Comprehension?

Reading comprehension is the complex process involving the intentional interaction between reader and text to convey meaning.

It is both purposeful and active.



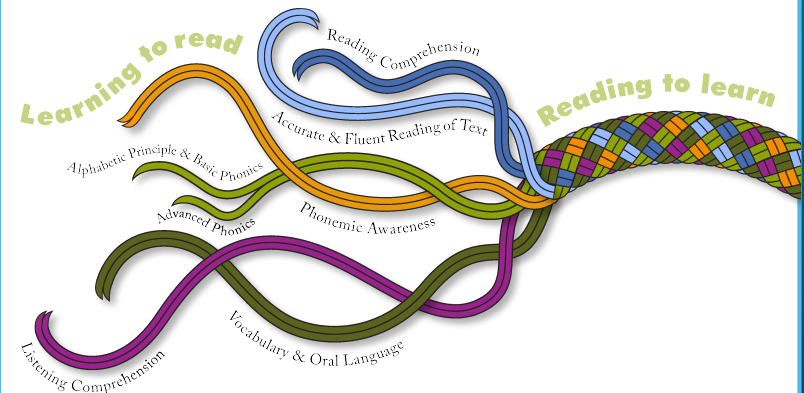
Sample Reading Comprehension Skills

- ▶ Answer questions about a story or informational passage
- ▶ Tell the main idea of a simple story or topic of an informational passage
- ▶ Make and verify predictions
- ▶ Retell a story and include main idea, characters, settings, and important events
- ▶ Identify the sequence of events in a story or informational passage
- ▶ Stop while reading to assess understanding and clarify
- ▶ Identify similarities and differences in the text

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Basic Early Literacy Skills: Strands



Adapted from Scarborough, 2001, and Kameenui, Simmons, Coats, & Lin, 2007.

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Unwinding the Rope Strands...

- Vocabulary: Meaning & usage
- Language:
 - Syntax (order of words & relationship to other words in a sentence)
 - Morphology (knowledge of word parts)
 - Figurative Language (e.g., idiomatic expressions)
- Background Knowledge
- Working Memory
- Knowledge & skills for text integration and coherence
 - Awareness of text structure
 - Awareness of linguistic cohesive devices
- Thinking Strategies: Prediction and inference
- Fluency: Sufficient to support comprehension

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The Key Role of Fluency

- Students who can read **fluently** in text may experience greater improvements in vocabulary growth and comprehension from wide independent reading (Pikulski & Chard, 2005)

Fluent Readers...

- Recognize words accurately and effortlessly
- Simultaneously integrate understanding of vocabulary and background knowledge
- Use prosodic cues when reading connected text
- Focus attention on understanding the meaning of text rather than decoding words

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Purpose of DIBELS Deep Measures

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DIBELS® Deep Definition and Purpose

What is *DIBELS Deep*?

- ▶ Brief diagnostic
- ▶ For students below benchmark

Purpose:

- ▶ Provide a set of time and cost efficient brief diagnostic assessments designed to provide specific information for targeting instruction corresponding to the 5 essential components of effective reading programs.
- ▶ Guide team in use of data for decision making at system level

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Linkage of DIBELS® & DIBELS® Deep to the Basic Early Literacy Skills

	Measure	Basic Early Literacy Skill
FSF	First Sound Fluency	Phonemic Awareness → <i>DIBELS Deep PA,</i>
LNF	Letter Naming Fluency	None → <i>WRD</i>
PSF	Phoneme Segmentation Fluency	Phonemic Awareness → <i>WRD</i>
NWF	Nonsense Word Fluency	Alphabetic Principle and Basic Phonics → <i>WRD</i>
DORF	<i>DIBELS</i> Oral Reading Fluency (includes Retell)	Advanced Phonics and Word Attack Skills Accurate and Fluent Reading of Connected Text Reading Comprehension → <i>DIBELS Deep CFOL</i>
Daze	Daze	Reading Comprehension → <i>CFOL</i>

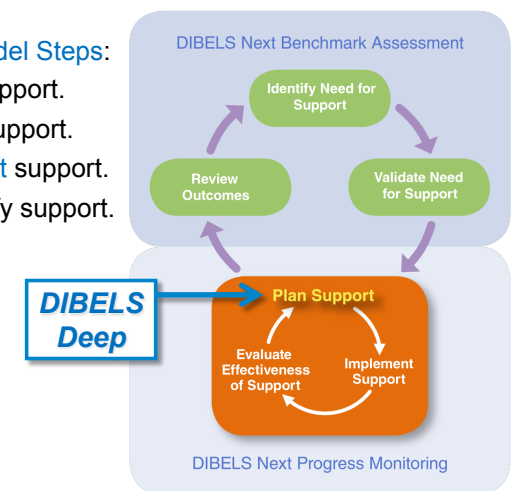
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DIBELS® Deep and the Outcomes-Driven Model

Outcomes-Driven Model Steps:

1. **Identify** need for support.
2. **Validate** need for support.
3. **Plan and implement** support.
4. **Evaluate** and modify support.
5. **Review** outcomes.



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Design Specifications

Specifications/Characteristics:

- ▶ Skill sequence corresponds to recognized sequences of instruction (c.f., Carnine, et. al., 2006; Jennings, Caldwell, & Lerner, 2006; National Research Council, 1998; Nippold, 2007; Simmons & Kame'enui, 1999; Wagner, Muse, & Tannenbaum, 2007).
- ▶ Identify specific needs; assist in differentiating instruction
- ▶ User-friendly, cost-effective, & linked to *DIBELS*
- ▶ Research-based & research-validated
- ▶ Tap into Complexities of Reading Comprehension
- ▶ Alignment with Common Core Standards

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Task Domains and Linkages to CCSS

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DIBELS® Deep Comprehension, Fluency & Oral Language (CFOL) Task Domains

- ▶ Story Coherence/Story Structure Awareness
- ▶ Listening Comprehension
- ▶ Reading Comprehension
- ▶ Syntax & Grammar
- ▶ Morphological awareness
- ▶ Figurative Language
- ▶ Vocabulary
- ▶ Reading Fluency

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Alignment with Common Core State Standards

Grade Level(s)	Section/Subsection	Common Core State Standard(s)
Kindergarten & First Grade	Story Coherence: Story Telling & What Happens Next (Prediction)	<ul style="list-style-type: none"> • Grades K – 1 Literature: Integration of Knowledge & Ideas 7. • Grades K – 1 Speaking & Listening: Presentation of Knowledge & Ideas 4 & 6. • Supports Grade 2 – 4 Speaking & Listening: Presentation of Knowledge & Ideas 4. • Grade K Language: Conventions of Standard English 1.f • Speaking & Listening College and Career Anchor Standard 2. • Grades K – 1 Speaking & Listening: Presentation of Knowledge & Ideas 4.
Kindergarten & First Grade	Listening Comprehension: Retell	<ul style="list-style-type: none"> • Reading: College & Career Readiness Anchor Standard 2. • Grades K – 1 Literature: Key Ideas & Details 2. • Supports Grades 2 – 3 Literature: Key Ideas & Details 2. • Grades K – 1 Literature: Key Ideas & Details 3. • Supports Grades 2 Literature: Craft & Structure 5. • Grades K – 1 Informational Text: Key Ideas & Details 2. • Grades K – 1 Speaking & Listening: Comprehension & Collaboration 2. • Supports Grades 2 – 4 Speaking & Listening: Comprehension & Collaboration 2.
Kindergarten & First Grade	Listening Comprehension: Question & Answer	<ul style="list-style-type: none"> • Reading: College & Career Readiness Anchor Standard 1 & 3. • Grades K – 1 Literature: Key Ideas & Details 1. • Supports Grades 2 – 4 Literature: Key Ideas & Details 1. • Grades K – 1 Informational Text: Key Ideas & Details 1. • Supports Grades 2 – 4 Informational Text: Key Ideas & Details 1. • Grades K – 1 Speaking & Listening: Comprehension & Collaboration 2. • Grade K Language: Conventions of Standard English 1.d

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Alignment with Common Core State Standards

Grade Level(s)	Section/Subsection	Common Core State Standard(s)
Third – Fourth Grades	Reading Comprehension: Short Passage Retell	<ul style="list-style-type: none"> Reading: College & Career Readiness Anchor Standard 2. Grade 3 – 4 Literature: Key Ideas & Details 2. Grades 3 – 4 Literature: Key Ideas & Details 3. Grades 3 – 4 Informational Text: Key Ideas & Details 2. Grade 4 Informational Text: Key Ideas & Details 3.
Third – Fourth Grades	Reading Comprehension: Summarizing/Main Idea	<ul style="list-style-type: none"> Reading: College & Career Readiness Anchor Standard 2. Grade 3 – 4 Literature: Key Ideas & Details 2. Supports Grade 3 – 4 Literature: Range of Reading and Text Complexity 10. Grade 3 – 4 Informational Text: Key Ideas & Details 2. Supports Grade 3 – 4 Informational Text: Range of Reading and Text Complexity 10. Grades 3 – 4 Speaking & Listening: Comprehension & Collaboration 2.
Kindergarten – First Grades	Language Comprehension: Matching Sentences to Pictures	<ul style="list-style-type: none"> Language: College & Career Readiness Anchor Standards 1 & 3. Supports Grades K – 4 Language: Conventions of Standard English 1. Supports Grades 3 – 4 Language: Conventions of Standard English 1.a Grade 3 Language: Conventions of Standard English 1.f
Kindergarten – Second Grades	Grammar/Syntax: Syntax Discrimination	<ul style="list-style-type: none"> Language: College & Career Readiness Anchor Standards 1 & 3. Supports Grades K – 4 Language: Conventions of Standard English 1. Supports Grade 3 Language: Conventions of Standard English 1.f Supports Grade 2 – 4 Language: Conventions of Standard English 3. Supports Grade 4 Language: Conventions of Standard English 1.d & f

Alignment with Common Core State Standards

Grade Level(s)	Section/Subsection	Common Core State Standard(s)
Kindergarten – Fourth Grades	Morphological Awareness: Decomposition, Derivation, & Inflection	<ul style="list-style-type: none"> Language: College & Career Readiness Anchor Standards 1, 3, & 4. Supports Grade 3 Language: Conventions of Standard English 1.e & f Supports Grade 4 Language: Conventions of Standard English 1.b Grade 1 Language Vocabulary Acquisition & Use 4.a & b Supports Grade 3 Language: Vocabulary Acquisition & Use 4.b & c
Kindergarten – Fourth Grades	Figurative Language: Idioms	<ul style="list-style-type: none"> Reading: College & Career Readiness Anchor Standard 4. Language: College & Career Readiness Anchor Standard 5. Grades 3 Literature: Craft & Structure 4. Grade 3 Language: Vocabulary Acquisition 5.a Grade 4 Language: Vocabulary Acquisition 5.b
Kindergarten – Fourth Grades	Vocabulary: Formal Definitions	<ul style="list-style-type: none"> Supports Grade 3 Language: Conventions of Standard English 1.c Supports Grades K – 2 Language: Vocabulary Acquisition 5 Supports Grades 3 – 4 Language: Vocabulary Acquisition 5.c
First – Fourth Grades	Reading Fluency	<ul style="list-style-type: none"> Grades 1 – 4 Literature: Range of Reading & Level of Text Complexity 10. Grades 1 – 4 Informational Text: Range of Reading & Level of Text Complexity 10. Grades 1 – 4 Fluency: 4.a, 4.b, & 4.c

Testing Procedures and Sample DIBELS Deep CFOL Tasks

General Assessment Guidelines & Materials

- ▶ Individually administered
- ▶ Not timed
- ▶ Standardized directions
- ▶ Flexible prompting and teaching
- ▶ Discontinue rules
- ▶ Linked to DIBELS Next
- ▶ Test Book
- ▶ Scoring Sheet
- ▶ Pencil or Pen
- ▶ Clipboard

DIBELS Deep CFOL Research



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DMG Research Process

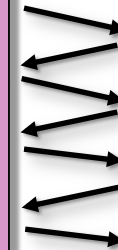


Development

- Research-based

Research Phase

- Pre-Pilot
- Pilot
- Phase 1 Research
- Phase 2 Research
- Dissemination



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Research Studies Overview

1. Initial Pilot Study:

- ▶ Scope & sequence
- ▶ Test items, directions, prompts, & scoring
- ▶ Starting points & discontinue rules

2. Pilot-2 Study:

- ▶ Scope & sequence
- ▶ Item difficulty
- ▶ Feasibility & user satisfaction
- ▶ Relation to *DIBELS*

3. CFOL Validation 2013 – 2014:

- ▶ Item order and difficulty
- ▶ Relation to *DIBELS Next*
- ▶ Procedural reliability
- ▶ Utility & user satisfaction



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DIBELS[®] Deep CFOL Initial Pilot Study

Participants

- ▶ One local school
 - * School size is 400 students K - 5
 - * Student/Teacher ratio is 23:1
 - * Free/reduced price lunch = 53%
 - * Ethnicity ranged from 2% Native American, 2% Asian, 2% Black, 12% Hispanic, 79% White students
- ▶ Students (n = 76)
 - * Sample includes 14 students in each grade K & 1, and 16 students in each grade 2 – 4.

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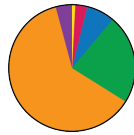
DIBELS® Deep CFOL Pilot-2 Study

Two school districts in two states

- ▶ Six K – 6 schools in one state/district & one PK – 4 school in the other state/district
- ▶ School size ranged from 291 – 574 (median = 412)
- ▶ Student/Teacher ratio ranged from 13:1 – 18:1 (median = 16:1)
- ▶ Free/reduced price lunch ranged from 19% – 53% (median = 44%)

Students (Total n = 762)

- ▶ Kindergarten n = 149
- ▶ First grade n = 149
- ▶ Second grade n = 161
- ▶ Third grade n = 152
- ▶ Fourth grade n = 151



Ethnicity of students in participating schools

- ▶ <1% American Indian/Alaskan
- ▶ 3% Asian/Pacific Islander
- ▶ 7% Black
- ▶ 23% Hispanic
- ▶ 60% White students
- ▶ 4% Two or more races

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Pilot-2 Study (2012) Results

Starting points & discontinue rules:

- ▶ Discontinue rules seemed to work well; routing on reading comprehension suggested starting point was too challenging.

Scope & Sequence:

- ▶ We examined scores in each test section by grade level. Some sections did not show growth as grade levels increase. Other sections showed ceiling effects at upper grades (e.g., some story coherence tasks).
- ▶ Other sections indicated very steadily increasing scores as grade level increased (e.g., figurative language; vocabulary tasks).
- ▶ Item level results were used in deciding to move or delete items

Relation to *DIBELS Next*:

- ▶ Several promising correlations ranging from moderate to strong.

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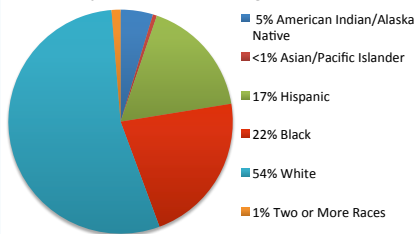
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DIBELS® Deep CFOL Validation Study

Four public schools in four states

- ▶ One K – 6 school, one K – 5 school, & two PK – 5 schools
- ▶ School size ranged from 241 – 527 (average = 386)
- ▶ Student/Teacher ratio ranged from 12:1 – 17:1 (average = 15:1)
- ▶ Free/reduced price lunch ranged from 50% – 92% (average = 76%)

Ethnicity in Participating Schools



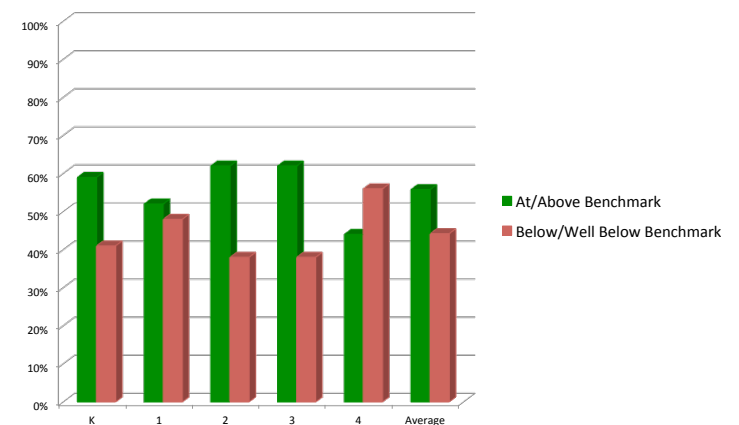
- ▶ 5% American Indian/Alaska Native
- ▶ <1% Asian/Pacific Islander
- ▶ 17% Hispanic
- ▶ 22% Black
- ▶ 54% White
- ▶ 1% Two or More Races

Grade	Sample Size
Kindergarten	102
First Grade	100
Second Grade	93
Third Grade	96
Fourth Grade	84

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Descriptive Statistics: Benchmark Status



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Sample Correlations With DIBELS Next Composite

Grade Level	DIBELS Composite Score at Beginning of Year	DIBELS Composite Score at Middle of Year
Grade K	Story Telling ($r = .34$) Listening Comp Retell ($r = .33$) Listening Comp Q & A ($r = .30$) Sentence Repetition ($r = .37$) Sentence Anagrams ($r = .36$) Morpheme Compounding ($r = .44$) Multiple Meanings ($r = .42$)	- Listening Comp Retell ($r = .26$) Listening Comp Q & A ($r = .34$) Sentence Repetition ($r = .34$) Sentence Anagrams ($r = .33$) Morpheme Compounding ($r = .42$) -
	Grade 1	- Sentence Repetition ($r = .32$) Sentence Anagrams ($r = .38$) Making Words ($r = .40$) Figurative Language ($r = .32$) Formal Definitions ($r = .40$) Multiple Meanings ($r = .32$)

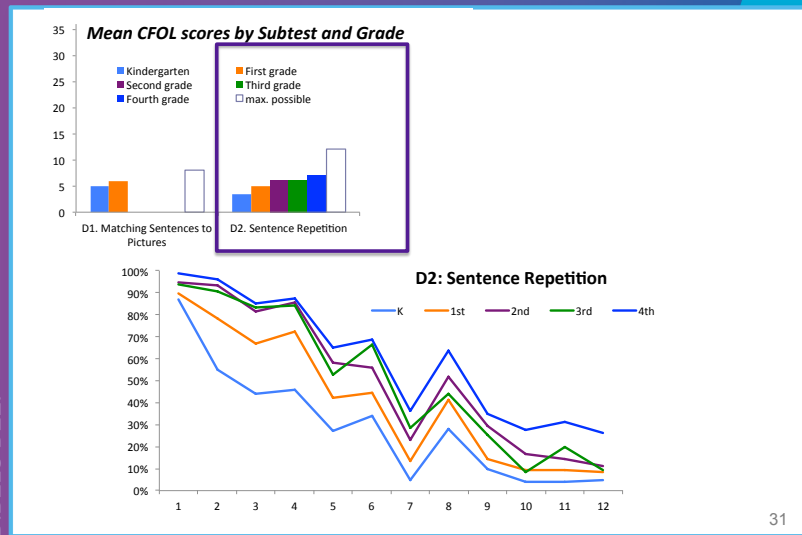
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Sample Correlations With DIBELS Next Composite

Grade Level	DIBELS Composite Score at Beginning of Year	DIBELS Composite Score at Middle of Year
Grade 2	Paragraph Reading Retell ($r = .44$) Sentences w/Homophones ($r = .62$) Sentences w/Homographs ($r = .61$) Sentence Anagrams ($r = .45$) Correct Use of Past Tense ($r = .44$) Sentence Completion ($r = .37$) Making Words ($r = .37$) Reading Fluency Rubric (Exp/Narr) ($r = .61/.61$)	Paragraph Reading Retell ($r = .61$) Sentences w/Homophones ($r = .50$) Sentences w/Homographs ($r = .70$) Sentence Anagrams ($r = .60$) Correct Use of Past Tense ($r = .43$) Sentence Completion ($r = .51$) Making Words ($r = .46$) Reading Fluency Rubric (Exp/Narr) ($r = .79/.72$)
	Grade 3	Sentences w/Homographs ($r = .69$) Summarizing ($r = .43$) Sentence Completion ($r = .45$) Multiple Meanings ($r = .44$) Reading Fluency Rubric (Exp/Narr) ($r = .38/.35$)
Grade 4	Short Passage Reading Retell ($r = .47$) Correct Use of Past Tense ($r = .44$) Making Words ($r = .31$) Formal Definitions ($r = .41$) Multiple Meanings ($r = .36$) Reading Fluency Rubric (Exp/Narr) ($r = .57/.61$)	Short Passage Reading Retell ($r = .51$) Sentence Repetition ($r = .59$) - Making Words ($r = .38$) Formal Definitions ($r = .42$) Multiple Meanings ($r = .52$ [w/Daze]) Reading Fluency Rubric (Exp/Narr) ($r = .65/.68$)

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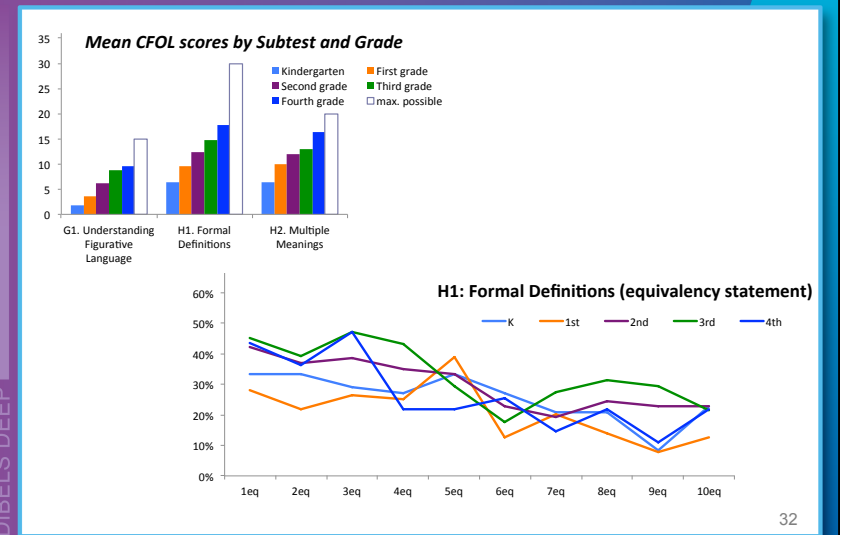
Section and Item Analyses



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Section and Item Analyses

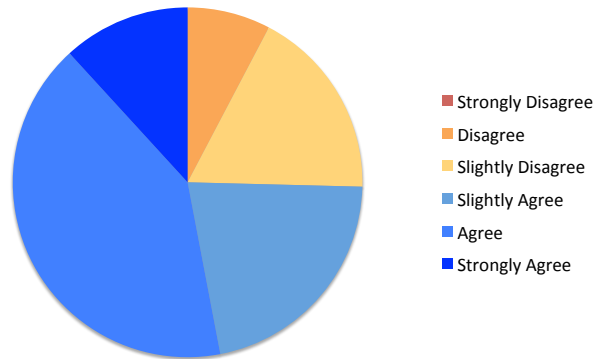


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Sample User Satisfaction Results

The measures were a good way to assess students' reading strengths and weaknesses related to comprehension, reading fluency, oral language, and vocabulary...

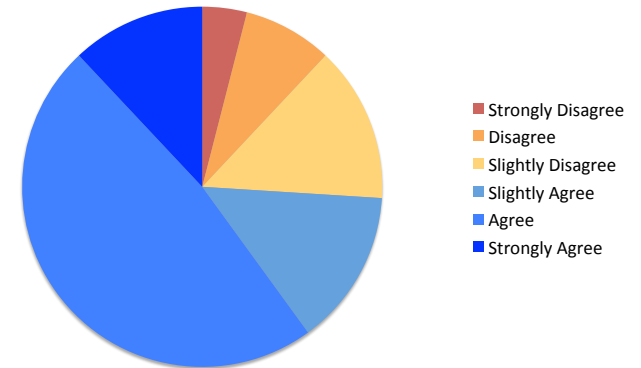


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Sample User Satisfaction Results

Overall, the measures would be beneficial for planning reading instruction for struggling readers...



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Summary

DIBELS Deep is a useful companion product to *DIBELS Next* for:

- * Obtaining additional information about where **and** how to make adjustments to instruction for students, especially students in Tiers 2 and 3.



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Questions & Discussion



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Next Steps

Summer 2014

- ▶ Complete data analysis
 - * Factor analyses
 - * Additional Item analyses
 - * Procedural reliability
- ▶ Revise materials



2014 – 2015 School Year

- ▶ Revised materials to Voyager Sopris Learning

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Thank You!

Please do not hesitate to contact me if you have questions or would like additional information.



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