

Technical Report
DIBELS Oral Reading Fluency-Based Indicators of
Third Grade Reading Skills for
Colorado State Assessment Program (CSAP)

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Technical Report
DIBELS Oral Reading Fluency Indicators and the CSAP Reading Assessment

Introduction

This paper describes the utility of the DIBELS Oral Reading Fluency (DIBELS ORF) assessment to predict a placement level in the third-grade (English) reading CSAP, a standards-based reading comprehension assessment that is administered statewide each year in the state of Colorado.

Subjects

Fall, winter, and spring 2001-2002 DIBELS ORF scores and spring 2002 CSAP (English) reading scores were obtained for third-grade students in a Colorado elementary school. Fifty-eight students took the DIBELS in the fall, 57 took the DIBELS in the winter, and 58 took the DIBELS and the CSAP in the spring. Due to turnover, only 52 students took all three administrations of the DIBELS. Reading Center staff and teachers at the elementary school were trained in the administration of the DIBELS ORF and its use for screening and progress monitoring in the fall of 2001. Third-grade students were assessed using the DIBELS ORF in September, January, and April of the 2001-02 academic year. The third-grade CSAP reading assessment was administered in April 2002.

Measures

Good, Simmons, and Kame'enui (2001) provide a complete description of the DIBELS ORF assessment, which is an individually administered test of accuracy and fluency with connected text. The assessment consists of three reading passages, each of which students read aloud for one minute. Errors are words omitted, substitutions, and

hesitations of more than three seconds. Words self-corrected within three seconds are scored as accurate. The DIBELS ORF score is the median correct words per minute from the three passages. The website <http://dibels.uoregon.edu> displays reliability and validity information for the DIBELS ORF: test-retest reliability for elementary students ranges from .92 to .97; alternate form reliability ranges from .89 to .94, and criterion-related validity ranges from .52 to .91. Spring benchmark goals for a trajectory of progress of words correct per minute in grade-level material (Good, Simmons, & Kame'enui, 2001) for the DIBELS Oral Fluency Assessment have been established as 40 for first-grade, 90 for second-grade, and 110 for third-grade.

CSAP information is available at the Colorado Department of Education (CDE) website, <http://www.cde.state.co.us/cdeassess>. Colorado Model Content Standards are used as guidelines to develop the CSAP assessments. The Colorado Model Content Standards adopted by the State Board of Education represent the fundamental knowledge and skills expectations for students at specific grade levels. These standards and assessment expectations were developed over the course of two years with the help of thousands of educators, curriculum specialists, and content area experts from across the state. The assessment frameworks are derived from the state standards and the suggested grade level expectations. Items on the CSAP assessments are intended to measure performance relative to the standards.

The third-grade reading comprehension performance levels (Standard 1) are described on the CDE website:

- Unsatisfactory: Third grade students are unsatisfactory in Reading Comprehension when they read narratives and simple texts with familiar content with little evidence of literal comprehension.

- Partially Proficient: Third grade students are partially proficient in Reading Comprehension when they can comprehend simple narrative and/or expository text with familiar content on a literal level. They are able to demonstrate limited accuracy in the identification and sequencing of facts and events; demonstrate minimal understanding in a written response; and demonstrate understanding of simple vocabulary.
- Proficient: Third grade students are proficient in Reading Comprehension when they can comprehend longer and increasingly difficult text, including poetry. They are able to: draw inferences from what they read; follow directions; identify main idea and supporting details; accurately and thoroughly sequence events; draw conclusions; determine cause and effect; reread and search to confirm obvious information and meaning; demonstrate their thorough understanding of text through a written response; and understand vocabulary essential to the text.
- Advanced: Third Grade students are advanced in Reading Comprehension if they can comprehend a variety of texts including narrative (such as realistic fiction, fantasy, and legends), expository, and poetry in an in-depth manner: restate and evaluate main idea and significant details, problem and solution, and cause and effect; paraphrase and summarize information; analyze the sequence of events; identify and infer character traits and motives, the theme of a narrative, and meaning from figurative language, including metaphor and personification; interpret complex or content specific vocabulary; reread and search text to confirm less obvious information and meaning; draw conclusions by inferring from the text using higher levels of thinking.

The Cronbach's Alpha reliability coefficient for the 2001 CSAP Grade 3 (English) Reading assessment is reported on the CDE website as .89. Standard Errors of Measurement at performance level cut-scores are also available on the website for the 2001 CSAP test. The 2002 reliability information was not available when this study was completed.

The performance level score ranges for the 2002 CSAP Grade 3 Reading Assessment (English version) were:

656 and Above	Advanced
526 - 655	Proficient
466 – 525	Partially Proficient
465 and Below	Unsatisfactory

Results and Discussion

Correlation coefficients for the 2002 third-grade CSAP reading assessment and three DIBELS ORF measures by assessment time are presented in Table 1. The DIBELS score in the spring correlated with the CSAP score at .80 indicating that the two measures bear a high relationship to one another. The spring DIBELS is a strong predictor of the CSAP score. Further, with correlations ranging between .89 and .93 between DIBELS measures in fall, winter, and spring, one may argue that the fall and winter DIBELS scores are also strong predictors of the spring CSAP score.

Table 1

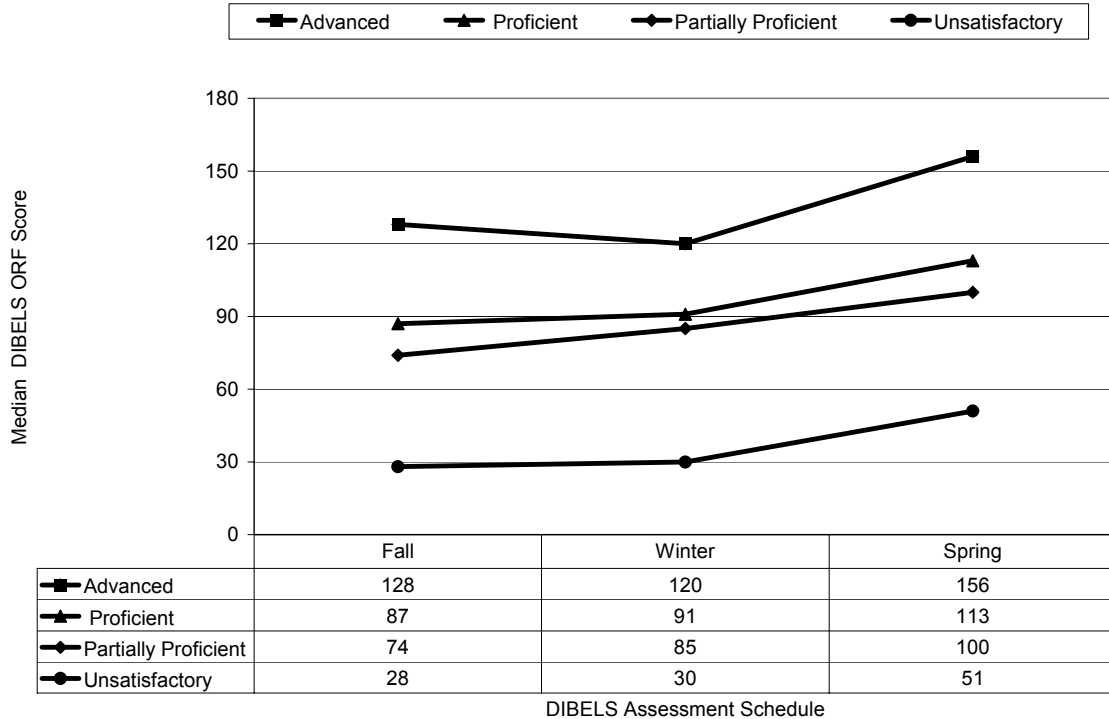
Correlation Coefficients of DIBELS ORF Scores by Benchmark Assessment Time and the 2002 Third-Grade CSAP Reading Assessment (n=58)

	DIBELS Fall	DIBELS Winter	DIBELS Spring
DIBELS Winter	.91		
DIBELS Spring	.89	.93	
CSAP Spring	.73	.73	.80

The medians of the DIBELS ORF scores for 52 students, who were all assessed in the fall, winter, and spring, are presented in Chart 1. These scores are grouped by CSAP performance level: 5 students in the unsatisfactory level, 7 students in the partially proficient level, 33 students in the proficient level, and 7 students in the advanced level.

Chart 1

Median DIBELS ORF Scores for CSAP Performance Levels



Tables 2 and 3 display the frequency distribution of the spring DIBELS ORF assessment scores grouped by CSAP performance levels. Of the students who scored at the benchmark goal of 110 or above on DIBELS in the spring (see Table 2), 27 of the 30 students (90%) scored proficient or advanced on the 2002 third-grade reading CSAP. However, 16 out of 28 (57%) of the students who scored less than 110 on the spring DIBELS were proficient on the CSAP. It would appear that the benchmark of 110 is sufficient for establishing a high probability of obtaining a proficient or advanced level on the CSAP. However, of the students who scored only 90 or above on DIBELS in the spring (see Tables 2 and 3), 39 of the 43 students (91%) scored proficient or advanced on the CSAP.

Table 2

Distributions of Spring DIBELS ORF Scores Grouped by CSAP Proficiency Levels and DIBELS ORF Spring Benchmark Goals

DIBELS Score (by Spring Benchmark Goals)	Number of Scores at CSAP Performance Level			
	Unsatisfactory	Partially Proficient	Proficient	Advanced
Below 40	1	0	0	0
40 to 89	5	5	4	0
90 to 109	0	1	12	0
110 or Above	0	3	20	7

Table 3

Distributions of Spring DIBELS ORF Scores Grouped by CSAP Proficiency Levels and DIBELS ORF Alternate Spring Goals

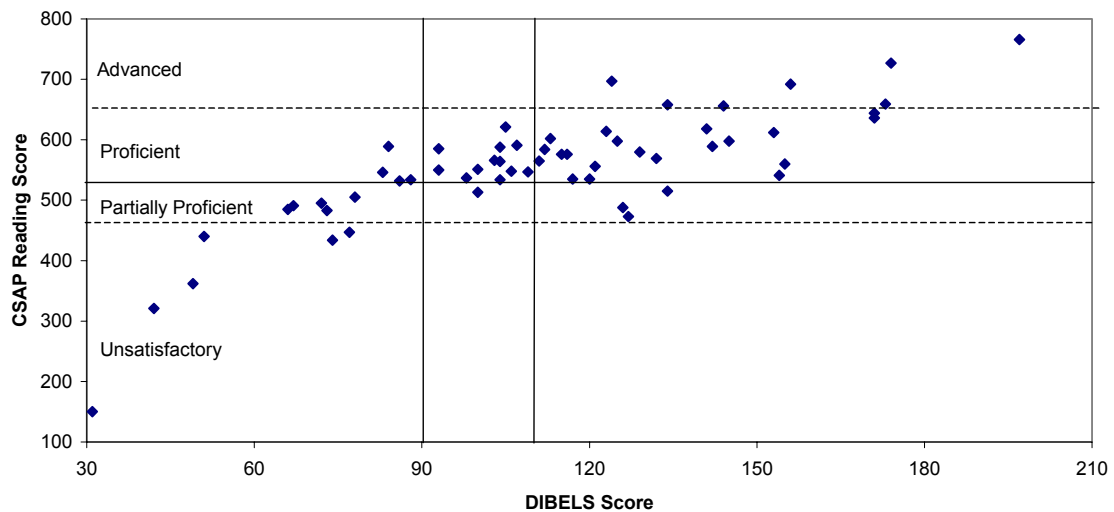
DIBELS Score (by Alternate Goals)	Number of Scores at CSAP Performance Level			
	Unsatisfactory	Partially Proficient	Proficient	Advanced
Below 60	4	0	0	0
60 to 89	2	5	4	0
90 to 119	0	1	18	0
120 or Above	0	3	14	7

2002 third-grade reading CSAP. Only 4 out of 15 (27%) of the students who scored less than 90 on the spring DIBELS were proficient on the CSAP. It may be argued that a cut score somewhere below 110, possibly as low as 90, may be appropriate to provide a high probably of achieving a CSAP level of proficient or advanced. It should be noted that all seven students, who performed at the advanced level on the CSAP, had a spring DIBELS score of 120 or above.

Chart 2 displays the scatter diagram of spring DIBELS ORF and CSAP scores for the 58 students. The DIBELS score of 90 is emphasized in the chart, because 90 or above on the spring assessment resulted in a 91% likelihood of a student scoring at a level of proficient or advanced on the CSAP.

Chart 2

Spring DIBELS and CSAP Scores for 58 Third Grade Students



Conclusions

For this group of third-grade students, 39 of 43 (91%) of the students who scored 90 or above on the DIBELS ORF in the spring scored proficient or advanced on the CSAP, and 11 of 15 (73%) of the students who scored below 90 on the DIBELS ORF scored unsatisfactory or partially proficient. Using 90 on the spring DIBELS ORF to predict CSAP score categories resulted in correctly classifying 50 of 58 (86%) of the students on the CSAP with regard to scoring proficient/advanced or unsatisfactory/partially proficient.

For this group of third-grade students, 27 of 30 (90%) of the students who scored 110 or above on the spring DIBELS ORF in the spring scored proficient or advanced on the CSAP, and 12 of 28 (43%) of the students who scored below 110 on the DIBELS ORF scored unsatisfactory or partially proficient. Using a score of 110 on the spring DIBELS ORF to predict scoring categories resulted in correctly classifying 43 of 58 (74%) on the CSAP with regard to scoring proficient/advanced or unsatisfactory/partially proficient.

If future scores for additional students bear out this high percentage of correct CSAP score placements, the DIBEL's utility to predict proficient/advanced and unsatisfactory/partially proficient on the CSAP will be excellent.

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