

North Carolina Teacher Academy Technical Report¹

Comparing the DIBELS Oral Reading Fluency Indicator and the North Carolina End of Grade Reading Assessment

Jeff Barger
N.C. Teacher Academy Trainer
Buncombe County Schools
Asheville, North Carolina

Introduction

It has been established that the DIBELS Oral Reading Fluency (ORF) measure has been a reliable predictor of performance on high stakes tests (Good, Simmons, & Kame'enui, 2001). The purpose of this study was to determine the connection between performance on the ORF Spring benchmark and reading achievement as measured by the North Carolina End of Grade Test. Because of the short time between these two measures, it may be more accurate to characterize this comparison as correlation rather than prediction. The strong relationship between fluency and high stakes testing strongly indicates that ORF does indeed predict performance on high stakes testing.

Method

Thirty-eight third grade students from one school in Buncombe County were given the DIBELS Spring ORF in the first week of May 2003 (Table 1). The measure consists of three different passages. The student reads each passage orally for one minute. The number of words read correctly is then calculated. The ORF score is taken from the student's median score for the three passages. Further scoring information along with reliability and validity information about the ORF can be found at <http://dibels.uoregon.edu>.

The same thirty-eight students were given the North Carolina End of Grade reading assessment one week later (Table 1). This test consists of fifty-six questions, and students have a total of 115 minutes to complete the test. There are two, three-minute stretch breaks during the test. Students read each passage and answer a series of multiple choice questions before moving on to the next passage.

This test uses a four-level grading scale. Level I is the lowest level and considered insufficient mastery of the subject. Level II is inconsistent mastery. Level III is consistent mastery. Level IV is the highest level and considered superior mastery (NC Department of Instruction, Division of Accountability Services, Testing Section, 2001). Students must achieve at least a Level III to be considered at grade level. Further information about this test can be found at <http://www.ncpublicschools.org/abcs>.

¹ Suggested Citation:

Barger, J. (2003). *Comparing the DIBELS Oral Reading Fluency indicator and the North Carolina end of grade reading assessment* (Technical Report). Asheville, NC: North Carolina Teacher Academy.

Table 1

Descriptive Statistics

Groups	<i>M</i>	<i>SD</i>	<i>n</i>
DIBELS Oral Reading Fluency	111.53	35.76	38
North Carolina Reading Assessment	249.18	8.78	38

Results

The correlation between ORF Spring scores and NC End of Grade reading scores was high ($r = .73$). It is in line with correlations found between ORF scores and the Oregon Statewide Assessment ($r = .67$) by Good, Simmons, and Kame'enui (2001), and correlations found between ORF scores and the Florida Comprehensive Assessment Reading Test ($r = .73$) by Buck and Torgeson (2003).

Of the thirty-eight students tested, twenty-four reached the spring goal of 110 correct words per minute (cwpm) or better on the DIBELS ORF. Twenty-two of these twenty-four students also achieved Level IV on the North Carolina End of Grade reading test. The two students who did not reach Level IV scored a Level III. The respective two students scored 120 and 110 cwpm on the DIBELS assessment (Table 2).

Table 2

Number of students at each NC End of Grade Level

Spring ORF	NC End of Grade Level IV	NC End of Grade Level III	NC End of Grade Level II	NC End of Grade Level I
110 cwpm or above	22	2	0	0
100-109 cwpm	0	3	0	0
70-99 cwpm	1	2	3	0
45-69 cwpm	0	2	4	0

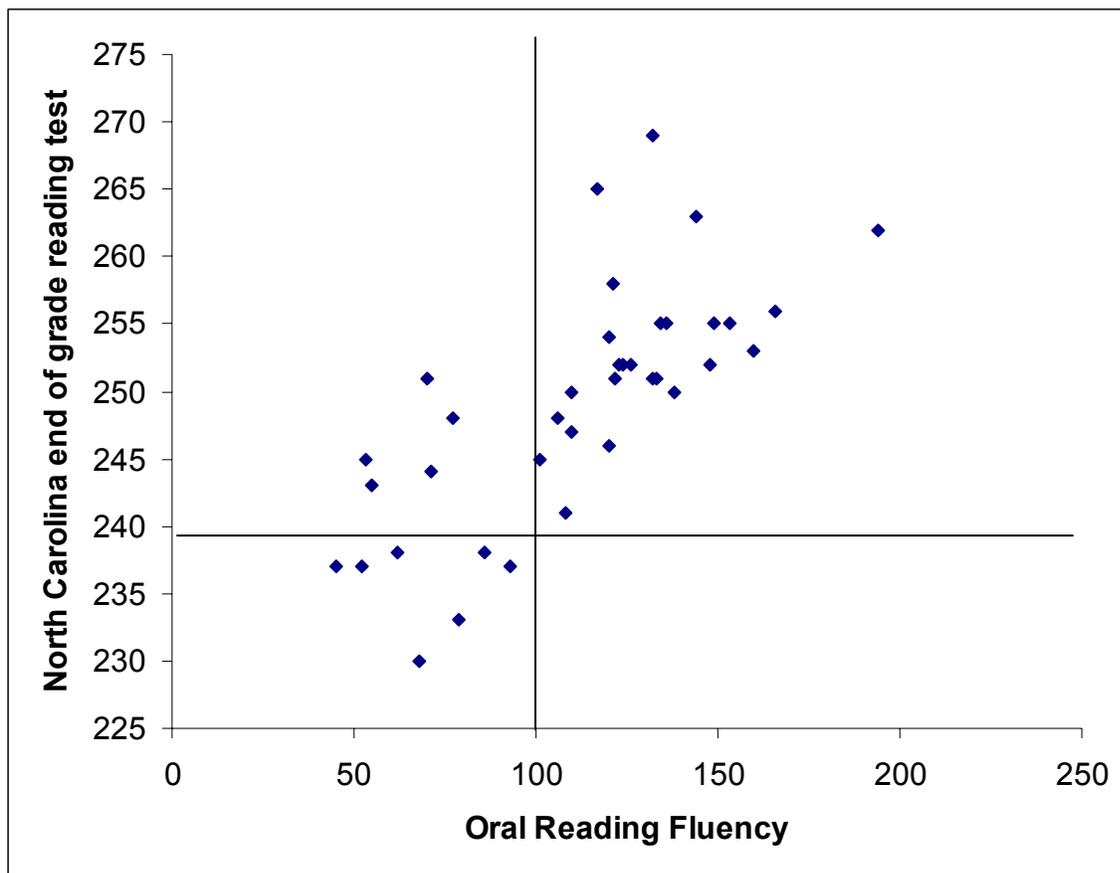
A student must reach a scale score of at least 240 on the NC test in order to be considered at or above grade level (Table 3).

Table 3

Levels	Scale Scores
Level I	216-229
Level II	230-239
Level III	240-249
Level IV	250-272

Figure 1 shows that all twenty-six students who scored 100 cwpm or better on the ORF passed (240 scale score or higher) the North Carolina End of Grade test. Twelve students scored below 100 cwpm and of those twelve, five achieved at least Level III.

Figure 1



Conclusions

This study shows the DIBELS Oral Reading Fluency measure may be an accurate predictor of whether or not a student will achieve a proficient score on the North Carolina End of Grade Reading assessment. One hundred percent of the 26 students who scored 100 cwpm or better achieved a passing score on the NC End of Grade assessment. Ninety-two percent of those students who scored 110 cwpm were able to achieve a Level IV score. The ORF provides a target goal (110 cwpm) for students to reach by the beginning of May.

Once a student reads below 100 cwpm, the correlation between ORF and NC End of Grade scores was less clear. Only 50 percent of the students who scored 70 -99 cwpm achieved at least a Level III on the NC End of Grade assessment.

For students who scored 69 cwpm or lower, it was much more difficult to predict performance although it can be surmised that most students in this category are at-risk of not passing the test (Level I or II).

In this study, 100 cwpm seemed to be the dividing line in terms of making an accurate prediction of whether or not a student passes the North Carolina End of Grade Reading test.

References

Good, R.H., Simmons, D.C., & Kame'enui, E. (2001). The importance and decision-making utility of a continuum of fluency-based indicators of foundational reading skills for third-grade high-stakes outcomes. *Scientific Studies of Reading, 5*, 257-288.

North Carolina Department of Instruction, Division of Accountability Services, Testing Section (2001). *How is the information provided?*

Buck, J., & Torgeson, J. (2003). The relationship between performance on a measure of oral reading fluency and performance on the Florida Comprehensive Assessment Test, *Florida Center for Reading Research*

Thank you to Natalie Flindt, University of Oregon, Bob McLean and Brittany Sanders, Buncombe County Schools, and the North Carolina Teacher Academy for their assistance with this study. Any questions regarding this report can be sent to Jeff Barger. His e-mail address is jeff.barger@bcsemail.org.