

# Technical Adequacy of Acadience Reading Diagnostic PA & WRD

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Acadience Reading Diagnostic: Phonemic Awareness & Word  
Reading and Decoding Assessment Manual Chapter 6

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# Technical Adequacy of Acadience Reading Diagnostic PA & WRD

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This chapter describes research on the technical adequacy of the Acadience Reading Diagnostic PA & WRD measures. Three primary studies were conducted as part of the development of PA & WRD. First, we describe a small pilot study of the measures. Second, we describe an initial validation study (Phase 1). Finally, we present a more extensive validation study (Phase 2) that included factor analyses and item analyses conducted on the measures. Fairly brief overviews will be provided for the first two studies, while the primary focus of the chapter will be on the Phase 2 validation study.

## PA & WRD Pilot Study

The Acadience Reading Diagnostic PA & WRD Pilot Study (Powell-Smith & Kaminski, 2007) was focused on achieving three specific aims: (1) determine the accuracy of the scope and sequence of skills on the measures, (2) determine appropriate discontinue rules for the measures, and (3) obtain information from teachers regarding the utility of the measures. This information was subsequently used to revise the measures for the next round of research. This pilot study was designed to be exploratory and descriptive. A summary of the pilot study is provided in this chapter. Additional details regarding the pilot study are provided in the technical report provided on the Acadience Learning website: <https://acadiencelarning.org/pubs.html#diagnostic>.

**Participants and procedures.** Pilot study data were collected in two public elementary schools in a midsize town in the Pacific Northwest. One school (School A) was a large elementary school, while the other school (School B) was a small alternative school focused on the arts. School B is one of several alternative school programs available in the participating school district. School A had 422 students enrolled in grades K–5. Approximately 5% of these students were English Language Learners. School demographic data available from the state department of education indicated that 68% of the students enrolled were White (not of Hispanic origin), 4% were Black (not of Hispanic origin), 12% were Hispanic, 6% were Asian/Pacific Islander, and 4% were multiracial/multiethnic. The remaining 6% were not described. Approximately 47% of the student population was categorized as economically disadvantaged. School B had 97 students enrolled in grades K–5. Less than 1% of these students were English Language Learners. School demographic data available from the state department of education indicated that 47% of the students enrolled were White (not of Hispanic origin), 18% were Black (not of Hispanic origin), 11% were Hispanic, 7% were Asian/Pacific Islander, and 6% were American Indian/Alaska Native. The remaining 11% were not described. Approximately 60% of the student population was categorized as economically disadvantaged.

Teachers were directed to select two struggling and two typically achieving students in each classroom to participate. The information teachers used to select students was not shared with researchers. A sample of 35 students participated including six first-grade students, nine second-grade students, 10 third-grade students, and 10 fourth-grade students. Personnel from Acadience Learning who were trained on the measures collected all data for the study. Once Institutional Review Board (IRB) approval was obtained and prior to data collection, school permission, parent consent, and student assent were obtained.

Four data collectors assessed participating students. Assessors were given a list of assessment forms that could be administered at each grade level. The forms ranged from those at grade level and below. For example, a third-grade student could be given a third-grade form and any lower-level form. Assessors were told not to follow the discontinue rules on the forms, but rather to stop testing if it became clear that the tasks were too difficult for the child being tested. Upon conclusion of each testing session, feedback was shared among the assessors and the principal investigator. Teacher participants in the study were asked to complete a brief questionnaire regarding their opinions about the accuracy of the scope and sequence of skills represented on the measures, as well as the utility and feasibility of the new measures.

Anecdotal feedback was obtained directly from assessors who administered the Acadience Reading Diagnostic PA & WRD measures. Feedback was obtained orally as well as written on the score sheets. This information, as well as a review of students' responses to test items, resulted in a list of potential changes to the measures. Most of the suggested changes were in regard to clarifying directions, correcting typos, and formatting of the test items and score sheets. For three of the forms, content-related changes were suggested.

***Summary of findings.*** The data obtained in the pilot study provided general support for the accuracy of the scope and sequence. The results likely reflect the range of skills within the sample tested (i.e., both struggling and typically achieving students) given that the measures ultimately administered to participants contained skills appropriate for their grade level. Also, with the exception of second-grade students, who were the most variable in their performance, the results for each grade appear to reflect an accurate scope and sequence of skills; that is, students were tested primarily in materials designated as grade-appropriate for them. Differences found in second grade may have been related to the scope and sequence or the sample of students tested. When examining individual score sheets and feedback from examiners, a few skills within some measures were identified as potentially out of sequence, but the sequence across measures appeared to be appropriate.

In addition, feedback from examiners who completed the pilot testing indicated that the discontinue rules for the measures worked well enough to retain as part of the measures that would be examined in further research (i.e., a Phase 1 validity study). Two teachers completed the usability questionnaire. Though quite limited, the data obtained from this questionnaire indicated that the measures may be useful to teachers. Both teachers provided responses indicating a favorable view of the utility of Acadience Reading Diagnostic PA & WRD.

## Phase 1 Validation Study

The Phase 1 Validation Study for Acadience Reading Diagnostic PA & WRD (Powell-Smith & Kaminski, 2013) was focused primarily on the utility of the measures (e.g., feasibility of the revised measure, use for determining instructional content, etc.) in addition to examining the relation to DIBELS® 6th Edition<sup>1</sup> benchmark assessment data. The study addressed the following research questions:

1. What is the distribution and frequency of PA and WRD measures given at each grade level?
2. What is the relationship between the PA and WRD forms?
3. What is the relationship between performance on Acadience Reading Diagnostic PA & WRD and the DIBELS 6th Edition benchmark measures?
4. What is the relation between sections within each PA and WRD measure?
5. Are the items and sections sequenced appropriately?
6. To what extent do teachers find the measures useful?
7. To what extent are assessors satisfied with the measures?

A summary of this Phase 1 validation study is provided in this chapter. Additional details regarding the study are provided in Powell-Smith and Kaminski (2013) that may be obtained on the Acadience Learning website: [www.acadiencelearning.org](http://www.acadiencelearning.org).

**Participants and setting.** Phase 1 study data were collected in 11 schools in four states. Participating schools represented rural areas as well as midsize cities and larger suburban areas. The schools ranged in the size of the student population served from 182 to 674 students, and the grade levels served ranged from pre-K to third grade to sixth grade. Participating schools had a range of 11%–53% of students participating in the federal free/reduced-price lunch program. All but one of the participating schools was designated as a Title I school. Finally, while the student population across these schools was primarily White, two of the schools had greater ethnic diversity with at least 40% of their student population being non-White.

School sites were instructed to select a random sample, stratified across instructional support recommendation levels (i.e., benchmark, strategic, intensive) according to their fall benchmark data. A total of 245 students participated across grades K–4 with a range of 45–65 students per grade. A total of 31 teachers and 16 assessors provided feedback about the utility of the measures by completing usability questionnaires.

**Data collection.** All data collection occurred during the 2006–2007 school year. Local personnel trained in the administration and scoring of PA & WRD measures served as assessors and collected the data at each school site. Assessors who participated in the study served in a variety of roles within their respective school districts, including school psychologist, Title I teacher, and educational assistant. All PA and WRD measures were administered individually and were not timed. When this study occurred, two PA measures were in development (PA1 and PA2). All but two sites collected their PA & WRD data in the fall and winter; the other two sites collected these data in winter and spring. All benchmark assessment data were collected according to each schools typical assessment

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<sup>1</sup>The DIBELS® registered trademark was sold by Acadience Learning Inc. to the University of Oregon (UO) and is now owned by the UO.

schedule. These data were later de-identified, exported, and sent to Acadience Learning so they could be matched to the PA & WRD data. Finally, teacher and assessor questionnaire data were collected after all PA & WRD testing was completed.

**Data analysis.** Trained Acadience Learning data entry personnel entered all PA & WRD data into spreadsheets. Section-level data as well as item-level data were entered into separate databases. Reliability checks were conducted on all data entry. Once the PA & WRD data entry process was complete, these data were merged with the DIBELS 6th Edition benchmark data from data exports provided by each site. Data sets were merged prior to data analysis. Data analysis primarily involved calculating descriptive statistics and correlations. For each measure and for sections within each measure, descriptive statistics were calculated (e.g., mean, standard deviation). The percentage of students earning a correct score on each item within each section was examined and outliers were determined. An item was considered an outlier if the mean percentage of students earning a correct score on that item was more than two standard deviations above or below the mean for the section. Descriptive statistics also were calculated for the items on both teacher and assessor questionnaires. Finally, correlations within PA and WRD measures and between PA and WRD measures and DIBELS 6th Edition benchmark measures were calculated.

**Summary of results.** In the sections that follow, we provide descriptions of the results corresponding to each of the research questions examined in the study.

*Distribution of PA and WRD measures.* We reviewed the distribution of PA and WRD measures given at each grade level for fall and winter test administrations. In general, the measures given to students were at the target grade level. Some exceptions to this pattern were noted. In each case, benchmark data examined for those students provided some explanation as to why those students may have been tested on portions of PA & WRD not targeted for their grade level. For example, four kindergarten students in the winter were given WRD Form 2 (a beginning first-grade level measure). Examination of these four students' benchmark data indicated that they were performing well above the benchmark for Phoneme Segmentation Fluency (PSF) for that time period. These four students also earned Nonsense Word Fluency (NWF) scores above the benchmark.

*Relationship between the PA and WRD measures.* We examined descriptive statistics as well as correlations between PA and WRD measures for both fall and winter test administrations. These descriptive statistics data are most interpretable for measures generally within the target grade and the immediately adjacent grade where the sample size was greater than 10 students. For example, kindergarten student performance on PA Form 2 would be compared to first-grade student performance on PA Form 2. Likewise, we would compare kindergarten student performance on WRD Form 1 with first-grade student performance on WRD Form 1. The patterns in the fall descriptive data for kindergarten, first-, third-, and fourth-grade results were consistent with the expectation that the PA and WRD measures increase in difficulty as you move from one measure to the next one in the sequence. Inconsistent with this general pattern, the mean score for second-grade students was higher on WRD Form 4 than it was for WRD Form 3. Similarly, the winter results also supported that notion that the measures are arranged in increasing difficulty.

Correlations between PA and WRD measures for the fall and winter test administrations also were examined. Correlations were based on participants with pairwise complete data. All the correlations were statistically significant. In the fall, each of these correlations for grade-appropriate measures

ranged between .67 and .89, suggesting moderate to strong relationships between the measures. In the winter, the correlations between measures ranged from .58 to .91, again suggesting moderate to strong relationships between the measures. The correlations within a skill area or construct (i.e., between different WRD measures) were stronger than those between constructs (i.e., between PA and WRD measures).

*Relation of PA & WRD to DIBELS 6th Edition.* Correlations between both sets of measures were examined. Data were examined by time of year, grade, and measure. Correlations were calculated for participants with pairwise complete data for concurrently administered measures only (e.g., fall PA Form 2 and fall PSF, winter WRD Form 1 and winter NWF, etc.). Results indicated low correlations overall for PA Form 1. However, the correlations for PA Form 2 were strong, in particular with PSF. Most of the WRD measures were very strongly correlated with NWF and Oral Reading Fluency (ORF).

*Relationship within sections of PA and WRD.* We also examined correlations of PA and WRD sections with each of the other sections within each PA and WRD measure by grade level and time of administration. Correlations for PA Form 1 administered to kindergarten students during the fall test administration were mostly in the moderate range. Similar results (i.e., mostly moderate correlations) were found for PA Form 2 administered to kindergarten students at both fall and winter time points. Highest correlations were found between blending tasks and segmenting tasks. Weakest relationships were obtained for onset-rime and rhyming tasks on PA Form 1. Mostly small correlations between tasks on PA Form 2 were found for the first-grade sample of students.

The WRD Form 1 form was administered to kindergarten (fall and winter) and first-grade (fall only) students. Across both groups and time points, most correlations were moderate-strong to strong. WRD Form 2 was given to first-grade students during both fall and winter time points. Most of the WRD Form 2 correlations fell into the moderate-strong to strong range in the fall and in the moderate-strong range in the winter. Most correlations for WRD Form 3, administered to first- and second-grade students, and WRD Form 4, administered to first- through third-grade students, were in the moderate-strong range regardless of grade level or time of administration. Finally, most correlations for WRD Form 5 were moderate-strong for second- and third-grade students regardless of administration time point and were mostly moderate to moderate-strong for fourth-grade students administered WRD Form 5 in the fall. For detailed results of these correlational analyses, see Tables 10–20 of the technical report (Powell-Smith & Kaminski, 2013) on the Acadience Learning website: [www.acadiencelearning.org](http://www.acadiencelearning.org).

*Item- and section-level data.* To examine the appropriate sequencing of sections and items, descriptive analyses were conducted. Each item on each of the component measures was examined to see the percent of correct student responses at the target grade level and at adjacent grades for both the fall and winter test administrations. Next, item-level data were summarized for each section (e.g., mean and standard deviation for the percent of students earning a correct score on each item in each section) at target grade levels and at adjacent grades for fall and winter test administrations. In addition, the item data were examined for outliers. An item was considered an outlier if the mean percent of students earning a correct score on the item was two standard deviations above or below the mean percent of students earning items correct for that section.

In examining the pattern across PA Form 1 sections, overall the blending tasks were easier than segmenting tasks. Within the segmenting and blending tasks, the type of blending or segmenting task did not discriminate skill level. The PA Form 2 data suggest that those tasks were more challenging for kindergarten students than for first-grade students. Further, tasks involving identification or production of final sounds were harder than tasks involving identification or production of initial sounds. Again, blending tasks were easier than segmenting tasks. Segmenting words with more phonemes was more difficult than segmenting shorter words.

The analyses of the data for WRD Forms 1–5 indicated the following:

- WRD Form 1 was more difficult for kindergarten students than first-grade students, with many kindergarten students encountering the discontinue rule fairly early in the measure.
- WRD Form 2 results showed more first-grade students discontinue within the first three sections in the fall administration than occurred in the winter. In addition, the data suggested that some sections did not differentiate skill levels and might be combined in a revised version of the measure (e.g., vowel-consonant-consonant and consonant-vowel-consonant-consonant words beginning with continuous sounds combined with those beginning with stop sounds).
- In general, second-grade students performed better than first-grade students on the WRD Form 3 tasks.
- Without exception, students in third grade obtained a higher average percent correct on the WRD Form 4 tasks than second-grade students.
- The data for WRD Form 5 suggest that tasks were more challenging for third-grade students than for fourth-grade students. In addition, some more challenging tasks were in the middle of the form (e.g., section H, words with “ch” pronounced as /k/) suggesting that they should be moved toward the end given their difficulty level as observed by the low average percent correct for both grades.

*Teacher and assessor feedback.* In general, items on the teacher questionnaire received an “agree” rating. All anecdotal remarks were examined as well to determine if any general themes emerged. Two general themes were noted. First, teachers expressed concern that the measures would be too long to give to every student in their classes. Second, remarks suggested that the data obtained from the measures would be useful for targeting instruction. Likewise, assessors indicated generally favorable views of the measures with most items receiving an agree rating. Anecdotal remarks also were generally positive. One theme that emerged was related to increasing efficiency in test administration.

**Discussion.** The results of this study indicate that the scope and sequence of items, sections, and measures was generally accurate. The results of this study provide initial support for the construct validity of the PA and WRD measures. We found moderate-strong to near perfect correlations between PA and WRD measures of the same skill and moderate to moderate-strong correlations between PA and WRD measures of different skills. The correlations between PA and WRD measures and DIBELS 6th Edition measures of the same skill also provide support for the construct validity of PA and WRD measures. In fact, we found primarily moderate to strong correlations when examining these relations. Further, within-form section correlations suggest that most sections were related to

other sections within their respective forms.

Section- and item-level results provided pertinent information about the scope and sequence of the items and sections on the forms. While in general the scope and sequence was supported, some items within sections appeared to be out of place and some sections within forms appeared to be out of place, which is information that provided direction for revision of the measures. The data collected in this study also support the utility of PA & WRD. Overall, teachers agreed that the measures are useful. In addition, assessors expressed satisfaction with the usability of the measures and conveyed constructive feedback about changes to the measures that would increase their utility.

***Changes to PA & WRD as a result of the Phase 1 study.*** We determined that onset-rime and rhyming tasks did not appear to add information when considering the other PA tasks. Relatedly, the role of rhyming in PA, and, indeed overall reading skill, has been questioned in the research literature (McGuinness, 2005). As such these tasks were subsequently removed from the assessment. These changes ultimately resulted in a single PA form covering the skills that had the strongest technical qualities. In addition, the mean percent correct data for each section was used to reorder sections depending on the number of problematic items (e.g., extreme outliers) within those sections. These changes to the measures were implemented prior to the Phase 2 study.

## **Phase 2 Validation Study**

The Phase 2 Validation Study was focused on examining the reliability, validity, and utility (e.g., feasibility of the revised measure, use for determining instructional content, etc.) of Acadience Reading Diagnostic PA & WRD. The specific research questions examined were:

1. What is the relation between performance on Acadience Reading Diagnostic PA and DIBELS 6th Edition Initial Sound Fluency (ISF) and PSF benchmark scores?
2. What is the relation between performance on Acadience Reading Diagnostic WRD measures and DIBELS 6th Edition NWF and ORF benchmark scores?
3. What is the factor structure of Acadience Reading Diagnostic PA?
4. What is the factor structure of the Acadience Reading Diagnostic WRD measures?
5. What is the procedural reliability of examiners on PA & WRD measures?
6. To what extent do teachers find the PA & WRD measures useful?
7. To what extent are assessors satisfied with the PA & WRD measures?

***Participants and setting.*** Approximately 460 randomly selected students in kindergarten through third grade (approximately 115 students per grade) participated in this study. One hundred teachers and 25 assessors also participated. All participants were from school sites recruited from multiple school districts that used the mobile version of DIBELS 6th Edition and whom had previously expressed an interest in participating in research on Acadience Reading Diagnostic. Seven schools in four states participated in this study. Demographic data on each of the schools is found in Table 1. Participating schools represented rural areas, distant and remote towns, as well as a small city and midsize suburban area. The schools ranged in the size of the student population served from 302 to 708 students, and the grade levels served ranged from pre-K to grade 8. Participating schools also had a range of 32%–79% of students participating in the federal free/reduced-price lunch program.<sup>2</sup> All

<sup>2</sup>Data on free/reduced-price lunch were only available for five of the seven schools.



of the participating schools were designated as Title I eligible. Finally, while the student population across these schools was primarily White, two of the schools had greater ethnic diversity with approximately 40% of their student population being non-White.

**Measures.** The measures used in this study included the DIBELS 6th Edition measures appropriate for each grade level’s fall, winter, or spring benchmark assessments, the experimental Acadience Reading Diagnostic PA & WRD measures, and investigator-created user feedback questionnaires.

*Assessor training and data collection.* Each of the assessors in the study was trained to administer and score the PA and WRD measures by the lead author. Most trainings occurred via webinar. All data collection occurred during the 2008–2009 school year. Prior to data collection for this study, IRB approval as well as approval from the school districts and schools was obtained. Students whose teachers volunteered to participate were eligible to participate, and a project description and consent form/information letter was sent home. DIBLES 6th benchmark assessment data were collected according to each site’s DIBELS 6th benchmark data collection schedule. After winter benchmark, PA and WRD measures were administered to the randomly selected students at designated grade levels. All PA and WRD measures were administered individually and were not timed. No discontinue rules were used in this study for PA and WRD Forms 1–5; that is, all items were attempted according to the schedule shown in Table 2. A modified discontinue rule was used for Word Reading Quick Screen (WRD QS).

**Table 1**  
*School Demographic Characteristics*

Demographic Data	School Number						
	1	2	3	4	5	6	7
Locale	Rural Distant	Town Distant	Suburb Midsize	Town Remote	Rural Fringe	City Small	Rural Distant
Grades Taught	PK–3	PK–6	KG–5	KG–5	PK–8	K–6	PK–8
Total Students	302	611	708	355	334	409	321
Student/Teacher Ratio	14.5	19.9	17.7	13.4	15.2	24.1	16.7
Title 1 Eligible	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Free/Reduced Lunch	72%	-	39%	32%	64%	-	79%
Percent Female	46%	49%	47%	48%	50%	43%	49%
<i>Student Ethnicity</i>							
American Indian	27%	0%	0%	0%	32%	0%	19%
Asian	0%	<1%	2%	1%	<1%	0%	<1%
Black	7%	0%	1%	<1%	3%	16%	<1%
Hispanic	19%	0%	5%	<1%	<1%	<1%	<1%
White	60%	99%	91%	98%	64%	72%	79%

*Note:* Data were retrieved from National Center for Educational Statistics.

**Table 2**  
*Assessment Schedule By Grade Level*

Grade	Acadience Reading Diagnostic Measures Given (Winter 2009)
Kindergarten	Phonemic Awareness (PA), Word Reading & Decoding Form 1 (WRD1), & Quick Screen (QS) items 1-6*
First Grade	WRD2 & WRD3, QS items 1-38*
Second Grade	WRD4, QS items 1-50*
Third Grade	WRD5, QS items 1-70

*\*Note:* If a student received a score of incorrect on the last five items at their grade level then testing was discontinued. Otherwise, testing continued until the student had five consecutive incorrect items above the item set designated in this chart.

Procedural integrity was checked with one-third of students per grade level at each school site. Two weeks after initial testing, retesting occurred with one-third of students at each grade level at each school site. This testing was observed by a second examiner. A procedural checklist was used. Finally, teacher and assessor questionnaires were completed after the second round of PA & WRD data collection (e.g., winter or spring depending on the site).

**Data management, entry, and reliability.** All DIBELS 6th Edition as well as the PA & WRD data were captured via mobile device, uploaded to Wireless Generation, and exported to a spreadsheet that was sent to Acadience Learning. All data were de-identified prior to being sent to Acadience Learning. Section-level data as well as item-level data were entered into separate databases prior to analyses. The procedural checklist data were then entered into SurveyMonkey and exported for analysis.

**Results.** In the sections that follow, we provide detailed results of the data analyses conducted to examine to each of the research questions in the study.

**Descriptive statistics.** Descriptive statistics for DIBELS 6th Edition scores for participating students by grade level are displayed in Tables 3–6. On average, kindergarten students appear to be performing close to or above the DIBELS 6th Edition benchmark goals on the ISF, PSF measures, and NWF. There are no benchmark goals for Word Use Fluency (WUF) available, but students appear to be making steady growth on that measure from beginning- to end-of-year with steadily increasing mean scores.

First-grade students’ mean scores are higher than the winter benchmark goal for ORF, and on average they were also above benchmark on PSF and NWF, and WUF scores went up from beginning to middle of year. Similarly, the second-grade students’ average scores on ORF and NWF indicated they were on track to meet or exceed the DIBELS 6th Edition benchmark goal of 90 words read correct. Once again, average scores on WUF increased across the year. Finally, the mean ORF score for third-grade students was generally above the benchmark goal at each time point. Despite the fact that each grade level’s mean scores indicate benchmark or higher performance, standard deviations indicate a range of performance was represented by these groups of students.

**Table 3***Descriptive Statistics for DIBELS Measures: Kindergarten Participants*

Measure	N	Min	Max	Mean	SD
ISF BOY	104	0	56	18.82	12.79
ISF MOY	102	0	87	30.75	18.42
ISF EOY	27	0	80	22.81	15.70
LNF BOY	119	0	77	26.59	19.07
LNF MOY	118	0	93	38.08	20.26
LNF EOY	115	1	100	45.60	19.52
PSF BOY	28	0	69	37.57	19.45
PSF MOY	102	0	69	35.24	18.30
PSF EOY	107	0	75	44.40	17.25
NWF BOY	28	11	59	30.21	12.41
NWF MOY	102	0	141	30.27	21.66
NWF EOY	107	0	145	37.06	25.90
WUF BOY	74	0	90	18.66	16.87
WUF MOY	73	0	70	35.84	17.26
WUF EOY	73	0	74	42.62	17.95

*Note:* ISF = Initial Sound Fluency; LNF = Letter Naming Fluency; PSF = Phoneme Segmentation Fluency; NWF = Nonsense Word Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year.

**Table 4***Descriptive Statistics for DIBELS Measures: First-Grade Participants*

Measure	N	Min	Max	Mean	SD
LNF BOY	66	5	86	43.67	14.43
LNF MOY	7	19	52	38.00	11.05
LNF EOY	17	12	77	44.47	15.41
PSF BOY	96	0	75	43.64	14.29
PSF MOY	96	13	77	50.74	13.04
PSF EOY	90	17	74	48.94	10.07
NWF BOY	96	0	139	43.21	24.60
NWF MOY	96	12	140	61.90	26.30
NWF EOY	90	0	140	68.19	32.04
ORF BOY	30	7	128	44.23	30.90
ORF MOY	89	0	123	47.40	30.71
ORF EOY	73	8	132	58.16	31.26
RTF BOY	15	4	63	28.80	17.93
RTF MOY	56	0	105	30.27	20.74
RTF EOY	51	2	110	31.96	21.78
WUF BOY	55	5	176	43.93	30.09
WUF MOY	54	3	89	51.59	15.30
WUF EOY	52	12	83	51.46	15.95

Note: LNF = Letter Naming Fluency; PSF = Phoneme Segmentation Fluency; NWF = Nonsense Word Fluency; ORF = Oral Reading Fluency; RTF = Retell Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year.

**Table 5***Descriptive Statistics for DIBELS Measures: Second-Grade Participants*

Measure	N	Min	Max	Mean	SD
NWF BOY	83	14	142	75.93	32.61
NWF MOY	23	30	126	56.22	23.91
NWF EOY	8	32	140	91.00	39.12
ORF BOY	118	11	191	71.69	38.34
ORF MOY	118	6	209	86.60	41.79
ORF EOY	114	23	230	100.72	40.08
RTF BOY	89	2	95	35.25	16.98
RTF MOY	88	2	116	45.18	22.78
RTF EOY	87	14	120	52.18	22.33
WUF BOY	74	13	142	46.97	23.01
WUF MOY	75	12	154	54.81	22.83
WUF EOY	73	26	125	63.90	19.06

Note: NWF = Nonsense Word Fluency; ORF = Oral Reading Fluency; RTF = Retell Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year.

**Table 6***Descriptive Statistics for DIBELS Measures: Third-Grade Participants*

Measure	N	Min	Max	Mean	SD
ORF BOY	112	23	180	89.51	33.87
ORF MOY	111	20	245	104.59	37.27
ORF EOY	108	35	205	115.12	33.84
RTF BOY	85	5	126	47.28	24.03
RTF MOY	85	9	133	58.46	26.27
RTF EOY	83	11	130	51.22	21.96
WUF BOY	70	0	143	50.29	22.35
WUF MOY	70	14	132	55.73	21.08
WUF EOY	68	0	117	47.96	22.14

*Note:* ORF = Oral Reading Fluency; RTF = Retell Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year.

*Descriptive statistics for PA and WRD measures.* The results of these analyses are provided in Tables 7–12. When reviewing the descriptive data for PA and WRD measures, a few patterns were evident. With respect to PA, segmenting compound words and segmenting syllables appeared to be harder than segmenting two-phoneme words and segmenting three-phoneme words. However, segmenting four-phoneme words was much harder than either of those tasks. Producing initial sounds was less variable than producing final sounds. Kindergarten students completing WRD Form 1 responded correctly to all letter-sound correspondences. For this group, nonsense words were generally harder, responding correctly to slightly more than half of the high-frequency words on average. For first-grade students completing WRD Form 2, sections where they read CCVC nonsense words and CCVCC, CCCVC, and CCCVCC nonsense words were slightly more difficult overall than the other sections. These students also responded correctly to most high-frequency words on WRD Form 2. First-grade students also completed WRD Form 3. Some sections in the middle of the form appeared to be harder than those that came later on in the form. The results for WRD Form 4 and WRD Form 5 suggested that most sections were sequenced appropriately.

**Table 7***Descriptive Statistics for Acadience Reading Diagnostic Phonemic Awareness Sections*

Section	N	Min	Max	Mean	SD
Blending Compound Words	115	0	5	4.48	1.07
Blending Syllables	115	0	5	4.54	0.87
Segmenting Compound Words	115	0	5	3.82	1.75
Segmenting Syllables	115	0	5	3.43	1.69
Blending Two-Phoneme Words	115	0	5	4.66	0.88
Blending Three-Phoneme Words	115	0	5	4.53	1.13
Producing Initial Sounds	115	0	10	9.53	1.63
Producing Final Sounds	113	0	10	7.88	2.71
Segmenting Two-Phoneme Words	113	0	5	4.47	1.09
Segmenting Three-Phoneme Words	113	0	5	4.53	1.23
Segmenting Four-Phoneme Words w/Blends	113	0	5	1.89	1.72

**Table 8***Descriptive Statistics for Acadience Reading Diagnostic WRD QS and WRD1 Sections*

Section	N	Min	Max	Mean	SD
WRD QS	302	0	70	48.68	18.21
Letter-Sound Correspondence	119	8	26	22.78	3.98
VC & CVC Real Words Beginning w/Continuous Sounds	114	0	15	10.00	5.26
VC & CVC Nonsense Words Beginning w/Continuous Sounds	113	0	15	8.73	5.10
CVC Real Words Beginning w/stop sounds	111	0	9	6.23	2.99
CVC Nonsense Words Beginning w/stop sounds	106	0	9	5.35	3.27
Pre-Primer High-Frequency Words	103	0	32	18.09	9.40

Note: WRD QS = Word Reading and Decoding Quick Screen; WRD1 = Word Reading and Decoding Form 1; V = Vowel; C = Consonant.

**Table 9***Descriptive Statistics for Acadience Reading Diagnostic WRD2 Sections*

Section	N	Min	Max	Mean	SD
VCC & CVCC Real Words Beginning w/Continuous Sounds	93	1	12	8.71	2.83
VCC & CVCC Nonsense Words Beginning w/Continuous Sounds	93	0	12	7.73	3.35
CVCC Real Words Beginning w/Stop Sounds	94	0	12	9.13	2.87
CVCC Nonsense Words Beginning w/Stop Sounds	94	0	12	8.73	3.30
Real Words w/Double Final Consonant	94	0	5	4.30	1.04
Nonsense Words w/Double Final Consonant	94	1	5	4.01	1.16
CCVC Real Words	94	0	10	7.74	2.44
CCVC Nonsense Words	93	0	10	6.98	2.82
CCVCC, CCCVC, & CCCVCC Real Words	93	0	10	7.24	2.87
CCVCC, CCCVC, & CCCVCC Nonsense Words	93	0	10	5.94	3.20
Words with “y” Vowel	92	1	10	7.17	2.46
Primer High-Frequency Words	92	5	44	38.97	7.81

Note: WRD2 = Word Reading and Decoding Form 2; V = Vowel; C = Consonant.

**Table 10***Descriptive Statistics for Acadience Reading Diagnostic WRD3 Sections*

Section	N	Min	Max	Mean	SD
Real Words w/Consonant Digraphs	95	0	5	4.17	1.28
Nonsense Words w/Consonant Digraphs	95	0	5	3.51	1.49
Words w/Contractions	95	1	5	4.33	1.03
Words w/Suffixes, Plurals	94	1	5	3.51	1.24
One-Syllable Real Words w/R-Controlled Vowels	94	0	5	3.23	1.63
One-Syllable Nonsense Words w/R-Controlled Vowels	94	0	5	2.34	1.72
VCe & CVCe Real Words	90	0	5	3.89	1.28
VCe & CVCe Nonsense Words	90	0	5	3.10	1.94
One-Syllable Real Words w/L-Controlled Vowels	90	0	5	1.96	1.66
One-Syllable Nonsense Words w/L-Controlled Vowels	90	0	5	2.22	1.56
Words w/Hard & Soft “c”	88	1	8	4.56	2.21
Words w/Hard & Soft “g”	88	0	8	4.52	2.01
Real Words Beginning w/ “qu”	88	0	5	3.34	1.73
Nonsense Words Beginning w/ “qu”	88	0	5	2.60	1.69
Real Compound Words	88	0	5	3.81	1.41
Nonsense Compound Words	87	0	5	3.48	1.53
One-Syllable Words w/Vowel Digraphs	87	0	11	8.01	3.13
One-Syllable Words w/Vowel Diphthongs	87	0	9	5.82	2.46
First-Grade High-Frequency Words	87	1	36	30.48	7.57

Note: WRD3 = Word Reading and Decoding Form 3; V = Vowel; C = Consonant.

**Table 11***Descriptive Statistics for Acadience Reading Diagnostic WRD4 Sections*

Section	N	Min	Max	Mean	SD
Words w/Medial Double Consonants	124	0	5	4.15	1.26
Words w/Possessives	124	2	5	4.90	0.41
Words w/Contractions	124	0	5	4.58	0.95
Real Compound Words	123	0	5	4.67	0.88
Nonsense Compound Words	123	0	5	4.36	1.19
Two-Syllable Real Words w/R-Controlled Vowels	123	0	5	4.25	1.21
Two-Syllable Nonsense Words w/R-Controlled Vowels	123	0	5	3.37	1.83
Words w/Consonant Digraphs (ck, gh, ph, & wr)	120	0	7	5.78	1.82
Two-Syllable Words w/Short & Long Vowel Patterns & Inflections	120	0	5	4.06	1.37
Two-Syllable Words w/Vowel Digraphs & Inflections	119	0	5	3.87	1.33
Words w/Common Prefixes & Suffixes	119	1	5	4.34	1.12
Multisyllabic Words	118	0	5	4.01	1.17
Second-Grade High-Frequency Words	118	18	44	41.85	4.20

Note: WRD4 = Word Reading and Decoding Form 4.

**Table 12***Descriptive Statistics for Acadience Reading Diagnostic WRD5 Sections*

Section	N	Min	Max	Mean	SD
Real Compound Words	120	0	5	4.61	1.01
Nonsense Compound Words	120	1	5	4.72	0.84
Words w/Possessives	120	1	5	4.73	0.67
Words w/Contractions	120	0	5	4.49	0.86
Words w/Silent Letters	118	1	5	4.74	0.74
Words w/Variant Plurals	118	2	5	4.65	0.65
Multisyllabic Words	118	0	5	4.44	1.07
Words w/Common Prefixes & Suffixes	118	0	5	4.19	1.26
Words w/Consonant Trigraphs	118	0	5	3.92	1.21
Two-Syllable Words w/Diphthongs	117	2	9	8.20	1.57
Words w/Irregular Vowel Patterns (ou, er, ie, ei)	116	1	8	6.28	1.61
CCCVC, CCCVCC, & CCCVCCC Words w/Inflections	116	0	5	3.81	1.26
Words w/“ch” pronounced as /k/	116	0	5	3.10	1.73
Words w/“ive,” “ous,” & “ious” Endings	114	1	5	3.98	1.17
Words w/Irregular Vowel Patterns (ea, eau)	114	0	7	3.31	1.37
Third-Grade High-Frequency Words	114	26	35	34.12	1.80

Note: WRD5 = Word Reading and Decoding Form 5; V = Vowel; C = Consonant.



*Procedural reliability.* Data from the procedural checklist were summarized for each measure. Overall, the data suggest excellent procedural reliability. For PA, 33 observations were conducted indicating a mean procedural reliability of 93% (range, 79%–100%). For the WRD QS, 125 observations were conducted. The mean percent procedural reliability was 95% (range, 90%–99%). For WRD Form 1 through WRD Form 5, 123 observations were completed, which yielded procedural reliability ranging from 25%–95% (mean = 58%). Lower percentages for WRD Form 1–WRD Form 5 were due to low agreement regarding prompting as well as missing data.

*Validity: Correlations with DIBELS 6th Edition measures.* The correlations between DIBELS 6th Edition measures and each section of the Acadience Reading Diagnostic PA & WRD measures are shown in Tables 13–19. For the PA measure, the highest correlations were between PSF, NWF, and the phoneme segmenting tasks (segmenting two-phoneme words, segmenting three-phoneme words, etc.) of the PA measure. It was noted that NWF was correlated more highly with segmenting four-phoneme words with blends than with segmenting two- or three-phoneme words. The WRD QS was most highly correlated with NWF and ORF, with correlations falling in the moderate to strong range. When examining the data for WRD Form 1, most of the correlations with DIBELS 6th Edition measures were in the moderate range, though some were higher (e.g., high-frequency words with LNF and NWF). Similarly for WRD Form 2, most sections were moderately correlated with DIBELS 6th Edition measures. Among the sections strongly correlated with DIBELS 6th Edition measures was, once again, high-frequency words. In addition, reading words with “y” as a vowel also was strongly correlated with ORF. For WRD Form 3, the highest correlations were with LNF (for some sections), NWF, and ORF. Finally, for WRD Form 4 and WRD Form 5, most correlations were in the moderate to strong range for NWF and ORF in particular. Overall, these data support the validity of the PA & WRD measures.

*Validity: Factor structure of PA and WRD measures.* Model fit of the factor structure for PA & WRD was tested using Amos 17.0. We examined six models, one for each section, in which items loaded on subscales, which loaded on the latent factor representing each PA or WRD section. When sections were composed of subsections, we utilized a second order latent factor structure to represent the hierarchy of variable relationships (e.g., the PA model included both first and second order latent variables to represent the A–E subsections which comprised the PA section). The WRD Form 1 model is an exception to the second order latent factor structure, however, because when the second order latent factor model was fit according the hypothesized factor structure, the model yielded an inadmissible solution that was not positive definite. Therefore, the proposed WRD Form 1 second order latent factor model was replaced with a unidimensional latent factor model, and these results are described below.

Overall, the subtest-specific models yielded mixed model fit results according to the criteria proposed by Hu and Bentler (1999). The model fit statistics are presented in Table 20. Every model resulted in a significant  $\chi^2$  statistic, indicating some degree of model misfit. The majority of the models yielded adequate Root Mean Square Error of Approximation (RMSEA) values ( $< .06$ ) with the exception of the WRD Form 4 model. Most models yielded Comparative Fit Index (CFI) values that were slightly below the proposed cutoff ( $> .95$ ) with the exception of the WRD Form 1 model.

The Squared Multiple Correlations (SMCs) for each model represent the percent of variance in each of the listed variables explained by its predictors (conversely, 1-SMC represents the residual or unexplained variance associated with each of the listed variables). Table 21 displays the standardized path coefficients (also commonly referred to as regression weights or factor loadings) and SMCs for each of the models. An interpretation of the standardized path coefficients is as follows: When the latent construct of PA increases by one standard deviation, the subscale A increases by 0.86 standard deviations. Figures 1–6 provide a visual representation of each model, with error variances and path coefficients excluded for purposes of clarity in presentation.

*Item-response analysis for WRD QS.* An Item Response Theory (IRT) analysis on the WRD QS was performed to evaluate arrangement of items on the form and item difficulty. A principle components analysis was performed to confirm the assumption of unidimensionality; that is, all the items on the WRD QS measure a single latent skill. All items on the WRD QS were assumed to have an equal relationship to the underlying latent construct, thus a one-parameter Rasch (1960) model was fit to the data. Models were fit separately by grade. In kindergarten, only the first 30 items were evaluated. All 70 items were evaluated in first, second, and third grades. Models were evaluated by their individual item characteristic curves (ICC), the information function (IF), and item-level difficulty parameters. The ICC results suggest varying degrees of difficulty across items covering a wide variety of ability levels for all grades (see Table 22 for difficulty parameters and plots). The IF suggests that the WRD QS is sensitive to different groups of students in each grade. The IRT results also indicate that items were arranged in increasing difficulty across all grades.

The WRD QS is sensitive to higher ability levels in kindergarten, average ability levels in first grade, and lower ability levels in second and third grades. The results suggest fewer differences in sensitivity to ability level between second and third grade. To explore this further, a discriminant analysis (DA) was performed to predict grade-level based on item-level WRD QS performance. The DA results predicted kindergarten students with an 84% success rate, first-grade students with a 72% success rate, second-grade students with a 71% success rate, and third-grade students with a 77% rate. In second grade, the DA predicted students at a third-grade level approximately 20% of the time, and in third grade, the DA predicted students at the second-grade level approximately 21% of the time. Both of these results account for more than 90% of the students, which suggest that the WRD QS adequately discriminates between second and third grade. In general, the WRD QS is sufficiently sensitive to appropriate ability levels for each grade.

*User feedback.* Data from the user feedback questionnaires were summarized and is shown in Tables 23–26. Most of the assessors completed feedback questionnaires. Their responses across the various parts of the assessment (e.g., PA, WRD QS) suggest general agreement with the items on the questionnaires. Very few teacher participants completed the teacher questionnaire. The data that were collected indicate general agreement with each of the items. The results from assessors and teachers taken together indicate that overall teachers and assessors found the materials useful for assessing reading difficulties, helpful for planning instruction, and they would recommend them to others for such purposes.

**Table 13**  
*Correlations Among DIBELS Measures and PA Sections*

Section	ISF BOY	ISF MOY	ISF EOY	LNF BOY	LNF MOY	LNF EOY	PSF BOY
Blending Compound Words	0.32**(98)	0.38***(98)	0.16(25)	0.21*(113)	0.30**(112)	0.24*(109)	0.02(27)
Blending Syllables	0.16(98)	0.24*(98)	-0.01(25)	0.10(113)	0.33***(112)	0.20*(109)	0.38(27)
Segmenting Compound Words	0.31**(98)	0.39***(98)	0.28(25)	0.18(113)	0.39***(112)	0.39***(109)	0.60***(27)
Segmenting Syllables	0.14(98)	0.33***(98)	0.25(25)	0.13(113)	0.29**(112)	0.32***(109)	0.43*(27)
Blending Two-Phoneme Words	0.23*(98)	0.19(98)	0.19(25)	0.29**(113)	0.28**(112)	0.25*(109)	0.26(27)
Blending Three-Phoneme Words	0.15(98)	0.15(98)	0.27(25)	0.19*(113)	0.29**(112)	0.20*(109)	0.39*(27)
Producing Initial Sounds	0.01(98)	0.20*(98)	0.07(25)	0.11(113)	0.28**(112)	0.15(109)	0.12(27)
Producing Final Sounds	0.28**(97)	0.37***(97)	0.20(23)	0.13(111)	0.39***(110)	0.38***(107)	0.38(26)
Segmenting Two-Phoneme Words	0.08(97)	0.19(96)	0.39(24)	0.19*(111)	0.26**(110)	0.31**(107)	0.43*(26)
Segmenting Three-Phoneme Words	0.10(97)	0.23*(96)	0.36(24)	0.26**(111)	0.28**(110)	0.24*(107)	0.48*(26)
Segmenting Four-Phoneme Words w/Blends	0.34***(97)	0.31**(96)	0.66***(24)	0.32***(111)	0.50***(110)	0.52***(107)	0.46*(26)

Note: PA = Phonemic Awareness; ISF = Initial Sound Fluency; LNF = Letter Naming Fluency; PSF = Phoneme Segmentation Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

**Table 13**  
*Correlations Among DIBELS Measures and PA Sections (cont.)*

Section	PSF MOY	PSF EOY	NWF BOY	NWF MOY	NWF EOY	WUF BOY	WUF MOY	WUF EOY
Blending Compound Words	0.40***(96)	0.39***(102)	0.11(27)	0.26*(97)	0.28**(102)	0.10(70)	0.24*(69)	0.28*(69)
Blending Syllables	0.22*(96)	0.41***(102)	-0.02(27)	0.25*(97)	0.18(102)	-0.11(70)	0.36**(69)	0.19(69)
Segmenting Compound Words	0.22*(96)	0.34***(102)	0.43*(27)	0.27**(97)	0.29**(102)	-0.02(70)	0.22(69)	0.19(69)
Segmenting Syllables	0.15(96)	0.27**(102)	0.11(27)	0.16(97)	0.24*(102)	0.06(70)	-0.03(69)	0.26*(69)
Blending Two-Phoneme Words	0.41***(96)	0.50***(102)	0.23(27)	0.28***(97)	0.29**(102)	0.13(70)	0.31**(69)	0.21(69)
Blending Three-Phoneme Words	0.36***(96)	0.56***(102)	0.35(27)	0.21*(97)	0.34***(102)	0.17(70)	0.24*(69)	0.17(69)
Producing Initial Sounds	0.34***(96)	0.42***(102)	0.31(27)	0.24*(97)	0.26**(102)	-0.02(70)	0.25*(69)	0.07(69)
Producing Final Sounds	0.36***(95)	0.52***(100)	0.41*(26)	0.31**(96)	0.37***(100)	-0.05(70)	0.16(69)	0.20(69)
Segmenting Two-Phoneme Words	0.34***(95)	0.55***(100)	0.36(26)	0.15(96)	0.29**(100)	0.07(70)	0.21(69)	0.18(69)
Segmenting Three-Phoneme Words	0.47***(95)	0.61***(100)	0.30(26)	0.26*(96)	0.29**(100)	0.09(70)	0.22(96)	0.13(69)
Segmenting Four-Phoneme Words w/Blends	0.50***(95)	0.60***(100)	0.44*(26)	0.53***(96)	0.55***(100)	-0.06(70)	0.42***(69)	0.28*(69)

Note: PA = Phonemic Awareness; PSF = Phoneme Segmentation Fluency; NWF = Nonsense Word Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

**Table 14**  
*Correlations Among WRD QS and DIBELS Measures*

DIBELS Measure	WRD QS
ISF BOY	0.27(25)
ISF MOY	0.55**(24)
ISF EOY	0.32(17)
LNF BOY	0.32**(69)
LNF MOY	0.45**(36)
LNF EOY	0.36*(45)
PSF BOY	-0.05(67)
PSF MOY	-0.13(77)
PSF EOY	0.11(77)
NWF BOY	0.57***(141)
NWF MOY	0.59***(98)
NWF EOY	0.68***(84)
ORF BOY	0.58***(232)
ORF MOY	0.66***(264)
ORF EOY	0.68***(248)
RTF BOY	0.31***(170)
RTF MOY	0.31***(188)
RTF EOY	0.31***(180)
WUF BOY	0.19**(179)
WUF MOY	0.28***(179)
WUF EOY	0.33***(176)

*Note:* WRD QS = Word Reading and Decoding Quick Screen; ISF = Initial Sound Fluency; LNF = Letter Naming Fluency; PSF = Phoneme Segmentation Fluency; NWF = Nonsense Word Fluency; ORF = Oral Reading Fluency; RTF = Retell Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

**Table 15**  
*Correlations Among DIBELS Measures and WRD1 Sections*

Section	ISF BOY	ISF MOY	ISF EOY	LNF BOY	LNF MOY	LNF EOY	PSF BOY
Letter-Sound Correspondence	0.34***(99)	0.32**(97)	0.10(27)	0.50***(115)	0.54***(114)	0.54***(110)	0.42*(30)
VC & CVC Real Words Beginning w/Continuous Sounds	0.48***(96)	0.44***(96)	0.44*(26)	0.44***(111)	0.56***(110)	0.55***(108)	0.64*(27)
VC & CVC Nonsense Words Beginning w/Continuous Sounds	0.40***(95)	0.41***(95)	0.48*(26)	0.40***(110)	0.49***(109)	0.52***(107)	0.45*(27)
CVC Real Words Beginning w/Stop Sounds	0.36***(93)	0.45***(94)	0.42*(26)	0.47***(108)	0.49***(107)	0.50***(106)	0.42*(26)
CVC Nonsense Words Beginning w/Stop Sounds	0.35***(88)	0.33**(91)	0.48*(25)	0.38***(103)	0.48***(102)	0.47***(102)	0.50*(25)
Pre-Primer High-Frequency Words	0.46***(85)	0.27*(88)	0.59**(25)	0.62***(100)	0.67***(99)	0.67***(99)	0.53*(25)

Section	PSF MOY	PSF EOY	NWF BOY	NWF MOY	NWF EOY	WUF BOY	WUF MOY	WUF EOY
Letter-Sound Correspondence	0.47***(99)	0.51***(104)	0.42*(31)	0.48***(100)	0.45***(104)	0.04(71)	0.29*(70)	0.24(70)
VC & CVC Real Words Beginning w/Continuous Sounds	0.51***(94)	0.55***(100)	0.52**(28)	0.51***(95)	0.49***(100)	0.10(69)	0.40***(68)	0.33**(68)
VC & CVC Nonsense Words Beginning w/Continuous Sounds	0.51***(93)	0.56***(99)	0.37(28)	0.47***(94)	0.46***(99)	-0.05(68)	0.40***(67)	0.32**(67)
CVC Real Words Beginning w/Stop Sounds	0.52***(91)	0.51***(98)	0.47*(27)	0.44***(92)	0.44***(98)	0.09(69)	0.35**(68)	0.33**(68)
CVC Nonsense Words Beginning w/Stop Sounds	0.52***(86)	0.54***(94)	0.48*(26)	0.44***(87)	0.47***(94)	0.08(69)	0.31*(68)	0.17(68)
Pre-Primer High-Frequency Words	0.61***(83)	0.56***(91)	0.58**(26)	0.64***(84)	0.64***(91)	0.09(68)	0.30*(67)	0.13(67)

Note: WRD1 = Word Reading & Decoding Form 1; V = Vowel; C = Consonant; ISF = Initial Sound Fluency; LNF = Letter Naming Fluency; PSF = Phoneme Segmentation Fluency; NWF = Nonsense Word Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

**Table 16**  
*Correlations Among DIBELS Measures and WRD2 Sections*

Section	LNF BOY	LNF MOY	LNF EOY	PSF BOY	PSF MOY	PSF EOY
VCC & CVCC Real Words Beginning w/ Continuous Sounds	0.48***(63)	0.06(7)	0.31(18)	0.26*(91)	-0.08(92)	0.02(86)
VCC & CVCC Nonsense Words Beginning w/ Continuous Sounds	0.55***(63)	-0.35(6)	0.32(17)	0.20(92)	-0.20(92)	0.01(86)
CVCC Real Words Beginning w/Stop Sounds	0.42***(64)	0.80(6)	0.59*(17)	0.17(93)	-0.19(93)	-0.06(87)
CVCC Nonsense Words Beginning w/Stop Sounds	0.46***(64)	-0.05(6)	0.35(17)	0.09(93)	-0.15(93)	-0.08(87)
Real Words w/Double Final Consonant	0.29*(64)	0.29(6)	0.39(17)	0.13(93)	-0.20(93)	-0.12(87)
Nonsense Words w/Double Final Consonant	0.21(64)	0.74(6)	0.38(17)	-0.04(93)	-0.18(93)	-0.04(87)
CCVC Real Words	0.32**(64)	0.77(6)	0.15(17)	0.09(93)	-0.20(93)	-0.11(87)
CCVC Nonsense Words	0.31*(64)	-0.18(6)	0.28(17)	0.06(92)	-0.21(92)	-0.08(87)
CCVCC, CCCVC, & CCCVCC Real Words	0.32*(64)	0.83*(6)	0.28(17)	0.14(92)	-0.09(92)	-0.02(87)
CCVCC, CCCVC, & CCCVCC Nonsense Words	0.42***(64)	0.10(6)	0.35(17)	0.11(92)	-0.20(92)	-0.12(87)
Words with “y” Vowel	0.45***(63)	0.81*(6)	0.54*(17)	0.18(91)	-0.05(91)	-0.01(86)
Primer High-Frequency Words	0.49***(63)	0.88*(6)	0.59*(17)	0.22*(91)	-0.20(91)	-0.07(86)

Section	NWF BOY	NWF MOY	NWF EOY	ORF BOY	ORF MOY	ORF EOY
VCC & CVCC Real Words Beginning w/ Continuous Sounds	0.46***(91)	0.37***(93)	0.48***(86)	0.54**(30)	0.48***(86)	0.52***(69)
VCC & CVCC Nonsense Words Beginning w/ Continuous Sounds	0.39***(92)	0.32**(93)	0.37***(86)	0.25(30)	0.37***(87)	0.49***(70)
CVCC Real Words Beginning w/Stop Sounds	0.40***(93)	0.28**(94)	0.42***(87)	0.48***(30)	0.40***(88)	0.52***(71)
CVCC Nonsense Words Beginning w/Stop Sounds	0.28**(93)	0.31**(94)	0.43***(87)	0.36(30)	0.29**(88)	0.43***(71)
Real Words w/Double Final Consonant	0.33**(93)	0.32**(94)	0.31**(87)	0.55***(30)	0.32**(88)	0.36**(71)
Nonsense Words w/Double Final Consonant	0.26*(93)	0.30**(94)	0.33**(87)	0.59****(30)	0.28**(88)	0.41***(71)
CCVC Real Words	0.24*(93)	0.22*(94)	0.36***(87)	0.47***(30)	0.26*(88)	0.41***(71)
CCVC Nonsense Words	0.26*(92)	0.19(93)	0.43***(87)	0.29(29)	0.22*(87)	0.43***(71)
CCVCC, CCCVC, & CCCVCC Real Words	0.40***(92)	0.31**(93)	0.42***(87)	0.56***(29)	0.45***(87)	0.56***(71)
CCVCC, CCCVC, & CCCVCC Nonsense Words	0.38***(92)	0.24*(93)	0.46***(87)	0.39*(29)	0.37***(87)	0.51***(71)
Words with “y” Vowel	0.39***(91)	0.41***(92)	0.50(86)	0.69****(29)	0.57***(86)	0.72***(70)
Primer High-Frequency Words	0.42***(91)	0.35***(92)	0.40***(86)	0.45*(29)	0.52***(86)	0.60***(70)

Note: WRD2 = Word Reading & Decoding Form 2; V = Vowel; C = Consonant; NWF = Nonsense Word Fluency; ORF = Oral Reading Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

(continued)

**Table 16***Correlations Among DIBELS Measures and WRD2 Sections (cont.)*

Section	RTF BOY	RTF MOY	RTF EOY	WUF BOY	WUF MOY	WUF EOY
VCC & CVCC Real Words Beginning w/ Continuous Sounds	-0.09(16)	0.32*(55)	0.37**(50)	0.29*(55)	0.36**(54)	-0.03(52)
VCC & CVCC Nonsense Words Beginning w/ Continuous Sounds	-0.13(16)	0.23(56)	0.33*(51)	0.20(55)	0.43**(54)	0.09(52)
CVCC Real Words Beginning w/Stop Sounds	0.05(16)	0.28*(56)	0.39**(51)	0.22(55)	0.43**(54)	0.06(52)
CVCC Nonsense Words Beginning w/Stop Sounds	0.03(16)	0.25(56)	0.35*(51)	0.25(55)	0.36**(54)	0.07(52)
Real Words w/Double Final Consonant	0.29(16)	0.16(56)	0.22(51)	0.25(55)	0.33*(54)	0.20(52)
Nonsense Words w/Double Final Consonant	0.35(16)	0.18(56)	0.26(51)	0.14(55)	0.37**(54)	0.21(52)
CCVC Real Words	0.07(16)	0.14(56)	0.27(51)	0.24(55)	0.26(54)	0.00(52)
CCVC Nonsense Words	-0.11(16)	0.12(56)	0.37**(51)	0.15(55)	0.26(54)	0.11(52)
CCVCC, CCCVC, & CCCVCC Real Words	0.26(16)	0.18(56)	0.37**(51)	0.24(55)	0.31*(54)	-0.13(52)
CCVCC, CCCVC, & CCCVCC Nonsense Words	-0.08(16)	0.19(56)	0.38**(51)	0.14(55)	0.27*(54)	0.00(52)
Words with “y” Vowel	0.49(16)	0.21(56)	0.42**(51)	0.14(55)	0.34*(54)	0.01(52)
Primer High-Frequency Words	0.15(16)	0.33*(56)	0.32*(51)	0.18(55)	0.32*(54)	0.11(52)

*Note:* WRD2 = Word Reading & Decoding Form 2; V = Vowel; C = Consonant; RTF = Retell Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

**Table 17**  
*Correlations Among DIBELS Measures and WRD3 Sections*

Section	LNF BOY	LNF MOY	LNF EOY	PSF BOY	PSF MOY	PSF EOY
Real Words w/Consonant Digraphs	0.32*(63)	0.87*(6)	0.35(17)	0.12(92)	-0.18(92)	-0.08(86)
Nonsense Words w/Consonant Digraphs	0.34**(63)	-0.19(6)	0.33(17)	0.08(92)	-0.17(92)	-0.22*(86)
Words w/Contractions	0.46***(63)	-	0.50*(17)	0.20(92)	-0.12(92)	-0.04(86)
Words w/Suffixes, Plurals	0.34**(63)	0.61(6)	0.22(17)	0.02(92)	-0.15(92)	-0.08(86)
One-Syllable Real Words w/R- Controlled Vowels	0.32*(63)	0.73(6)	0.49*(17)	0.05(92)	-0.14(92)	0.04(86)
One-Syllable Nonsense Words w/R- Controlled Vowels	0.14(63)	0.88*(6)	0.18(17)	-0.07(92)	-0.13(92)	0.02(86)
VCe & CVCe Real Words	0.27*(63)	0.93**(6)	0.55(15)	0.13(88)	-0.14(88)	-0.10(84)
VCe & CVCe Nonsense Words	0.05(63)	0.56(6)	0.63(15)	0.01(88)	-0.05(88)	-0.08(84)
One-Syllable Real Words w/L- Controlled Vowels	0.28*(63)	0.79(6)	0.37(15)	-0.09(88)	-0.22*(88)	-0.03(84)
One-Syllable Nonsense Words w/L- Controlled Vowels	0.27*(63)	-0.31(6)	0.34(15)	0.07(88)	-0.29**(88)	-0.19(84)
Words w/Hard & Soft “c”	0.35**(62)	0.52(6)	0.44(14)	0.00(86)	-0.14(86)	-0.11(82)
Words w/Hard & Soft “g”	0.36**(62)	0.74(6)	0.52(14)	0.22*(86)	-0.06(86)	-0.14(82)
Real Words Beginning w/“qu”	0.31*(62)	0.27(6)	0.50(14)	0.09(86)	-0.29**(86)	-0.09(82)
Nonsense Words Beginning w/“qu”	0.28*(62)	-0.42(6)	0.54*(14)	0.07(86)	-0.14(86)	-0.05(82)
Real Compound Words	0.53***(63)	0.28(7)	0.59*(13)	0.28**(86)	-0.09(86)	-0.12(81)
Nonsense Compound Words	0.55***(62)	0.88*(6)	0.24(13)	0.29**(85)	-0.02(85)	-0.07(81)
One-Syllable Words w/Vowel Digraphs	0.44***(62)	0.94**(6)	0.56(13)	0.19(85)	-0.09(85)	-0.03(81)
One-Syllable Words w/Vowel Diphthongs	0.45***(62)	0.93**(6)	0.40(13)	0.22*(85)	-0.20(85)	-0.11(81)
First-Grade High-Frequency Words	0.53***(62)	0.93**(6)	0.58(13)	0.25*(85)	-0.15(85)	-0.05(81)

Note: WRD3 = Word Reading & Decoding Form 3; V = Vowel; C = Consonant; LNF = Letter Naming Fluency; PSF = Phoneme Segmentation Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

(continued)



**Table 17***Correlations Among DIBELS Measures and WRD3 Sections (cont.)*

Section	NWF BOY	NWF MOY	NWF EOY	ORF BOY	ORF MOY	ORF EOY
Real Words w/Consonant Digraphs	0.33**(93)	0.25*(93)	0.36***(86)	0.54**(31)	0.39***(88)	0.44***(71)
Nonsense Words w/Consonant Digraphs	0.35***(93)	0.28**(93)	0.40***(86)	0.40*(31)	0.30**(88)	0.45***(71)
Words w/Contractions	0.40***(93)	0.29**(93)	0.35**(86)	0.45*(31)	0.45***(88)	0.42***(71)
Words w/Suffixes, Plurals	0.22*(92)	0.33**(93)	0.44***(86)	0.50**(30)	0.33**(87)	0.50***(70)
One-Syllable Real Words w/R-Controlled Vowels	0.32**(92)	0.32**(93)	0.51***(86)	0.56**(30)	0.42***(87)	0.57***(70)
One-Syllable Nonsense Words w/R-Controlled Vowels	0.17(92)	0.17(93)	0.39***(86)	0.45*(30)	0.18(87)	0.42***(70)
VCe & CVCe Real Words	0.34**(88)	0.28**(89)	0.25*(84)	0.54**(26)	0.41***(83)	0.45***(70)
VCe & CVCe Nonsense Words	0.13(88)	0.20(89)	0.28**(84)	0.24(26)	0.11(83)	0.26*(70)
One-Syllable Real Words w/L-Controlled Vowels	0.28**(88)	0.25*(89)	0.42***(84)	0.51**(26)	0.28*(83)	0.40***(70)
One-Syllable Nonsense Words w/L-Controlled Vowels	0.36***(88)	0.25*(89)	0.22*(84)	0.09(26)	0.35**(83)	0.29*(70)
Words w/Hard & Soft “c”	0.42***(86)	0.46***(87)	0.38***(82)	0.77***(25)	0.57***(81)	0.62***(69)
Words w/Hard & Soft “g”	0.46***(86)	0.47***(87)	0.38***(82)	0.70***(25)	0.64***(81)	0.67***(69)
Real Words Beginning w/“qu”	0.37***(86)	0.30**(87)	0.36***(82)	0.49*(25)	0.50***(81)	0.61***(69)
Nonsense Words Beginning w/“qu”	0.26*(86)	0.15(87)	0.39***(82)	0.41*(25)	0.28*(81)	0.39**(69)
Real Compound Words	0.37***(86)	0.44***(87)	0.35***(81)	0.51*(24)	0.58***(80)	0.65***(69)
Nonsense Compound Words	0.42***(85)	0.48***(86)	0.36***(81)	0.56**(24)	0.58***(80)	0.68***(69)
One-Syllable Words w/Vowel Digraphs	0.46***(85)	0.50***(86)	0.43***(81)	0.69***(24)	0.69***(80)	0.72***(69)
One-Syllable Words w/Vowel Diphthongs	0.51***(85)	0.41***(86)	0.45***(81)	0.81***(24)	0.63***(80)	0.63***(69)
First-Grade High-Frequency Words	0.48***(85)	0.38***(86)	0.45***(81)	0.63***(24)	0.54***(80)	0.61***(69)

Note: WRD3 = Word Reading & Decoding Form 3; V = Vowel; C = Consonant; NWF = Nonsense Word Fluency; ORF = Oral Reading Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

(continued)

**Table 17***Correlations Among DIBELS Measures and WRD3 Sections (cont.)*

Section	RTF BOY	RTF MOY	RTF EOY	WUF BOY	WUF MOY	WUF EOY
Real Words w/Consonant Digraphs	-0.07(16)	0.34*(55)	0.37**(50)	0.23(54)	0.32*(54)	0.10(51)
Nonsense Words w/Consonant Digraphs	0.01(16)	0.28*(55)	0.40**(50)	0.17(54)	0.24(54)	0.06(51)
Words w/Contractions	-0.33(16)	0.34*(55)	0.26(50)	0.09(54)	0.37**(54)	0.22(51)
Words w/Suffixes, Plurals	0.16(16)	0.29*(55)	0.38**(50)	0.04(54)	0.32*(54)	0.07(51)
One-Syllable Real Words w/R-Controlled Vowels	0.00(16)	0.34*(55)	0.44**(50)	0.03(54)	0.33*(54)	0.26(51)
One-Syllable Nonsense Words w/R-Controlled Vowels	0.13(16)	0.19(55)	0.43**(50)	0.03(54)	0.17(54)	0.16(51)
VCe & CVCe Real Words	0.35(16)	0.27*(55)	0.41**(50)	0.23(54)	0.28*(54)	0.06(51)
VCe & CVCe Nonsense Words	0.28(16)	0.25(55)	0.43**(50)	0.07(54)	0.29*(54)	0.08(51)
One-Syllable Real Words w/L-Controlled Vowels	0.13(16)	0.31*(55)	0.30*(50)	0.00(54)	0.34*(54)	0.16(51)
One-Syllable Nonsense Words w/L-Controlled Vowels	-0.09(16)	0.42**(55)	0.19(50)	0.14(54)	0.25(54)	0.08(51)
Words w/Hard & Soft “c”	0.63**(16)	0.27*(55)	0.38**(50)	0.17(54)	0.34*(54)	-0.04(51)
Words w/Hard & Soft “g”	0.77***(16)	0.32*(55)	0.41**(50)	0.33*(54)	0.44***(54)	-0.08(51)
Real Words Beginning w/“qu”	0.31(16)	0.32*(55)	0.31*(50)	0.17(54)	0.24(54)	-0.08(51)
Nonsense Words Beginning w/“qu”	0.14(16)	0.14(55)	0.40**(50)	0.21(54)	0.28*(54)	-0.05(51)
Real Compound Words	0.58*(16)	0.44***(55)	0.49***(50)	0.24(54)	0.37**(54)	0.09(51)
Nonsense Compound Words	0.52*(16)	0.35**(55)	0.52***(50)	0.14(54)	0.43**(54)	-0.04(51)
One-Syllable Words w/Vowel Digraphs	0.75***(16)	0.36**(55)	0.42**(50)	0.26(54)	0.45***(54)	-0.03(51)
One-Syllable Words w/Vowel Diphthongs	0.54*(16)	0.40**(55)	0.39**(50)	0.22(54)	0.33*(54)	0.04(51)
First-Grade High-Frequency Words	0.37(16)	0.35**(55)	0.35*(50)	0.23(54)	0.41**(54)	0.15(51)

Note: WRD3 = Word Reading & Decoding Form 3; V = Vowel; C = Consonant; RTF = Retell Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

**Table 18***Correlations Among DIBELS Measures and WRD4 Sections*

Section	NWF BOY	NWF MOY	NWF EOY	ORF BOY	ORF MOY	ORF EOY
Words w/Medial Double Consonants	0.40***(87)	0.34(27)	0.34(12)	0.42***(119)	0.53(123)	0.51***(120)
Words w/Possessives	0.31***(87)	0.14(27)	0.04(12)	0.28**(119)	0.29***(123)	0.28**(120)
Words w/Contractions	0.38***(87)	0.25(27)	0.07(12)	0.40***(119)	0.51***(123)	0.51***(120)
Real Compound Words	0.37***(87)	0.25(27)	0.10(12)	0.37***(118)	0.47***(122)	0.45***(120)
Nonsense Compound Words	0.45***(87)	0.36(27)	0.13(12)	0.45***(118)	0.57***(122)	0.56***(120)
Two-Syllable Real Words w/R-Controlled Vowels	0.46***(87)	0.48*(27)	0.53(12)	0.44***(118)	0.61***(122)	0.60***(120)
Two-Syllable Nonsense Words w/R-Controlled Vowels	0.59***(87)	0.59**(27)	0.47(12)	0.49***(118)	0.69***(122)	0.64***(120)
Words w/Consonant Digraphs (ck, gh, ph, & wr)	0.49***(85)	0.35(26)	0.48(11)	0.50***(116)	0.56***(119)	0.58***(117)
Two-Syllable Words w/Short & Long Vowel Patterns & Inflections	0.41***(85)	0.51**(26)	0.61*(11)	0.45***(116)	0.62***(119)	0.60***(117)
Two-Syllable Words w/Vowel Digraphs & Inflections	0.42***(84)	0.41*(25)	0.27(10)	0.47***(116)	0.58***(118)	0.60***(116)
Words w/Common Prefixes & Suffixes	0.36***(84)	0.47*(25)	0.74*(10)	0.45***(116)	0.58***(118)	0.57***(116)
Multisyllabic Words	0.41***(83)	0.53**(24)	0.54(9)	0.53***(116)	0.63***(117)	0.56***(115)
Second-Grade High-Frequency Words	0.26***(83)	0.36(24)	0.67*(9)	0.44***(116)	0.54***(117)	0.55***(115)

Note: WRD4 = Word Reading & Decoding Form 4; NWF = Nonsense Word Fluency; ORF = Oral Reading Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

(continued)

**Table 18***Correlations Among DIBELS Measures and WRD4 Sections (cont.)*

Section	RTF BOY	RTF MOY	RTF EOY	WUF BOY	WUF MOY	WUF EOY
Words w/Medial Double Consonants	0.19(89)	0.21*(92)	0.34***(92)	-0.01(75)	0.00(76)	-0.04(75)
Words w/Possessives	0.35***(89)	0.28***(92)	0.32***(92)	0.12(75)	0.10(76)	-0.12(75)
Words w/Contractions	0.33***(89)	0.27***(92)	0.39***(92)	0.04(75)	-0.03(76)	-0.01(75)
Real Compound Words	0.25*(89)	0.27***(92)	0.33***(92)	0.01(75)	-0.06(76)	-0.22(75)
Nonsense Compound Words	0.27***(89)	0.24*(92)	0.37***(92)	-0.07(75)	0.05(76)	-0.07(75)
Two-Syllable Real Words w/R- Controlled Vowels	0.33***(89)	0.37***(92)	0.46***(92)	0.12(75)	0.00(76)	-0.13(75)
Two-Syllable Nonsense Words w/R- Controlled Vowels	0.29***(89)	0.34***(92)	0.49***(92)	-0.01(75)	0.01(76)	-0.07(75)
Words w/Consonant Digraphs (ck, gh, ph, & wr)	0.22*(89)	0.28***(91)	0.37***(91)	0.02(75)	0.00(76)	0.01(75)
Two-Syllable Words w/Short & Long Vowel Patterns & Inflections	0.27*(89)	0.27*(91)	0.45***(91)	0.04(75)	0.07(76)	0.04(75)
Two-Syllable Words w/Vowel Digraphs & Inflections	0.25*(89)	0.20(90)	0.26*(90)	0.12(75)	-0.13(76)	-0.20(75)
Words w/Common Prefixes & Suffixes	0.30***(89)	0.34***(90)	0.41***(90)	0.13(75)	0.05(76)	0.03(75)
Multisyllabic Words	0.25*(89)	0.25*(89)	0.33***(89)	-0.06(74)	0.06(75)	-0.04(74)
Second-Grade High-Frequency Words	0.31***(89)	0.29***(89)	0.37***(89)	0.12(74)	-0.09(75)	-0.11(74)

Note: WRD4 = Word Reading & Decoding Form 4; RTF = Retell Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

**Table 19**  
*Correlations Among DIBELS Measures and WRD5 Sections*

Section	ORF BOY	ORF MOY	ORF EOY	RTF BOY
Real Compound Words	0.47***(119)	0.53***(119)	0.55***(116)	0.35***(92)
Nonsense Compound Words	0.46***(119)	0.49***(119)	0.50***(116)	0.36***(92)
Words w/Possessives	0.43***(119)	0.40***(119)	0.38***(116)	0.33***(92)
Words w/Contractions	0.32***(119)	0.41***(119)	0.45***(116)	0.15(92)
Words w/Silent Letters	0.47***(117)	0.49***(117)	0.58***(114)	0.33***(90)
Words w/Variant Plurals	0.33***(117)	0.37***(117)	0.51***(114)	0.30***(90)
Multisyllabic Words	0.61***(117)	0.60***(117)	0.60***(114)	0.41***(90)
Words w/Common Prefixes & Suffixes	0.58***(117)	0.63***(117)	0.67***(114)	0.37***(90)
Words w/Consonant Trigraphs	0.50***(117)	0.57***(117)	0.61***(114)	0.30***(90)
Two-Syllable Words w/Diphthongs	0.57***(116)	0.55***(116)	0.56***(113)	0.41***(90)
Words w/Irregular Vowel Patterns (ou, er, ie, ei)	0.56***(115)	0.58***(115)	0.59***(112)	0.42***(90)
CCVC, CCCVCC, & CCCVCC Words w/Inflections	0.42***(115)	0.54***(115)	0.51***(112)	0.20(90)
Words w/“ch” pronounced as /k/	0.53***(115)	0.64***(115)	0.63***(112)	0.37***(90)
Words w/“ive,” “ous,” & “ious” Endings	0.54***(114)	0.63***(113)	0.61***(110)	0.40***(89)
Words w/Irregular Vowel Patterns (ea, eau)	0.47***(114)	0.53***(113)	0.52***(110)	0.19(89)
Third-Grade High-Frequency Words	0.48***(114)	0.56***(113)	0.55***(110)	0.36***(89)

Note: WRD5 = Word Reading & Decoding Form 5; ORF= Oral Reading Fluency; RTF = Retell Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

(continued)

**Table 19***Correlations Among DIBELS Measures and WRD5 Sections (cont.)*

Section	RTF MOY	RTF EOY	WUF BOY	WUF MOY	WUF EOY
Real Compound Words	0.23*(92)	0.32**(91)	0.20(70)	0.00(70)	0.13(68)
Nonsense Compound Words	0.17(92)	0.26*(91)	0.14(70)	0.09(70)	0.05(68)
Words w/Possessives	0.26*(92)	0.26*(91)	0.09(70)	0.22(70)	0.12(68)
Words w/Contractions	0.04(92)	0.16(91)	-0.03(70)	0.00(70)	0.06(68)
Words w/Silent Letters	0.27**(91)	0.37***(89)	0.16(70)	0.13(70)	0.27*(68)
Words w/Variant Plurals	0.26*(91)	0.31**(89)	0.21(70)	-0.08(70)	0.15(68)
Multisyllabic Words	0.35***(91)	0.35***(89)	0.19(70)	0.19(70)	0.19(68)
Words w/Common Prefixes & Suffixes	0.33**(91)	0.33**(89)	0.17(70)	-0.03(70)	0.19(68)
Words w/Consonant Trigraphs	0.32**(91)	0.33**(89)	0.11(70)	0.05(70)	0.06(68)
Two-Syllable Words w/Diphthongs	0.40***(91)	0.39***(89)	0.20(70)	0.21(70)	0.28*(68)
Words w/Irregular Vowel Patterns (ou, er, ie, ei)	0.37***(91)	0.39***(89)	0.09(70)	-0.01(70)	0.23(68)
CCCVC, CCCVCC, & CCCVCC Words w/Inflections	0.21*(91)	0.19(89)	0.11(70)	-0.02(70)	0.06(68)
Words w/“ch” pronounced as /k/	0.45***(91)	0.33**(89)	0.01(70)	-0.04(70)	0.17(68)
Words w/“ive,” “ous,” & “ious” Endings	0.35***(89)	0.38***(87)	0.10(70)	0.00(70)	0.18(68)
Words w/Irregular Vowel Patterns (ea, eau)	0.26*(89)	0.23*(87)	-0.08(70)	-0.13(70)	0.08(68)
Third-Grade High-Frequency Words	0.38***(89)	0.36***(87)	0.18(70)	0.17(70)	0.15(68)

Note: WRD5 = Word Reading & Decoding Form 5; RTF = Retell Fluency; WUF = Word Use Fluency; BOY = Beginning of Year; MOY = Middle of Year; EOY = End of Year; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

**Table 20***Model Fit Statistics for Acadience Reading Diagnostic PA & WRD*

Form	$\chi^2$ (df)	p-value	CFI	RMSEA
PA	91.52 (32)	<.001	.92	.06
WRD1	18.14 (9)	<.05	.99	.05
WRD2	134.86 (49)	<.001	.91	.06
WRD3	324.95 (146)	<.001	.88	.05
WRD4	184.89 (63)	<.001	.91	.07
WRD5	280.60 (103)	<.001	.89	.06

Note: PA = Phonemic Awareness; WRD = Word Reading & Decoding Form; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation.

**Table 21***Confirmatory Factor Analysis Results for Acadience Reading Diagnostic PA & WRD Sections*

Acadience Reading Diagnostic Sections	Standardized Path Coefficient	Squared Multiple Correlation
<b>Phonemic Awareness (PA)</b>		
A. Blending Word Parts	0.86	.74
a1. Blending Compound Words	0.75	.56
a2. Blending Syllables	0.74	.55
B. Segmenting Word Parts	0.58	.34
b1. Segmenting Compound Words	0.84	.71
b2. Segmenting Syllables	0.75	.56
C. Blending Phonemes	0.98	.96
c1. Blending Two-Phoneme Words	0.87	.76
c2. Blending Three-Phoneme Words	0.83	.69
D. Producing Initial and Final Sounds	0.99	.98
d1. Initial Sounds	0.74	.55
d2. Final Sounds	0.73	.53
E. Segmenting Phonemes	0.88	.77
e1. Segmenting Two-Phoneme Words	0.87	.76
e2. Segmenting Three-Phoneme Words	0.82	.67
e3. Segmenting Four-Phoneme Words w/Blends	0.46	.21
<b>Word Reading and Decoding Form 1 (WRD1)</b>		
A. Letter-Sound Correspondence	0.83	.69
B1. VC & CVC words (continuous) (Real)	0.95	.90
B2. VC & CVC words (continuous) (Nonsense)	0.93	.86
C1. CVC words (stop) (Real)	0.93	.86
C2. CVC words (stop) (Nonsense)	0.93	.86
D. Pre-Primer High-Frequency Words	0.82	.67
E. Sentences	0.96	.92

*Note:* All path coefficients are statistically significant at the  $p < .001$  level. Sentences were analyzed as a continuous variable.

(continued)

**Table 21***Confirmatory Factor Analysis Results for Acadience Reading Diagnostic PA & WRD Sections (cont.)*

Acadience Reading Diagnostic Sections	Standardized Path Coefficient	Squared Multiple Correlation
<b>Word Reading and Decoding Form 2 (WRD2)</b>		
A	0.97	.94
A1. VCC & CVCC Words (continuous) (Real)	0.86	.74
A2. VCC & CVCC Words (continuous) (Nonsense)	0.85	.72
B	0.96	.92
B1. CVCC Words (stop) (Real)	0.92	.85
B2. CVCC Words (stop) (Nonsense)	0.86	.74
C	0.81	.66
C1. Double Final Consonant Words (Real)	0.81	.66
C2. Double Final Consonant Words (Nonsense)	0.85	.72
D	0.92	.85
D1. CCVC Words (Real)	0.93	.86
D2. CCVC Words (Nonsense)	0.88	.77
E	0.95	.90
E1. CCVCC, CCCVC & CCCVCC Words (Real)	0.90	.81
E2. CCVCC, CCCVC & CCCVCC Words (Nonsense)	0.83	.69
F. “y” Vowel Words	0.77	.59
G. Primer High-Frequency Words	0.82	.67
H. Sentences	0.94	.88
h1	0.70	.49
h2	0.83	.69
h3	0.78	.61
h4	0.81	.66
h5	0.85	.72

Note: All path coefficients are statistically significant at the  $p < .001$  level. Sentences were analyzed as a continuous variable.

(continued)



**Table 21**

*Confirmatory Factor Analysis Results for Acadience Reading Diagnostic PA & WRD Sections (cont.)*

Acadience Reading Diagnostic Sections	Standardized Path Coefficient	Squared Multiple Correlation
<b>Word Reading and Decoding Form 3 (WRD3)</b>		
A	0.86	.74
A1. Consonant Digraph Words (Real)	0.94	.88
A1. Consonant Digraph Words (Nonsense)	0.85	.72
B. Contractions	0.76	.58
C. Words with Suffixes/Plurals	0.76	.58
D	0.79	.62
D1. One-Syllable Words w/R-Controlled Vowels (Real)	0.99	.98
D2. One-Syllable Words w/R-Controlled Vowels (Nonsense)	0.75	.56
E	0.90	.81
E1. VCe and CVCe Words (Real)	0.90	.81
E2. VCe and CVCe Words (Nonsense)	0.64	.41
F	0.73	.53
F1. One-Syllable Words w/L-Controlled Vowels (Real)	0.81	.66
F2. One-Syllable Words w/L-Controlled Vowels (Nonsense)	0.81	.66
G. Words w/Hard and Soft “c”	0.78	.61
H. Words w/Hard and Soft “g”	0.80	.64
I	0.85	.72
I1. Words Beginning with “qu” (Real)	0.90	.81
I2. Words Beginning with “qu” (Nonsense)	0.68	.46
J	0.96	.92
J1. Compound Words (Real)	0.88	.77
J2. Compound Words (Nonsense)	0.88	.77
K. One-syllable Words w/Vowel Digraphs	0.91	.83
L. One-syllable Words w/Vowel Diphthongs	0.85	.72
M. First-Grade High-Frequency Words	0.91	.83
N. Sentences	0.96	.92
n1	0.90	.81
n2	0.79	.62
n3	0.86	.74
n4	0.88	.77
n5	0.88	.77

*Note:* All path coefficients are statistically significant at the  $p < .001$  level. Sentences were analyzed as a continuous variable.

(continued)

**Table 21**

*Confirmatory Factor Analysis Results for Acadience Reading Diagnostic PA & WRD Sections (cont.)*

Acadience Reading Diagnostic Sections	Standardized Path Coefficient	Squared Multiple Correlation
<b>Word Reading and Decoding Form 4 (WRD4)</b>		
A. Words with Medial Double Consonants	0.83	.69
B. Possessives	0.54	.29
C. Contractions	0.72	.52
D	0.94	.88
D1. Compound Words (Real)	0.82	.67
D2. Compound Words (Nonsense)	0.89	.79
E	0.97	.94
E1. Two-Syllable Words w/R-Controlled Vowels (Real)	0.87	.76
E2. Two-Syllable Words w/R-Controlled Vowels (Nonsense)	0.86	.74
F. Words with Consonant Digraphs	0.86	.74
G. Two-syllable Words w/Short & Long Vowel Patterns & Inflections	0.89	.79
H. Two-syllable Words with Vowel Digraphs & Inflections	0.85	.72
I. Words with Common Prefixes & Suffixes	0.91	.83
J. Multisyllabic Words	0.82	.67
K. Second-Grade High-Frequency Words	0.87	.76
L. Sentences	0.97	.94
11	0.44	.19
12	0.91	.83
13	0.91	.83
14	0.80	.64
15	0.89	.79

*Note:* All path coefficients are statistically significant at the  $p < .001$  level. Sentences were analyzed as a continuous variable.

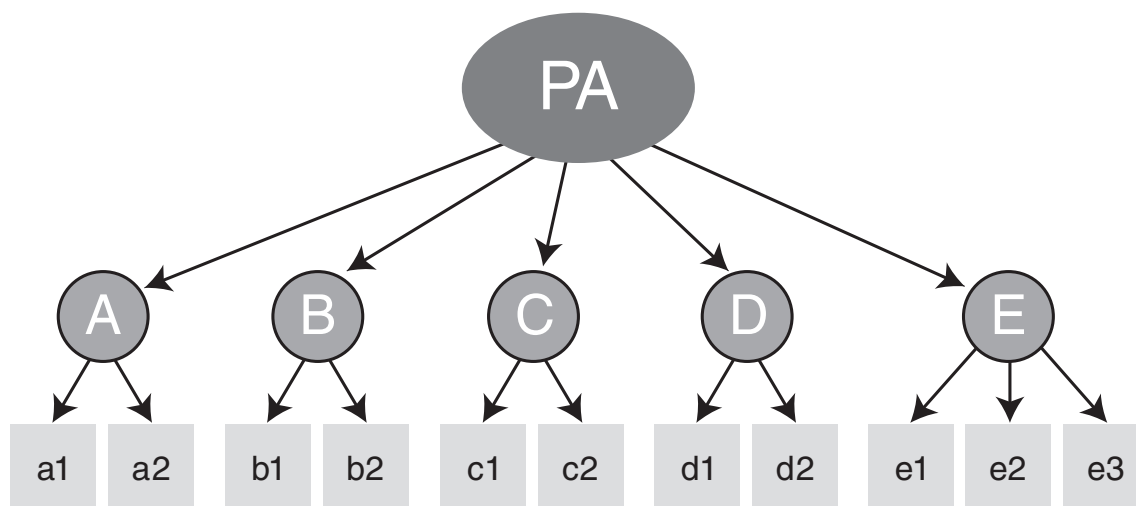
(continued)

**Table 21***Confirmatory Factor Analysis Results for Acadience Reading Diagnostic PA & WRD Sections (cont.)*

Acadience Reading Diagnostic Sections	Standardized Path Coefficient	Squared Multiple Correlation
<b>Word Reading and Decoding Form 5 (WRD5)</b>		
A	0.94	.88
A1. Compound Words (Real)	0.92	.85
A2. Compound Words (Nonsense)	0.91	.83
B. Possessives	0.71	.50
C. Contractions	0.71	.50
D. Words w/Silent Letters	0.89	.79
E. Variant Plurals	0.70	.49
F. Multisyllabic Words	0.89	.79
G. Words with Common Prefixes & Suffixes	0.90	.81
H. Words w/Consonant Trigraphs	0.85	.72
I. Two-syllable Words w/Diphthongs	0.93	.86
J. Words with low-frequency Vowel Patterns (ou, er, ie, ei)	0.88	.77
K. CCCVC, CCCVCC, & CCCVCCC Words w/inflections	0.80	.64
L. Words with “ch” pronounced as /k/	0.82	.67
M. Words with “ive,” “ous,” & “ious” Endings	0.87	.76
N. Words w/low-frequency Vowel Patterns (ea, eau)	0.71	.50
O. Third-Grade High-Frequency Words	0.91	.83
P. Sentences	0.98	.96

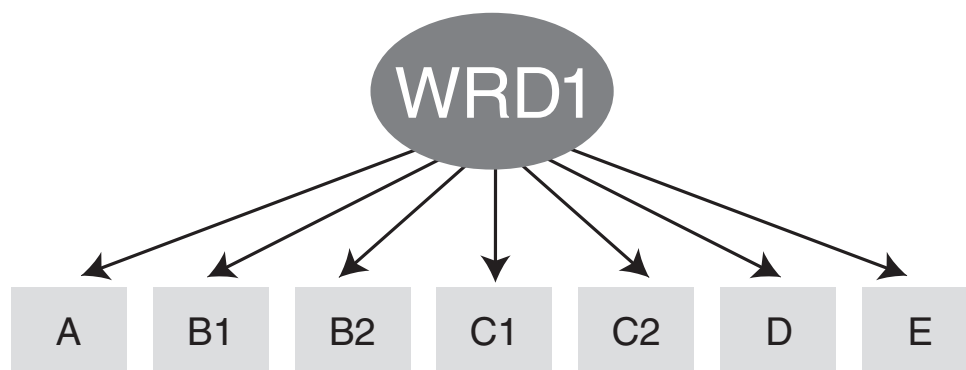
*Note:* All path coefficients are statistically significant at the  $p < .001$  level. Sentences were analyzed as a continuous variable.

**Figure 1**  
*Factor Model for Acadience Reading Diagnostic Phonemic Awareness (PA)*



*Note:* A = blending word parts; B = segmenting word parts; C = blending phonemes; D = producing initial and final sounds; E = segmenting phonemes.

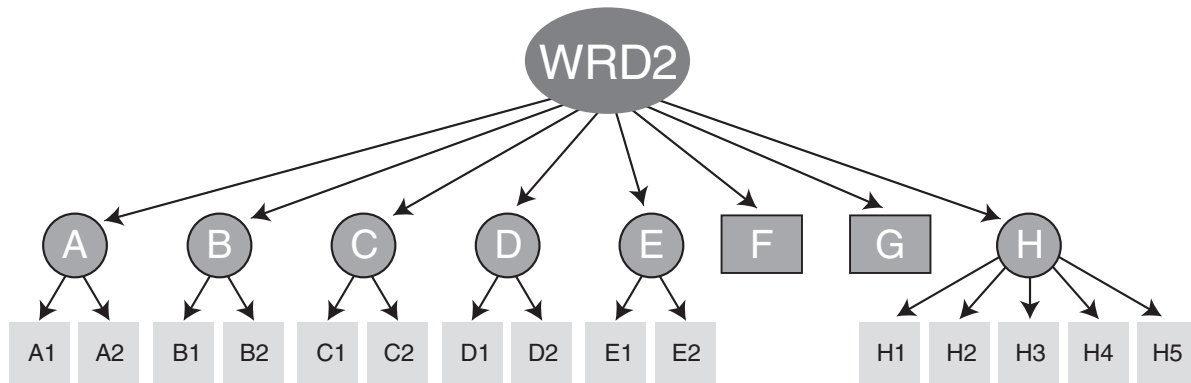
**Figure 2**  
*Factor Model for Acadience Reading Diagnostic Word Reading and Decoding Form 1 (WRD1)*



*Note:* A = letter-sound correspondence; B1 = VC\* & CVC words (continuous) (real); B2 = VC & CVC words (continuous) (nonsense); C1 = CVC words (stop) (real); C2 = CVC words (stop) (nonsense); D = pre-primer high-frequency words; E = sentences. \*V = vowel and C = consonant.

**Figure 3**

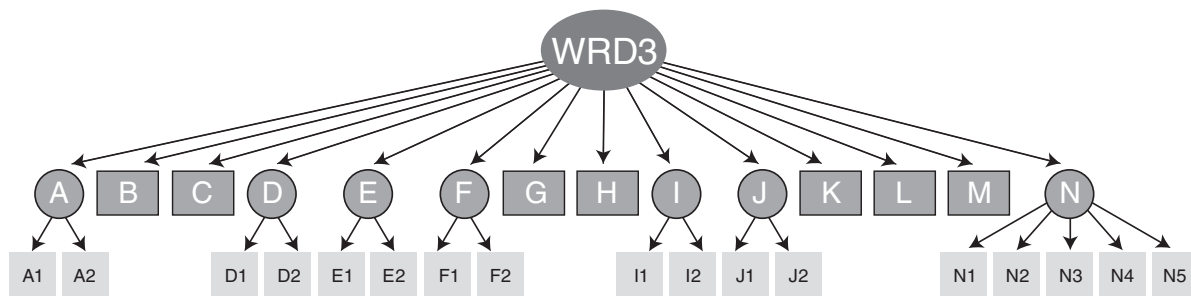
*Factor Model for Acadience Reading Diagnostic Word Reading and Decoding Form 2 (WRD2)*



*Note:* A1 = VCC\* & CVCC words (continuous) (real); A2 = VCC & CVCC words (continuous) (nonsense); B1 = CVCC Words (stop) (real); B2 = CVCC words (stop) (nonsense); C1 = double final consonant words (real); C2 = double final consonant words (nonsense); D1 = CCVC words (real); D2 = CCVC words (nonsense); E1 = CCVCC, CCCVC, & CCCVCC words (real); E2 = CCVCC, CCCVC, & CCCVCC words (nonsense); F = “y” vowel words; G = primer high-frequency words; H = sentences. \*V = vowel and C = consonant.

**Figure 4**

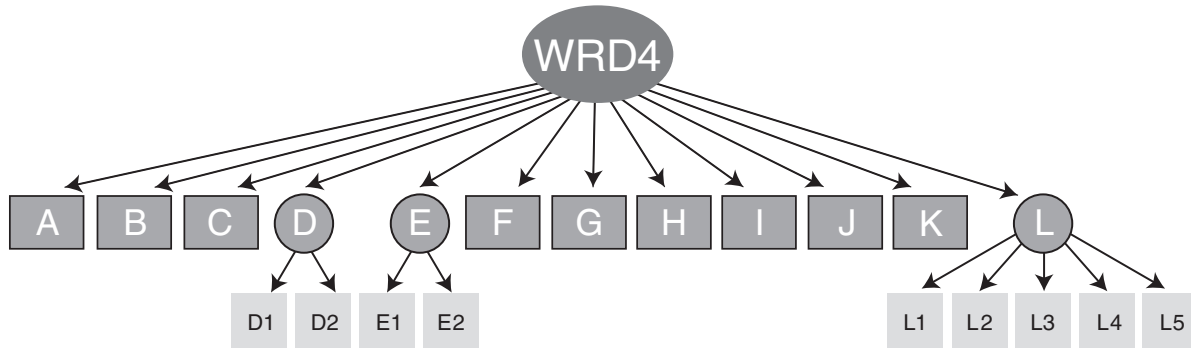
*Factor Model for Acadience Reading Diagnostic Word Reading and Decoding Form 3 (WRD3)*



*Note:* A1 = consonant digraph words (real); A2 = consonant digraph words (nonsense); B = contractions; C = words with suffixes/plurals; D1 = one-syllable words with R-controlled vowels (real); D2 = one-syllable words with R-controlled vowels (nonsense); E1 = VCe\* and CVCe words (real); E2 = VCe and CVCe words (nonsense); F1 = one-syllable words with L-controlled vowels (real); F2 = one-syllable words with L-controlled vowels (nonsense); G = words with hard and soft “c”; H = words with hard and soft “g”; I1 = words beginning with “qu” (real); I2 = words beginning with “qu” (nonsense); J1 = compound words (real); J2 = compound words (nonsense); K = one-syllable words with vowel digraphs; L = one-syllable words with vowel diphthongs; M = first-grade high-frequency words; N = sentences. \*V = vowel and C = consonant.

**Figure 5**

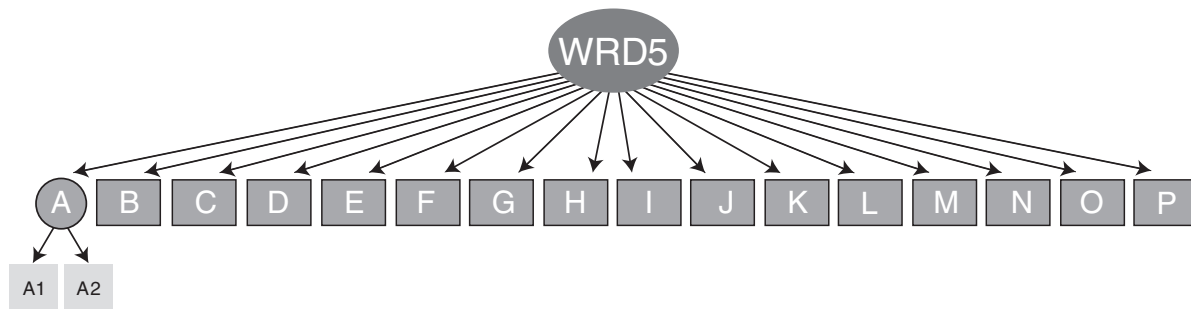
*Factor Model for Acadience Reading Diagnostic Word Reading and Decoding Form 4 (WRD4)*



*Note:* A = words with medial double consonants; B = possessives; C = contractions; D1 = compound words (real); D2 = compound words (nonsense); E1 = two-syllable words with R-controlled vowels (real); E2 = two-syllable words with R-controlled vowels (nonsense); F = words with consonant digraphs; G = two-syllable words with short and long vowel patterns and inflections; H = two-syllable words with vowel digraphs and inflections; I = words with common prefixes and suffixes; J = multisyllabic words; K = second-grade high-frequency words; L = sentences.

**Figure 6**

*Factor Model for Acadience Reading Diagnostic Word Reading and Decoding Form 5 (WRD5)*



*Note:* A1 = compound words (real); A2 = compound words (nonsense); B = possessives; C = contractions; D = words with silent letters; E = variant plurals; F = multisyllabic words; G = words with common prefixes and suffixes; H = words with consonant trigraphs; I = two-syllable words with diphthongs; J = words with low-frequency vowel patterns (ou, er, ie, ei); K = CCCVC\*, CCCVCC, & CCCVCCC words with inflections; L = words with “ch” pronounced as /k/; M = words with “ive,” “ous,” and “ious” endings; N = words with low-frequency vowel patterns (ea, eau); O = third-grade high-frequency words; P = sentences. \*V = vowel and C = consonant.

**Table 22***Acadience Reading Diagnostic WRD Quick Screen Difficulty Parameters and Plots from an Item Response Theory Analysis*

Difficulty Parameters and Plots by Grade								
Item	Kindergarten		First Grade		Second Grade		Third Grade	
In	1.1563		-1.3763		-4.0482		-3.3722	
Az	1.2324		-1.1843		-3.5377		-2.8949	
Ram	1.7457		-1.1843		-3.1954		-3.0808	
Nep	1.8423		-0.4977		-2.4368		-2.0302	
Got	1.4759		-1.1843		-4.0482		-3.2737	
Taf	1.7457		-1.2808		-3.3057		-2.8051	
Raft	1.9425		-1.2808		-3.3057		-2.6322	
Nomp	2.6377		-0.3038		-1.5325		-1.3311	
Cast	1.9425		-0.9890		-3.6594		-3.2737	
Gipt	2.3856		-0.1131		-1.6539		-1.6571	
Bell	1.6526		-1.0870		-3.9146		-3.3722	
Rezz	1.7457		-0.2081		-2.1250		-2.3140	
Skip	2.2679		-0.7922		-3.7851		-3.0808	
Fleb	3.2303		-0.0190		-1.1945		-1.1812	
Split	2.9163		-0.2081		-2.2763		-2.0982	
Glusk	2.9163		-0.4004		-1.7165		-1.4891	
Misty	3.2303		-0.3038		-2.1996		-2.4685	
Dry	3.5955		-0.6937		-3.1954		-3.1765	
Whip	3.0681		-0.8907		-1.9819		-2.6322	
Nuth	2.9163		-0.4977		-2.5208		-1.0383	
Isn't	3.4050		-0.3038		-2.8864		-2.8949	
Staying	3.2303		-0.6937		-3.6594		-3.0808	
Far	3.2303		-0.4977		-2.8864		-2.6322	
Derp	4.3246		0.7918		-1.1945		-1.3828	
Cave	3.8063		-0.5955		-3.6594		-2.5492	
Kete	4.3246		0.7918		-0.9359		0.0407	
Cold	3.2303		-0.7922		-3.3057		-3.2737	
Nalt	4.6679		0.9660		-0.7402		-0.9920	
Cod	3.2303		-0.6937		-1.4737		-1.4891	
Center	4.3246		0.4384		-1.7805		-2.5492	
Gas	--	--	-1.0870		-3.3057		-3.1765	
Gem	--	--	2.6673		0.5500		0.3130	
Quit	--	--	0.4384		-0.6454		-0.3934	
Queep	--	--	0.7042		-1.4159		-1.1329	
Anybody	--	--	-0.4004		-3.1954		-2.8051	

Note: Sample sizes by grade: Kindergarten = 37; First Grade = 58; Second Grade = 120; Third Grade = 126. A one-parameter Rasch model was fit to each grade separately. Difficulty parameters represent an estimate of the ability level required compared to all other items on the WRD QS. A plot shaded to the left side of the bar indicates an easier word, and a plot shaded toward the right side of the bar indicates a more-difficult word.

(continued)

**Table 22**

*Acadience Reading Diagnostic WRD Quick Screen Difficulty Parameters and Plots from an Item Response Theory Analysis (cont.)*

Difficulty Parameters and Plots by Grade								
Item	Kindergarten		First Grade	Second Grade		Third Grade		
Antcakes	--	--	-0.4004		-2.3553		-3.0808	
Wait	--	--	-0.4977		-2.5208		-2.4685	
Join	--	--	0.4384		-2.4368		-2.6322	
Supper	--	--	1.0529		-0.3250		-0.6830	
Brother's	--	--	-0.5955		-3.1954		-3.2737	
She's	--	--	-0.7922		-3.3057		-3.1765	
Handprint	--	--	0.1665		-2.6077		-2.7175	
Outself	--	--	-0.1131		-2.1996		-2.7175	
Orbit	--	--	0.4384		-2.6077		-2.6322	
Snarper	--	--	1.1397		-0.6926		-0.5157	
Gopher	--	--	2.7866		0.6834		0.7102	
Making	--	--	-0.0190		-3.5377		-3.0808	
Seated	--	--	1.4895		-1.3033		-1.8995	
Disinterest	--	--	2.6673		0.9114		0.4305	
Chocolate	--	--	0.2579		-3.0889		-2.8051	
Backyard	--	--	-0.0190		-3.1954		-2.9869	
Dashway	--	--	0.6161		-1.5926		-1.3828	
Town's	--	--	0.3485		-2.8864		-2.7175	
You've	--	--	0.4384		-2.2763		-2.8051	
Lamb	--	--	0.8790		-2.3553		-1.6571	
Spy/Spies	--	--	1.2267		-0.8370		-2.0982	
Fertilizer	--	--	3.0459		0.1573		-0.3131	
Explanation	--	--	3.3438		0.0705		0.1573	
Stitch	--	--	0.6161		-1.7165		-2.0982	
Poison	--	--	2.5533		-0.6454		-1.3311	
Ferry	--	--	1.9439		-0.3250		-0.7257	
Rein	--	--	2.6673		1.0053		0.3130	
Niece	--	--	2.9124		0.2876		0.3130	
Scrambled	--	--	0.9660		-1.7805		-2.0302	
Chord	--	--	3.9221		2.4328		1.1358	
Various	--	--	3.5138		1.0529		-0.1547	
Olive	--	--	2.1362		-0.3699		-0.9012	
Marvelous	--	--	1.7585		-1.0889		-1.5439	
Dread	--	--	2.3381		-0.5522		-1.4891	
Beau	--	--	4.9422		3.6285		3.0821	

Note: Sample sizes by grade: Kindergarten = 37; First Grade = 58; Second Grade = 120; Third Grade = 126. A one-parameter Rasch model was fit to each grade separately. Difficulty parameters represent an estimate of the ability level required compared to all other items on the WRD QS. A plot shaded to the left side of the bar indicates an easier word, and a plot shaded toward the right side of the bar indicates a more-difficult word.



**Table 23***Acadience Reading Diagnostic PA Phase 2 Questionnaire Ratings by Examiners and Coordinators*

Item	N	Mean Rating (SD)
1. The administration and scoring rules for Acadience Reading Diagnostic Phonemic Awareness (PA) were easy to follow.	25	4.9(.95)
2. The PA materials were organized appropriately for efficient administration.	24	5.0(.69)
3. I believe that the number, type, and sequence of practice items on PA were sufficient to ensure that the students understood the tasks.	25	5.2(.62)
4. I believe that the PA tasks were appropriate for the age/grade level of the students I tested.	25	5.3(.56)
5. All items included within PA were appropriate (e.g., at Kindergarten grade level).	25	5.3(.56)
6. I believe that the information obtained from PA accurately reflect students' skill level.	25	5.2(.58)
7. I would suggest the use of PA to others for gaining additional information about students struggling with early literacy skills/struggling readers.	24	5.2(.83)
8. Acadience Reading Diagnostic PA was a good way to assess students' phonemic awareness strengths and weaknesses.	24	5.3(.62)
9. Overall, PA would be beneficial for planning reading instruction for students struggling with early literacy skills/struggling readers.	25	5.1(.73)

Note: 1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Somewhat Agree; 5 = Agree; 6 = Strongly Agree.

**Table 24.***Acadience Reading Diagnostic WRD QS Phase 2 Questionnaire Ratings by Examiners and Coordinators*

Item	N	Mean Rating (SD)
1. The administration and scoring rules for the Acadience Reading Diagnostic Word Reading and Decoding (WRD) Quick Screen were easy to follow.	23	4.6(1.16)
2. The WRD Quick Screen materials were organized appropriately for efficient administration.	23	4.6(1.20)
3. I believe that the information obtained from the WRD Quick Screen accurately reflects students' skill level.	22	4.4(1.22)
4. I would suggest the use of the WRD Quick Screen to others for gaining additional information about struggling readers.	23	4.4(1.23)
5. The WRD Quick Screen was a good way to assess students' reading strengths and weaknesses.	22	4.4(1.18)
6. I believe the WRD Quick Screen will be helpful in targeting other portions of WRD to administer.	23	4.4(1.16)
7. Overall, the WRD Quick Screen would be beneficial for planning reading instruction for struggling readers.	23	4.3(1.26)

Note: 1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Somewhat Agree; 5 = Agree; 6 = Strongly Agree.

**Table 25***Acadience Reading Diagnostic WRD Phase 2 Questionnaire Ratings by Examiners and Coordinators*

Item	N	Mean Rating (SD)
1. The administration and scoring rules for the Acadience Reading Diagnostic Word Reading and Decoding (WRD) measures were easy to follow.	20	4.9(.85)
2. The WRD materials were organized appropriately for efficient administration.	20	5.0(.69)
3. I believe that the number, type, and sequence of practice items on WRD were sufficient to ensure that the students understood the task.	19	5.0(.82)
4. I believe that the WRD tasks were appropriate for the age/grade level of the students I tested.	20	4.8(.85)
5. All items included within WRD were appropriate, meaning that all words seemed at the appropriate grade level assigned to them (e.g., words on WRD probe 5 are approximately third grade level).	19	4.8(.63)
6. I believe that the information obtained from WRD accurately reflect students' skill level.	19	4.7(1.16)
7. I would suggest the use of WRD to others for gaining additional information about struggling readers.	19	4.8(1.32)
8. WRD measures were a good way to assess students' reading strengths and weaknesses.	19	4.9(1.10)
9. Overall, WRD measures would be beneficial for planning reading instruction for struggling readers.	19	4.9(.91)

Note: 1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Somewhat Agree; 5 = Agree; 6 = Strongly Agree.

**Table 26***Acadience Reading Diagnostic Phase 2 Questionnaire Ratings by Teachers*

Item	N	Mean Rating (SD)
1. The Acadience Reading Diagnostic measures adequately cover the range of early literacy and reading skills in grades K-3.	9	5.0(.87)
2. Most teachers would find the Acadience Reading Diagnostic measures useful for assessing reading difficulties.	9	4.7(1.41)
3. I believe the Acadience Reading Diagnostic Phonemic Awareness (PA) measure would be helpful in planning reading instruction for phonemic awareness.	9	4.9(1.05)
4. I believe the Acadience Reading Diagnostic Word Reading and Decoding (WRD) measures would be helpful in planning reading instruction for phonics (alphabetic principle/word reading and decoding).	8	5.1(1.13)
5. I would suggest the use of Acadience Reading Diagnostic measures to other teachers for obtaining further information about struggling readers.	9	4.7(1.58)
6. I would be willing to use the Acadience Reading Diagnostic measures in my classroom with my struggling readers.	8	4.4(1.51)
7. I like the procedures used for the Acadience Reading Diagnostic measures.	9	4.4(1.67)
8. The Acadience Reading Diagnostic measures are a good way to assess students' reading strengths and weaknesses.	8	4.9(1.36)
9. Overall, the Acadience Reading Diagnostic measures would be beneficial for planning reading instruction for struggling readers.	8	4.8(1.28)

Note: 1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Somewhat Agree; 5 = Agree; 6 = Strongly Agree.

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