Field Study of Reliability and Validity of the Fountas & Pinnell Benchmark Assessment Systems 1 and 2

INTRODUCTION

The Fountas & Pinnell Benchmark Assessment System is a formative reading assessment comprising 58 high-quality original titles, or “little books,” divided evenly between fiction and nonfiction. The assessment measures decoding, fluency, vocabulary, and comprehension skills for students in kindergarten through 8th grade. The set of books, recording forms, and other materials is an assessment tool for teachers, literacy specialists, and clinicians to use in determining students’ developmental reading levels for the purpose of informing instruction and documenting reading progress.

To determine whether the Fountas & Pinnell Benchmark Assessment System is a valid assessment of a student’s reading level, a formative evaluation was conducted with a broad spectrum of classroom readers in different regions across the United States. This formative evaluation generated ongoing and immediate feedback from field test examiners and readers that was used during the continued development of the program to ensure that it met standards of reliability and validity.

In summary, after two and a half years of editorial development, field testing, and independent data analysis, the Fountas & Pinnell Benchmark Assessment System texts were demonstrated to be both reliable and valid measures for assessing students’ reading levels.

DESCRIPTION OF THE BENCHMARK ASSESSMENT SYSTEM

The Fountas & Pinnell Benchmark Assessment System is aligned with the A–Z book levels of the Fountas & Pinnell Leveled Text Gradient. System 1 represents levels A–N on the Fountas & Pinnell Text Gradient and encompasses kindergarten through grade 2. System 2 represents Levels L–Z on the Fountas & Pinnell Text Gradient and encompasses grades 3 through 8. Recognizing the critical junctures in a child's literacy development between grade 2 and grade 3, the Fountas & Pinnell Benchmark Assessment System levels L, M, and N offer twice as many books (four books per level). The representations of books in Benchmark Systems 1 & 2 and their corresponding grade levels are depicted in Figure 1.

PURPOSE

A formative evaluation of the Fountas & Pinnell Benchmark Assessment System was conducted to ensure that (1) the leveling of the texts is reliable and (2) the reading scores are valid and accurately identify each student’s reading level.

The purpose of the study was twofold. The first was to examine every book, at every level, for the reliability of its designated level within a broader literacy framework and across corresponding fiction and nonfiction genres. That is, is the readability of the books consistent across the fiction and nonfiction domains? For example, are the level G fiction and nonfiction books not only typical level G books, but do corresponding fiction and nonfiction books at this level have the same degree of readability?

The second purpose of the evaluation was to determine the correlation between the Fountas & Pinnell Benchmark Assessment System and other reading assessments. That is, to what extent is the Fountas & Pinnell Benchmark Assessment System associated with other valid reading assessments?

RESEARCH QUESTIONS

In order to determine the reliability and validity of the Fountas & Pinnell Benchmark Assessment System, the following three research questions guided the formative evaluation:

Research Question 1
• How reliable is the Fountas & Pinnell Benchmark Assessment System?
  That is, how consistent and stable is the information derived from the reading books?

• Does each book of the Fountas & Pinnell Benchmark Assessment System consistently occupy the same position on the gradient of readability, based on multiple readings by age-appropriate students? That is, does each book, level A–Z represent
a degree of increased difficulty that is consistent with other Fountas and Pinnell leveled texts?

**Research Question 2**

- To what extent are the gradients of difficulty for fiction and nonfiction books aligned within the Fountas & Pinnell Benchmark Assessment System? Do fiction and nonfiction books represent similar levels of difficulty within similar levels of reading?

**Research Question 3**

- To what extent is the Fountas & Pinnell Benchmark Assessment System associated with other established reading assessments?
  - What is the convergent validity between the System 1 and Reading Recovery® assessment texts?
  - What is the convergent validity between the System 2 and the Slosson Oral Reading Test—Revised (SORT-R3) and the Degrees of Reading Power® (DRP)?

**METHODS**

**Formative Evaluation**

In order to determine reliability and validity, a research project manager designed a formative evaluation of the program. Formative evaluation is a method of analyzing the effectiveness of a program in its development stages. In this evaluation of the Fountas & Pinnell Benchmark Assessment System, the field data were collected systematically and analyzed on an ongoing basis to ascertain the program’s attainment of its objectives. Interim reports were developed and used as a basis for determining the soundness, complexities, and utility of the program. Because the process incorporated ongoing feedback gathered by field-test examiners, the program authors and developers were able to make informed decisions regarding adjustments and refinements. At the conclusion of the field study, an independent data-analysis team was brought in to evaluate the program’s reliability and validity.

This formative research was conducted in two phases. Phase I of the study addressed research questions 1 and 2; Phase II addressed research question 3. Prior to the formative evaluation, an editorial process was used to establish the text leveling. This editorial development process is discussed next.

**EDITORIAL PROGRAM DEVELOPMENT**

**Book Development**

Development of the texts for the Fountas & Pinnell Benchmark Assessment System was closely supervised by Irene Fountas and Gay Su Pinnell, creators of the A–Z Text Gradient, to ensure book development met their strict leveling protocols. Attention was paid to ensure the texts reflected the specific characteristics of the designated levels outlined in *Leveled Books K–8: Matching Texts to Readers for Effective Teaching* (Fountas & Pinnell, 2006a). At every level, with both fiction and nonfiction, the Fountas & Pinnell Benchmark Assessment System books are distinguished by their writing quality, compelling content, use of universal concepts, and visually strong illustrations. Text length is appropriate for grade level. In *System 1*, used for grades K–2, text levels A–N are 16 pages in length. In *System 2*, used for grades 3–8, text levels I–Z are four pages in length. Each *System* provides the teacher, evaluator, or clinician an appropriate measure to assess a student’s reading accuracy, fluency, and comprehension level for informing instruction.

**Leveling Books**

A gradient of text is defined by Fountas and Pinnell (2006a) as “a varied collection organized into approximate levels of difficulty. Texts that increase demands in terms of concept, theme, vocabulary, length, and so on, are more difficult” (p. 84). As part of the editorial development process, Fountas and Pinnell selected two separate teams of classroom teachers, one team to vet books for *System 1*, and the other team to vet books for *System 2*. These educators were chosen based on their experience in teaching with Fountas and Pinnell leveled books. These leveling teams met on three occasions to determine the initial text levels. The program’s authors reviewed this initial leveling and made revisions to texts to arrive at a complete test set for field testing.

**RESEARCH METHODS**

**Research Participants**

**Students**

Field testing included a total of 497 students spanning grades K-8. Field testing of *System 1* included 252 students and *System 2* included 245 students. School sites from which these students were drawn were socioeconomically, ethnically, and geographically diverse. The research goal was to identify “typical students.” Accordingly, students were selected on the basis of their ability to read and understand texts that were written approximately at grade level or above. Participants were also proficient speakers of English. Each field test examiner determined an individual student’s eligibility after discussing his or her reading profile with their respective teachers.

**Field-Test Examiners**

Thirteen field-test examiners were selected. All field-test examiners were educators who had extensive training in administering Reading Running Records (Clay, 2002) and in using other forms of benchmark assessments to assess students’ reading levels. Field-test examiners were not affiliated with the field sites and therefore could be objective in both identifying students and in administering assessments. Prior to the
beginning of the field testing, a two-day intensive training session led by the program’s authors, Irene Fountas and Gay Su Pinnell, guided the field-test examiners in the formative evaluation’s protocols and procedures.

**Contexts**

A total of 22 different schools participated in field testing of either System 1 or System 2 (some schools participated in both field tests). Field testing took place across the following geographic regions of the United States:

- Boston Metropolitan area 1 examiner; 1 school
- Providence, Rhode Island 1 examiner; 2 schools
- Houston Metropolitan area 2 examiners; 5 schools
- Los Angeles area 4 examiners; 6 schools
- Columbus, OH, area 3 examiners; 5 schools
- Orlando, FL, area 2 examiners; 3 schools

A second round of field testing for System 2 was conducted in four of the six original geographic locations (Ohio, California, Texas, and Florida).

Because of the increasing diversity of student populations in today’s schools, schools that represented diverse socioeconomic settings (SES) were targeted. These determinations were made by using federal guidelines for categorizing low-, middle-, and high-SES schools. Therefore, students in Phase I and Phase II represented a cross-section of the major regions of the U.S. and diverse socioeconomic levels (see Figure 2).

![Figure 2](image)

<table>
<thead>
<tr>
<th>SCHOOL FIELD SITES</th>
<th>CA</th>
<th>FL</th>
<th>MA</th>
<th>OH</th>
<th>RI</th>
<th>TX</th>
<th>Overall Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>7.3%</td>
<td>22.3%</td>
<td>41%</td>
<td>1.8%</td>
<td>18.5%</td>
<td>34%</td>
<td>20.8%</td>
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<tr>
<td>Asian American &amp; Pacific Islander</td>
<td>5.5%</td>
<td>5.3%</td>
<td>23%</td>
<td>0%</td>
<td>3%</td>
<td>17%</td>
<td>9%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>74%</td>
<td>23%</td>
<td>6%</td>
<td>0%</td>
<td>24%</td>
<td>30%</td>
<td>26%</td>
</tr>
<tr>
<td>White</td>
<td>11.7%</td>
<td>45.7%</td>
<td>29%</td>
<td>92.6%</td>
<td>54%</td>
<td>19%</td>
<td>42%</td>
</tr>
<tr>
<td>Multiracial/Other</td>
<td>1.5%</td>
<td>3.7%</td>
<td>1%</td>
<td>5.6%</td>
<td>0.5%</td>
<td>0%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

**Figure 3**

**PROCEDURES AND MATERIALS**

**Phase I of the Formative Evaluation**

Phase I of the study examined research questions 1 and 2, which respectively addressed the consistency of the vertical gradient of each level and the horizontal gradient within each level for both fiction and nonfiction books. The books were tested in the following sequence:

1. Fiction, System 1, levels A–N (grades K–2)
2. Nonfiction, System 1, levels A–N (grades K–2)
3. Fiction, System 2, levels L–Z (grades 3–8)
4. Nonfiction, System 2, levels L–Z (grades 3–8)

**Procedures for Assessment Administration**

Reading data for every student using both fiction and nonfiction books was gathered systematically through a formative evaluation design protocol. After an intensive training session, the field test examiners began working individually at selected school sites during the last quarter of 2006. By conferring with classroom teachers at each site, field test examiners identified eligible students who met the criteria for inclusion in the study (i.e., students who were considered to be “typical” readers according to grade level norms). Below is a list of protocols and procedures followed by each field-test examiner:

**Selecting a starting point for reading**

A Where to Start word list was developed by the program’s authors to assist field-test examiners in quickly placing a student at his or her appropriate reading level. This word list was
administered to all eligible students in their classrooms. Using this as a starting point, the field test examiners readily determined which book they should ask the student to read first.

**Determining a decoding instructional reading level**

Next, field-test examiners assessed each student’s ability to read and comprehend three sequential levels of books in the fiction genre. Specifically, the field-test examiners sought to identify one book for each student that was relatively easy (i.e., the student’s independent reading level); one book that offered just enough difficult vocabulary and/or concepts to make the reading interesting and challenging (i.e., the student's instructional reading level); and a third book that was too challenging to be rewarding (i.e., the student’s hard reading level). Accuracy of reading guidelines, consistent with Fountas and Pinnell’s framework (2006b), is as follows: independent level (95–100 percent accuracy), instructional level (90–94 percent accuracy), and hard level (below 90 percent accuracy).\(^1\)

**Determining comprehension instructional reading level**

Once field-test examiners determined a student’s instructional reading level, they engaged in a comprehension conversation about that particular book. If students were unresponsive or gave an incomplete response, field-test examiners prompted them according to a predetermined set of questions. Next, field-test examiners rated students’ understanding of a text using the Fountas and Pinnell comprehension guidelines (2001, pp. 323–24). The focal areas listed below were rated on a scale from 0–3:

- a. Thinking within the text
- b. Thinking beyond the text
- c. Thinking about the text.

**Assessing fluency**

As Pinnell, Pikulski, Wixson, Campbell, Gough, and Beatty (1995) point out, fluency is an indicator of students’ understanding of text. It is expected students should read along at a reasonable pace when reading at their instructional level. Consistent with Fountas and Pinnell’s fluency assessment guidelines (2001, pp. 491–92), which draw upon the National Assessment of Educational Progress (NAEP) Integrated Reading Performance Record Oral Reading Fluency Scale, the field-test examiners rated readers’ fluency across the following three dimensions. (Note that this scale is applicable only for students in grades 3–6.)

1. Readers phrase, or group words, through intonation, stress, and pauses. They emphasize the beginnings and endings of phrases by the rising and falling of pitch or by pausing.
2. Students adhere to the author’s syntax or sentence structure, reflecting their comprehension.
3. Readers are expressive; their reading reflects feeling, anticipation, and character development.

**Determining the corresponding readability between fiction and nonfiction books**

Finally, the field-test examiners repeated the process described above, with the same students, using nonfiction books. Given that students’ reading levels had been established, the field-test examiners did not need to re-administer the word list test. Field-test examiners began the session reading nonfiction books at the students’ instructional levels. They concluded the session when all three sequential levels of a student’s reading had been ascertained: independent, instructional, and hard.

**Anticipating varying developmental reading patterns**

The research project manager and program developers were aware that ascertaining students’ three sequential reading levels could be a more complex process than the one outlined above. They fully anticipated varying developmental levels and an up-and-down pattern in a child’s reading of progressively more difficult texts. These possibilities were covered extensively during the training session for the field-test examiners. Such patterns could be attributed to a variety of factors, such as classroom instructional emphasis or students’ interest in subject matter, motivation, need for warm-up time, reader fatigue, among other explanatory factors, all of which are beyond the scope of this study. To support ongoing data results, the research project manager provided additional support either by phone or in person throughout the testing process.

**Schedule of Assessment Administration**

The field-test examiners worked on a somewhat staggered schedule. This allowed them to refine the day-to-day practical aspects of the research as needed and to immediately replace any books that tested out of order.

In general, the schedule flowed as indicated in Figure 4.

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\(^1\) Based on feedback of the field testing, new accuracy criteria were established for Benchmark System 2 (levels A–Z) establishing a finer gradient reflection of students’ reading in grades 3 through 8. A discussion of the change and the new accuracy criteria are provided in this report’s section “Formative Program Development” on pages 5–6.
THREE-DAY SCHEDULE FOR FIELD-TEST EXAMINERS

**DAY 1: Fiction Texts**

- Administer word test
- Ascertain instructional, independent, and hard levels with fiction texts
- Work with approximately 12 students

**DAY 2: Nonfiction Texts**

- Work with same students
- Ascertain instructional, independent, and hard levels with nonfiction texts
- Each student should read at least three books

**DAY 3: Creating Additional Data**

- Return to classrooms to obtain data missing because of student absences, school field trips, assemblies, scheduling conflicts with district programs, etc.
- Work with approximately six additional students reading fiction and nonfiction books

Figure 4

Field Testing Documentation

Given the complexity of the assessment process, field-test examiners were responsible for maintaining ongoing detailed records of their findings related to the student’s readings. Documentation was completed on recording forms (see Appendix A for sample) to capture students’ reading accuracy, fluency, and comprehension scores as well as other data. This included recording the book titles—both fiction and nonfiction—that had been read.

Research Debriefings

On a daily basis, the field-test examiners analyzed new data collected in the field and reported back to the research project manager in debriefings by phone and email. These daily debriefings provided an opportunity to take immediate action on revising texts (if a particular book tested poorly, for example).

FORMATIVE PROGRAM DEVELOPMENT

With a formative evaluation process, data analysis was ongoing as well as recursive. Ongoing field data gathered in authentic contexts provided immediate information for adjustments and revisions in the program. As described previously, the research project manager debriefed field-test examiners at the end of each day’s field testing data collection. Based on these data, the research project manager identified patterns both within individual books and across books using the following four categories of text evaluation:

1. Texts that were completely on-target
2. Texts that required minor revisions
3. Texts that required substantive revisions
4. Texts that needed to be replaced altogether.

In December 2006 and January 2007, based on the System 1 field test results, changes were made in the leveling of the texts. For example, the level C fiction book Big Lizard, Little Lizard was replaced by Socks, and the nonfiction text Earthquake was changed from level U to level V. Drawing upon students’ reading data, the research project manager made specific recommendations for the gradient of difficulty represented across several dimensions. One example was modifying the texts to increase their appropriateness for their designated level. These changes included simplifying the specialized vocabulary words in some nonfiction texts or recasting sentences in a particular text to make them either more or less complex. At one point, two books were replaced with more appropriate books.

At the beginning of January 2007, based on the System 2 field test results, major changes were made to specific texts. These changes included modifying vocabulary, sentence complexity, or text selection.

After another round of field testing in January and February 2007, field-test examiners discovered a need to revise comprehension criteria because they found some students were able to decode increasingly difficult texts without the corresponding comprehension. Students had an independent level and a hard level, but no instructional level. This was especially prevalent with upper-elementary students. This ability to decode is a not an uncommon occurrence in any reading assessment program. However, responding to this concern, the program

<table>
<thead>
<tr>
<th>BENCHMARK CRITERIA FOR LEVELS A-K</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accuracy</strong></td>
</tr>
<tr>
<td>Excellent 6-7</td>
</tr>
<tr>
<td>95%-100%</td>
</tr>
<tr>
<td>90%-94%</td>
</tr>
<tr>
<td>Below 90%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BENCHMARK CRITERIA FOR LEVELS L-Z</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accuracy</strong></td>
</tr>
<tr>
<td>Excellent 6-7</td>
</tr>
<tr>
<td>98%-100%</td>
</tr>
<tr>
<td>95%-97%</td>
</tr>
<tr>
<td>Below 95%</td>
</tr>
</tbody>
</table>

Figure 5
developers recognized the need for educators to establish an instructional level as a stopping place. As a result, the Fountas & Pinnell Benchmark Assessment System includes new parameters (see Figure 5) linking accuracy and comprehension with independent, instructional, and hard reading levels. The accuracy levels were changed for System 2 levels L–Z, with the same criteria for comprehension. Developing new parameters is an innovative step in assisting educators with a more finely grained reflection of a student’s decoding coupled with an appropriate understanding of his or her text reading.

DATA ANALYSIS AND RESULTS: RELIABILITY AND VALIDITY

When the field testing was completed, an independent team of three research specialists was brought in to analyze the data. This team consisted of researchers experienced in quantitative data analysis as well as research design, methods, and data collection.

Phase I of the Formative Evaluation

Phase I of the study examined research questions 1 and 2, which related to the vertical gradient level for both fiction and nonfiction books, as well as the corresponding consistency of horizontal readability between fiction and nonfiction books. The results of Phase I are divided into two sections. The first section addresses research question 1 and the second section addresses research question 2.

Section 1. Reliability of Vertical Text Gradient

Research Question 1

• How reliable is the Fountas & Pinnell Benchmark Assessment System?
  That is, how consistent and stable is the information derived from the reading books?

• Does each book of the Fountas & Pinnell Benchmark Assessment System consistently occupy the same position on the gradient of readability, based on multiple readings by age-appropriate students? That is, does each book, from A–Z, represent a degree of increased difficulty that is consistent with other Fountas and Pinnell leveled texts?

The findings, obtained from field testing conducted in varied geographic regions throughout the country, demonstrate that relative to the text gradient, the Fountas & Pinnell Benchmark Assessment System books get progressively more difficult as the levels progress vertically from A–Z.

Section 1. Data Analysis of Vertical Text Gradient

All students with complete data were included in the analysis. Students for whom an instructional level had been identified and who had also been tested on the books immediately preceding and succeeding the instructional level were included. Students that had an instructional level with test information for one level higher or lower than the immediate and/or subsequent levels were also included. Students were not included if they had not tested at an instructional level, or where data for the preceding and/or succeeding levels were not available.

Section 1. Findings of Vertical Text Gradient

There were two ways in which students read the text gradient. Students read leveled texts (1) in sequential and hierarchical progression or (2) with some degree of variation. The following describes each.

i. Sequential and Hierarchical Progression from Lower to Higher Levels of Text Difficulty

The students’ reading progression from lower levels on the A–Z Text Gradient to higher levels was sequential and hierarchical. That is, the independent level, instructional level, and hard level were in the expected order of the text gradient. For example, when Level D was the instructional level, then C was less difficult than D, and E was more difficult than D, as illustrated in the following chart (Figure 6).

![Typical Sequential Order of Students at Instructional Reading Level D](image)

**Figure 6**

For **System 1** (grades K–2), 60.4% of the students read the fiction books and 53.8% read the nonfiction texts in sequential and hierarchical order. For **System 2** (grades 3–8), 80.3% of the students read the fiction texts and 75.4% read the nonfiction texts in sequential and hierarchical order. The following table (Figure 7) depicts the results.
ii. Variations in the Sequential and Hierarchical Progression from Lower to Higher Levels of Difficulty

In the previous section, the students’ reading progression from lower to higher levels of difficulty was described as occurring sequentially from one level to the next. However, the students’ progressions through the levels included some variations that are discussed below.

(1) Level immediately preceding instructional level was not easier

Some students’ progression from the instructional level to the subsequent level was more difficult. This indicated a sequential, hierarchical pattern of increased difficulty; however, the book preceding the instructional level was not independent or easier. The instructional level was therefore the same degree of difficulty (or easier than) the immediately preceding level. For example, when level D was the instructional level, level C was also at the instructional level, and both were more difficult than the preceding level B, but less difficult than the subsequent level E. When analyzing the reading scores of the books within one level of the preceding book, the books became easier, indicating a sequential and hierarchical pattern, as illustrated in Figure 8.

(2) Level immediately succeeding instructional level was not more difficult

In other cases of divergent sequential ordering, the students’ progression between the instructional level and the preceding level was easier. These findings indicated a sequential, hierarchical pattern of increased difficulty. However, the book succeeding the instructional level was not more difficult. The instructional level was therefore the same degree of difficulty as (or harder than) the immediately succeeding level. For example, when level D was the instructional level, the preceding level C was easier, but the subsequent level E was also at the instructional level; level F was more difficult than both levels D and E. Therefore, when analyzing the reading scores within one level of the succeeding book, the books became harder, indicating a sequential and hierarchical pattern, as illustrated in Figure 9.
Section 1. Results of the Vertical Text Gradient

The findings in section 1 regarding the vertical text gradient indicated that texts became more difficult as a reader progressed through them in sequence. When the sequence was expanded to include one level below the preceding reading level or one level above the succeeding reading level, the gradient percentage increased, reflecting a stronger vertical text gradient. For System 1 (grades K–2), 81.1% of the students now read the fiction texts in a divergent, but sequential and hierarchical order, and 80.4% now read the nonfiction books in that order. For System 2 (grades 3–8), 95.8% of the students now read the fiction texts in sequential and hierarchical order, and 84.2% read the nonfiction texts in that order. The following table (Figure 10) depicts the results.

<table>
<thead>
<tr>
<th>VERTICAL TEXT GRADIENT</th>
<th>DIVERGENT, BUT SEQUENTIAL AND HIERARCHICAL PROGRESSION FROM LOWER TO HIGHER LEVELS OF DIFFICULTY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>System 1 (Levels A–N)</td>
</tr>
<tr>
<td>Fiction</td>
<td>81.1%</td>
</tr>
<tr>
<td>Nonfiction</td>
<td>80.4%</td>
</tr>
</tbody>
</table>

**Figure 10**

The following charts (Figures 11 through 16) depict the percentage of students who read in a sequential and hierarchical order from lower to higher levels of difficulty when the sequence was expanded to include one level above or below the levels preceding and succeeding the targeted reading level.

**Benchmark Assessment System 1: Fiction and Nonfiction**

The first two charts (Figures 11 and 12) represent the progress of students reading the System 1 fiction and nonfiction books (levels A–N) in the sequential order when the sequence was expanded to include one level above or below the levels preceding and succeeding the targeted reading level.
Benchmark Assessment System 2:
Fiction and Nonfiction

The next two charts (Figures 13 and 14) represent the progress of students reading System 2 fiction and nonfiction books (levels L–Z) in the sequential order when the sequence was expanded to include one level above or below the levels preceding and succeeding the targeted reading level.

**Figure 13**

**Figure 14**

Benchmark Assessment Systems 1 & 2:
Fiction and Nonfiction by Grade Level

The final two charts (Figures 15 and 16) represent the progress of students reading the Fountas & Pinnell Benchmark Assessment System 1 and 2 fiction and nonfiction books (levels A–Z) by grade level, in the sequential order when the sequence was expanded to include one level above or below the levels preceding and succeeding the targeted reading level.

**Figure 15**

**Figure 16**
Section 2. Horizontal Consistency Between Fiction and Nonfiction Texts

Research Question 2

• To what extent are the gradients of difficulty for fiction and nonfiction books aligned within the Fountas & Pinnell Benchmark Assessment System? Do fiction and nonfiction books represent similar levels of difficulty within similar levels of reading?

This section includes a horizontal analysis of fiction and nonfiction books at each level to determine if they are at the same degree of difficulty. In other words, are the fiction and nonfiction books consistent, representing a similar level of difficulty at each level, A–Z, on the Text Gradient? For example, is a level D fiction book at the same level of difficulty as a level D nonfiction book?

The findings, obtained from field testing conducted in varied geographic regions throughout the country, indicate that relative to the consistency of the difficulty of the fiction and nonfiction texts, the books are written at similar levels of difficulty at each level of the A–Z text gradient.

Section 2. Data Analysis of Horizontal Text Consistency

All students with complete data were included in the analysis. Only students that had an instructional level in both fiction and nonfiction were included.

Section 2. Results of Horizontal Text Consistency

A preponderance of students read the text gradient in two ways. Students read fiction and nonfiction texts at the same level on the A–Z Text Gradient or they read fiction and nonfiction texts at similar levels of difficulty on the A–Z Text Gradient. The following describes each.

i. Fiction and Nonfiction Texts Represent Same Level of Text Difficulty

The students’ developmental reading level is the same for fiction and nonfiction on the A–Z Text Gradient. That is, the students’ instructional level in fiction is the same as in nonfiction. For example, a student’s instructional level is level D for both fiction and nonfiction. For System 1 (grades K–2), 43.4% of the students read at the same level in fiction and nonfiction. For Benchmark System 2 (grades 3–8), 26.1% of the students read at the same level in fiction and nonfiction. Figure 17 depicts these results.

There are many factors underlying the 26.1% correspondence for students in grades 3–8 reading fiction and nonfiction texts at the same level. One explanatory factor is that as readers progress through the grade levels, their mastery of content knowledge plays an increasingly larger and complex role in reading comprehension. In other words, it is difficult to predict, given a classroom's instructional focus and students' background knowledge, what a student might “typically” know.

ii. Fiction and Nonfiction Texts Represent Similar Level of Text Difficulty

The second way students read was at a similar level for fiction and nonfiction. Students’ instructional levels on the fiction and nonfiction texts varied by one level of difficulty on the A–Z Text Gradient. For example, a student reading at an instructional level D on a fiction text would read on an instructional level at the nonfiction text of the preceding level (level C) or succeeding level (level E).

When the analysis was expanded to include one level above or below the instructional level on the fiction text for the nonfiction text, the gradient percentage increased to reflect a stronger horizontal text gradient. For System 1 (grades K–2), 76.2% of the students read at an instructional level on the nonfiction text within one level of difficulty on the fiction text. For System 2 (grades 3–8), 69.2% of the students read the fiction and nonfiction texts within one level of difficulty. Figure 18 depicts these results.

Fountas and Pinnell Benchmark Assessment Systems 1 & 2

For System 1 and System 2 combined, 75.8% of the students read the fiction and nonfiction texts within one level of difficulty. The following chart (Figure 19) shows by grade level, the percentage of students reading the fiction and nonfiction texts within one level of text difficulty.
PERCENTAGE OF STUDENTS READING FOUNTAS & PINNELL FICION AND NON-FICTION BOOKS AT SIMILAR LEVEL

![Bar chart showing percentage of students reading Fountas & Pinnell fiction and non-fiction books at similar level.]

TEST-RETEST RELIABILITY BETWEEN FICTION AND NONFICTION BOOKS

<table>
<thead>
<tr>
<th>Book Series A–N</th>
<th>.93</th>
</tr>
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<tbody>
<tr>
<td>Book Series L–Z</td>
<td>.94</td>
</tr>
<tr>
<td>All Books (A–Z)</td>
<td>.97</td>
</tr>
</tbody>
</table>

Figure 20

CONVERGENT VALIDITY

The validity of a test is the degree to which the assessment measures what it purports to measure. Validity is a check on how well an assessment fulfills its stated function. Convergent validity examines the relationship between an assessment’s test scores and the scores from other instruments that measure similar variables. Therefore, the assessment outcomes from the Fountas & Pinnell texts should be related with other tests that assess reading.

- For System 1 correlation to texts used for assessments in Reading Recovery®.
- For System 2 correlation to Slosson Oral Reading Test—Revised (SORT-R3) and the Degrees of Reading Power®.

METHODS

Three teams of field-test examiners (field-test examiners worked individually) followed the procedure described previously in phase I to determine students’ independent, instructional, and hard levels of reading proficiency at grade levels K–6 on the Fountas & Pinnell Benchmark Assessment System. Next, field-test examiners administered the Slosson Oral Reading Test—Revised (SORT-R3) to students in grades 3 through 8. Then, field-test examiners administered either Reading Running Records with texts used for Reading Recovery® assessments or the Degrees of Reading Power® (DRP), according to whether their instructional level aligned with System 1 or 2. As in Phase I, field-test examiners systematically maintained data records and participated in daily debriefings with the research project manager.

DESCRIPTION OF OTHER ASSESSMENTS

The Reading Recovery® Observation Survey Text Reading Level. The Observation Survey consists of six literacy tasks; one is the Text Reading Level. This task records, by using a running record of a student’s reading, the accuracy and process the child employs.
when reading. Increasingly difficult texts are used to ascertain his or her appropriate reading level. In recent studies, the Text Reading Level was correlated with other standardized, norm-referenced tests. These include the Iowa Test of Basic Skills (.764 correlation) (Gómez-Bellengé, Rodgers, Wang, & Schulz, 2005), the Gates-MacGinitie Reading Test, and the Woodcock Reading Mastery Test (Gómez-Bellengé & Thompson, 2005).

The Degrees of Reading Power® (DRP) is a norm-referenced assessment made up of nonfiction text passages formatted using a cloze technique. That is, selected words are omitted from the text and the student selects a word from among multiple choices. DRP measures basic comprehension. The assessment measures where to place a reader on a range of texts. Based on a student’s assessed frustration, instructional, or independent level, placement is determined for appropriate reading materials.

The Slosson Oral Reading Test-Revised (SORT-R3) is a list of 200 words in increasing order of difficulty administered individually to students. Words are grouped together in ten lists of 20 words and each list corresponds to a specific grade level. Although it does not measure comprehension—it measures students’ oral word calling—the assessment assists educators in providing placement on a child’s approximate reading level.

RESULTS OF CONVERGENT VALIDITY

Convergent Validity with Reading Recovery Assessment Texts

The table (Figure 21) shows a strong relationship between the reading accuracy rates on System 1 (levels A–N) fiction (correlation of .94) and nonfiction (correlation of .93), and reading accuracy rates on texts used for assessments in Reading Recovery®. In other words, the performance on the System 1 texts is strongly indicative of performance on Reading Recovery® assessment books. This is an important finding because the Reading Recovery Test Level assessments, like the Fountas & Pinnell Benchmark Assessment System, assess decoding, fluency, vocabulary, and comprehension. In addition, Reading Recovery® was recognized in March 2007 by the U.S. Department of Education as an effective and scientifically based reading program (see: What Works Clearinghouse, 2007). These results reinforce the validity of the Fountas & Pinnell Benchmark Assessment System 1 program.

Convergent Validity with Slosson Word Test

Another aspect of Phase II of the formative evaluation examined the relationship between the System 2 fiction and nonfiction books (levels L–Z) and the Slosson Word Test. The results in Figure 21 indicate that performance on the System 2 fiction texts (correlation of .69) and nonfiction texts (correlation of .62) is moderately indicative of performance on Slosson word reading. The Slosson Word Test measures students’ oral word calling and provides approximate placement of a child’s reading level. These results indicate that the Benchmark System 2 texts are moderately indicative of the Slosson measure of word reading. It should be emphasized, however, that the Fountas & Pinnell Benchmark Assessment System is more than a word reading measure.

When the Fountas & Pinnell Benchmark Assessment System grade levels were compared with Slosson grade levels for fiction and nonfiction books, students generally scored higher on the Slosson than they did with the Fountas and Pinnell Benchmark Assessment System texts for grades 3–6. However, this pattern did not occur in grades 7 and 8. Because Slosson measures only isolated word reading, it can be expected that students might score higher when compared with the Fountas & Pinnell Benchmark Assessment System in which a student’s score is based on comprehensive reading of complete books.

Convergent Validity with Degrees of Reading Power

A final study looked at the relationship between the System 2 (Levels L–Z) books and the DRP® text passage reading. The DRP is made up of nonfiction text passages using a cloze technique and measures where to place a reader on a range of texts. The Benchmark System 2 fiction books (correlation of .44) and nonfiction books (correlation of .42) were moderately related with performance on DRP. These results (Figure 21) therefore show that the Benchmark System 2 texts are moderately indicative of cloze text passages. It should be noted, however, that the Fountas & Pinnell Benchmark Assessment System includes a reading comprehension dimension, through question prompts, in the context of complete books, while the DRP® measures comprehension as the degree to which the reader accurately predicts the words missing in short passages through multiple word choices.
SUMMARY AND CONCLUSION

Summary of Findings

Research question 1 asked whether each book from levels A–Z represented a degree of increased difficulty that is consistent with other Fountas and Pinnell leveled texts.

- Analysis of the field testing indicates that relative to the text gradient, the Fountas & Pinnell Benchmark Assessment System books get progressively more difficult as the levels progress vertically from A–Z.
- For System 1 (grades K–2), 81.1% of the students read the fiction texts and 80% read the nonfiction books in a divergent but sequential and hierarchical order. For System 2 (grades 3–8), 95.8% of the students read the fiction texts and 94.2% read the nonfiction texts in a divergent but sequential and hierarchical order.

Research question 2 addressed the extent to which the gradients of difficulty for fiction and nonfiction books were aligned within the Fountas & Pinnell Benchmark Assessment System series. That is, do fiction and nonfiction books represent similar levels of difficulty within similar levels of reading?

- For System 1 (grades K–2), 76.2% of the students read at similar levels in fiction and nonfiction within one level of text difficulty.
- For System 2 (grades 3–8), 69.2% of the students read at similar levels in fiction and nonfiction within one level of text difficulty.

Research question 3 addressed the reliability and validity of the Fountas & Pinnell Benchmark Assessment System with other assessment measures.

- There was a strong association between the System 1 (levels A–N) fiction texts (correlation of .94) and nonfiction texts (correlation of .93) and Reading Recovery® Text Level Assessments. This is an important finding, since Reading Recovery® was recently recognized by the U.S. Department of Education as an effective and scientifically based reading program.
- The results indicate that performance on the System 2 fiction texts (correlation of .69) and nonfiction texts (correlation of .62) is moderately indicative of performance on Slosson word reading. Again, it needs to be emphasized that the Fountas & Pinnell Benchmark Assessment System 2 is more than a word reading measure, since it adds a reading comprehension dimension.
- The System 2 fiction texts (correlation of .44) and nonfiction texts (correlation of .42) were moderately indicative of performance on DRP® word reading.

Conclusion

After two and a half years of editorial development, field testing, and independent data analysis, the Fountas & Pinnell Benchmark Assessment System texts were demonstrated to be both reliable and valid measures for assessing students’ reading levels.

The final report was compiled by an outside team of three independent researchers who analyzed the data gathered from the formative evaluation of the Fountas & Pinnell Benchmark Assessment Systems 1 and 2. Two research team members were former school literacy coaches and Reading Recovery educators. All data analysts had backgrounds in literacy research studies using quantitative and qualitative methods and analysis. The final report incorporated the initial formative evaluation design, methods, and collected data.

Appendix A: Field Test Examiner Recording Form Samples
REFERENCES


APPENDIX A: FIELD-TEST EXAMINER RECORDING FORM SAMPLES (CONTINUED)

Part of the Park, Level A, Woodland, WR: 24

B. COMPREHENSION CONVERSATION

Instructions: Let's talk about what you learned in this book.

Have a conversation with the child about the text. If the child provides evidence of key understandings, circle the appropriate number. Use the principles as needed to indicate deficiencies in key understandings the child had not absorbed.

<table>
<thead>
<tr>
<th>Key Understandings</th>
<th>Points</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where the Text</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description of the park. There are lots of things to do in the park. The boy is having fun and enjoying the park.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note any additional understandings:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 1 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beyond the Text</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name other things they would do at the park or suggest park activities. You can describe other things the boy did or suggest fun park activities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note any additional understandings:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 1 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Score: 6
Add 1 point for any additional understandings 6

Fountas & Pinnell Benchmark Assessment System 1 4

---

Part of the Park, Level A, Woodland, WR: 24

Describe something you would like to do at the park.

Fountas & Pinnell Benchmark Assessment System 1 5

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Fountas & Pinnell Benchmark Assessment System 1.6.2

Student Summary Sheet:

Fountas Test Coordinator's Name: _____________ Date: _____________

Student's ID Number: _____________ School: _____________

Word List
Highest Level Achieved: _____________ Total of Correct Words: _____________

RECEPTION

Independent Level: _____________ % Accuracy: _____________

Comprehension Conservation 0 1 2 3

Fluency 0 1 2 3

Instructional Level: _____________ % Accuracy: _____________

Comprehension Conservation 0 1 2 3

Fluency 0 1 2 3

Optional Level: _____________ % Accuracy: _____________

Comprehension Conservation 0 1 2 3

Fluency 0 1 2 3

NONRECEPTION

Independent Level: _____________ % Accuracy: _____________

Comprehension Conservation 0 1 2 3

Fluency 0 1 2 3

Instructional Level: _____________ % Accuracy: _____________

Comprehension Conservation 0 1 2 3

Fluency 0 1 2 3

Optional Level: _____________ % Accuracy: _____________

Comprehension Conservation 0 1 2 3

Fluency 0 1 2 3

It's a skill needs more than one year at the independent instructional or difficult level, then complete an additional summary sheet.
For more information and to review the Fountas and Pinnell Benchmark Assessment System, visit:
www.FountasAndPinnellBenchmarkAssessment.com

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