



**No Child
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Analysis of State K-3 Reading Standards and Assessments



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Final Report

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Contents

List of Figures.....	iv
List of Tables.....	v
Acknowledgments	vii
Executive Summary	ix
Introduction and Background.....	1
Methodology.....	3
Review of Standards	3
Review of State Assessments	5
Findings.....	7
Representation of Essential Elements by State Reading Standards.....	7
Level of Representation, Quality, and Organization of Standards	14
State Assessments as Reading First Outcome Measures	17
Similarities in How Well Standards and Assessments Represent the Essential Elements.....	20
Discussion and Conclusions.....	21
Degree and Quality of Standards’ Representation of the Essential Elements.....	21
Statewide Reading Assessments’ Representation of the Essential Elements.....	22
Relationship between Assessments’ and Standards’ Representation of the Essential Elements.....	22
References	23
Appendices	25
Appendix A National Reading Panel Description of the Essential Components of Reading Instruction	27
Appendix B Stratified Random Sample of 20 States.....	29
Appendix C Documentation Used in Review of State K-3 Reading Standards in 2003-04 ...	31
Appendix D Standards Review Instrument.....	35
Appendix E State Assessment Review Form Sample Page.....	51
Appendix F Results of Analyses of Ratings of State K-3 Reading Standards.....	53

Figures

Figure 1. Mean Number of Clear and Ambiguous Standards Representing Each Essential Element in 2003-04	8
Figure 2. Percentage of States by Appropriateness to Grade Level of K-3 Reading Standards Representing Each Essential Element in 2003-04.....	9
Figure 3. Percentage of States by Adequacy of Coverage of K-3 Reading Standards Representing Each Essential Element in 2003-04	10
Figure 4. Percentage of States by Level of Detail of K-3 Reading Standards Representing Each Essential Element in 2003-04.....	12
Figure 5. Number of States Administering Statewide Reading Assessments in Grades K-3 in 2003-04	17
Figure 6. Number of States Identifying Their Statewide Reading Assessments in Grades K-3 as Reading First Outcome Measures in 2003-04	18
Figure 7. Number of States with Statewide K-3 Reading Assessments Identified as Reading First Outcome Measures in 2003-04.....	19

Tables

Table 1.	Mean Number of State K-3 Reading Standards Clearly Representing the Essential Elements by How Adequately the Standards Cover Each Element in 2003-04	14
Table 2.	Mean Number of State K-3 Reading Standards Clearly Representing the Essential Elements by Grade Appropriateness in 2003-04.....	15
Table 3.	Mean Number of State K-3 Reading Standards Clearly Representing the Essential Elements by the Appropriateness of Detail in 2003-04.....	16

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Executive Summary

Background and Methodology

The National Reading Panel (NRP) issued a report in 2000 that responded to a congressional mandate to help parents, teachers, and policymakers identify key skills and instructional methods central to reading achievement. The panel identified five areas that they found to be critical to effective reading instruction: phonemic awareness, phonics, fluency, vocabulary, and text comprehension (see Appendix A in the complete final report for a description of these areas).

Using these findings as a foundation, the *No Child Left Behind Act (NCLB) of 2001* established the Reading First program under Title I, Part B, Subpart 1 of the *Elementary and Secondary Education Act (ESEA)* to ensure that all children in America are reading at or above grade level by the end of third grade. This initiative is designed to achieve this goal through the establishment of high quality reading instruction in kindergarten through grade 3 that includes the five essential components identified in the research. Congress also recognized that state academic content standards and assessments play an important role in supporting instruction in the classroom. Section 1205 of ESEA calls for an evaluation of whether state standards correlate with and assessments measure these essential components of reading instruction.

This report addresses the relationship between state content standards and assessments and the essential components of effective reading instruction. The extent to which the essential components are addressed in the standards and assessments indicates the extent to which states have integrated the essential components into their reading curriculum. This report describes reviews of state assessments and standards, the purpose of which was twofold:

- to evaluate the degree to which state reading content standards for K-3 students reflected expectations for learning in these five essential areas of effective reading instruction; and
- to determine the extent to which state assessments administered in the K-3 grade span played a role in the measurement of Reading First outcomes in the five areas.

The methods used to address these two purposes differed in both emphasis and approach. This study conducted an expert review in January 2004 of state reading content standards for grades K-3 from a random sample of 20 states. Five consultants with expertise in reading instruction, scientifically based reading research, staff development in reading, and familiarly with state content standards reviewed the standards from the 20 selected states. Teams of two reviewers determined how many of each state's standards represent the five areas of reading instruction and the degree to which this representation is clear, is appropriate for the intended grade level, provides complete coverage of each area, and provides an appropriate level of detail to guide instruction.

The analysis of state assessments was made simpler by existing data. State Reading First applications included information on which states were using their existing statewide assessments to measure the five essential components of effective reading instruction. Project staff conducted a systematic review of approved Reading First applications for all states and the

District of Columbia to determine which states' 2003-04 K-3 statewide assessments were identified as measures of the five essential areas of reading instruction.

Key Findings

Comprehension and, to a lesser extent, vocabulary are better represented by sampled states K-3 reading standards than are the other three essential elements of reading instruction.

- Reading comprehension is the most represented of the essential elements in state K-3 reading content standards with an average of 57 standards per state, followed by vocabulary (19), phonics (16), fluency (6), and phonemic awareness (6).
- Most standards representing each essential element were judged to be placed at the appropriate grade by most of the states. A few states were found to have placed standards representing phonemic awareness and phonics at too high of a grade level.
- Most states have standards that adequately cover comprehension and phonics, while just over half of the states provide adequate coverage for vocabulary, phonemic awareness, and fluency. Comprehension standards were judged to cover most or all of the appropriate content in 90 percent of the states, followed by phonics (80 percent), vocabulary (60 percent), phonemic awareness (60 percent), and fluency (55 percent).
- Most states (75 percent) provide an appropriate level of detail for comprehension standards, followed by vocabulary (70 percent), phonics (60 percent), phonemic awareness (50 percent), and fluency (35 percent). In most cases, when standards were judged as not having an appropriate level of detail, it was because they were too broad.
- All of the 20 sampled states make comprehension clearly visible in their organization of reading standards. Almost all (18) make some of the other elements visible. Half make all five elements visible and they tend to do so at relatively high levels within their organizational hierarchy.

States with larger numbers of K-3 reading standards organized to make the five essential elements more visible were judged to represent these elements better.

- For each of the essential elements, states with larger numbers of standards have standards that provide better coverage, are more likely to be at an appropriate grade level, and are written more often at an appropriate level of detail.
- Both the number and quality of reading standards—within and across the five elements—were directly related to the degree of element visibility within the organization within the reading standards.

With the possible exception of vocabulary and comprehension in grade 3, statewide reading assessments in 2003-04 do not significantly address expected student outcomes from reading instruction in the five essential areas.

- Thirty states administer statewide reading assessments in grade 3, and very few do so at grades below 3.
- Twenty of these states identify their grade 3 statewide reading assessments as measures of Reading First outcomes, primarily for just vocabulary and comprehension.
- None of the states identify their statewide reading assessments as outcome measures in the area of fluency, presumably because it requires individual assessment of children.

There is a slight relationship between how state standards and assessments represent the five essential elements of reading instruction.

- States that identified their statewide reading assessments as Reading First outcome measures tended to have more reading standards that visibly represented the five essential elements of effective reading instruction.

Introduction and Background

Many children struggle when learning to read. This failure can have a tremendous long-term impact on their self-confidence, motivation to learn, future performance in school, and success in life. An extensive knowledge base now exists that pinpoints the skills children must learn in order to read well and the components of reading instruction which are essential to that learning (Armbruster, Lehr, and Osborn, 2003). This information can serve as the foundation for educational policy decisions, curriculum development and instructional planning aimed at helping children learn to read and overcome the problems that come with reading failure.

The National Reading Panel (NRP) issued a report in 2000 that responded to a congressional mandate to help parents, teachers, and policymakers identify skills and methods central to reading achievement (National Reading Panel [NRP], 2000). The NRP was charged with reviewing research in reading instruction and identifying instructional methods that consistently relate to reading success.

The NRP identified five areas as critical to effective reading instruction: phonemic awareness, phonics, fluency, vocabulary, and text comprehension. They found that reading is a complex system of deriving meaning from print. To be effective, instruction in reading must address all of the five critical areas explicitly and systematically. The panel's report (NRP, 2000) details the nature and importance of each of these five essential reading components. Excerpts from this report describing these components and the evidence of their importance are presented in Appendix A.

Using these findings as a foundation, the *No Child Left Behind Act (NCLB) of 2001* established the Reading First program under Title I, Part B, Subpart 1 of the *Elementary and Secondary Education Act (ESEA)* to ensure that all children in America read at or above grade level by the end of third grade. This initiative is designed to achieve this goal by establishing high quality reading instruction in kindergarten through grade 3 that includes the five essential components identified in the research. Congress recognized the need to study the implementation of this initiative, including instructional practices and materials, reading assessments used for screening, diagnosis, and student progress, and professional development. The U.S. Department of Education (ED) has funded two other evaluations related to Reading First. The Reading First Implementation study is an evaluation of how the Reading First program is being implemented in a nationally representative sample of Reading First schools. Results from this evaluation are expected in 2006 and 2007. The Reading First Impact Study will focus primarily on impact using a quasi-experimental design (regression discontinuity). The evaluation will collect data from 250 Reading First and non-Reading First schools. Reports are expected in 2007 and 2008.

Congress also recognized that state academic content standards and assessments play an important role in supporting instruction in the classroom. The impact that effective reading instruction has on students' learning to read will depend on the alignment of state standards and assessment with that instruction (e.g., Cohen, 1987; Smith and O'Day, 1991; Webb, 1997). Absent a central focus of state reading standards and related state assessments on student expectations in these five areas, it is less likely that local curriculum and classroom instruction

will address the five essential elements. In Section 1205, the Reading First legislation calls for an evaluation of whether state standards correlate with and assessments measure these essential components of reading instruction. Accordingly, ED also funded a review of the relationship between state standards and assessments in K-3 reading and these components.

This report presents the results of this review of state standards and assessments, the purpose of which was twofold:

- to evaluate the degree to which state reading content standards for K-3 students reflect expectations for learning in the five essential areas of effective reading instruction; and
- to determine the extent to which state assessments administered in the K-3 grade span play a role in the measurement of Reading First outcomes in the five essential areas.

The methods employed to conduct these two reviews are described next. Then the results of the reviews are presented. The final section contains a discussion of these results and conclusions.

Methodology

Review of Standards

A review of state reading standards was conducted to examine the standards' relationship to the five essential elements by addressing five questions:

- Which reading standards describe student knowledge and skills in each essential area?
- How clearly and explicitly does each standard represent the area?
- How appropriate are the standards representing each area for the grade(s) to which the state has assigned them?
- Do the identified standards provide complete coverage of student knowledge and skills in the area?
- Do the standards representing each area provide an appropriate level of detail with sufficient specificity to promote alignment among curriculum, instruction, and assessment and sufficient flexibility to provide curricular guidelines that could be translated into instructional activities tailored to the needs of different students?

These questions address important aspects of how well each state's reading standards represent the five essential elements of reading instruction. They are based on a previous review of state reading standards for the primary grades, conducted by the Center for the Improvement of Early Reading Achievement (CIERA) (Wixson and Dutro, 1998). The CIERA study examined how well state reading standards for grades K-3 represented five areas of important reading content that are quite similar to the five essential components of reading instruction that are the basis for this review. The four criteria employed by CIERA—complexity, level of detail, content coverage, and appropriateness of content—also informed the construction of the above questions addressed by this review.

A sample of 20 states was randomly selected to be geographically representative of the country and to include states with relatively large numbers of students. The 50 states and the District of Columbia were stratified by region, and a probability sample of 20 states was drawn with the probability of being sampled proportionate to total enrollment.¹ The sampled states accounted for almost 70 percent of the country's total enrollment, and four to six states were sampled from each of four geographical regions. A list of the sampled states with their enrollment and region, as well as additional sampling details, can be found in Appendix B.

The content standards for reading in grades K-3 were obtained from the 20 sampled states during January 2004. The documentation collected for the review process included descriptions of the state K-3 reading standards, per se, and descriptions of benchmarks or grade-level expectations that provided the most specific available delineation of expected student knowledge and skills in

¹ Total enrollment was used as a proxy for the size of the Reading First grant. At the time that the sample was drawn, the Reading First funding levels for the first year were not available for all states. The correlation between total enrollment and Reading First funding is very high. Based on the 49 states for which both pieces of data were available, the correlation was 0.91.

reading. Although states organize and describe their K-3 reading standards in a variety of ways, it was possible in most cases to obtain documentation that dealt exclusively with reading expectations for grades K-3. States vary with regard to the amount of material they include in their standards documents and the “grain size” of the material presented. What is a standard in one state might be a grade level expectation in another. Many states use “large” standards that cut across grade levels, but one state has different standards for each grade level. No state explicitly uses the five essential components of reading instruction as the organizer for standards and grade level expectations in grades K-3. While aspects of varying components are present to varying degrees in the respective sets of standards (as will be discussed further below), they are somewhat “scattered” throughout the documents. A listing of these documents and the Internet addresses where these documents were found is presented in Appendix C.

A data collection instrument was designed to obtain information about each state’s reading standards that answered the five review questions stated above (see Appendix D). The instrument asks for the identification of state standards that represent each of the five essential elements of reading instruction described by the National Reading Panel. It also asks how clearly each standard represents an element, how appropriate the standards are for the grade level at which they are assigned, how well they cover the elements, and how appropriate their level of detail is for guiding instruction. Comments are requested on the ratings given and on the strengths and weaknesses of the entire set of K-3 reading standards.

Five consultants with expertise in reading instruction, scientifically based reading research, and staff development in reading, and who are familiar with the findings of the National Reading Panel and state content standards, were recruited to review the standards from the 20 selected states. The reviewers attended a one-day training session where the data collection instrument was explained, and expectations for the conduct of the review were presented. They were introduced to the standards review project and their role was explained. The data collection instrument was shared and explained, and expectations for the conduct of the review were presented. Most of the day was spent practicing and discussing issues emerging from the use of the instrument with documents describing the K-3 reading standards of a state not in the sample of 20.

Two experts reviewed each state’s standards. Assignments were made so that each expert was paired with each of the other four experts for two states. Thus, each expert reviewed the standards of eight states. Assignment was arbitrary; however, reviewers were not assigned the standards of any states with which they had any professional affiliation or contact. Reviewers worked independently. However, they were allowed, but not required, to discuss their findings for any state with the assigned co-reviewer. They were not required to attain consensus on each state’s ratings.

The pairing of each expert with all others reduced the need for calibrating the ratings of individual reviewers that might have been unusually high or low in their ratings. Consensus was not required because differences in points of view were important to capture. In spite of very little reported collaboration between co-reviewers, discrepancies of more than one rating scale value occurred less than 10 percent of the time. These differences were judged small enough to use the average value of the two reviewers for each state in the analysis.

Review of State Assessments

The Reading First program requires states to provide evidence that their proposed assessments for screening, diagnosis, and measuring student progress address phonemic awareness, phonics, fluency, vocabulary, and text comprehension (U.S. Department of Education, 2002). In addition, states are required to identify valid and reliable assessments of reading achievement that are used to evaluate the outcomes of the Reading First program. This report determines the extent to which states are using their own statewide assessments of reading to measure Reading First outcomes for the essential components. Using assessments already in place would be more efficient than requiring schools participating in the Reading First program to administer additional assessments. More importantly, any state assessment that provides valid and reliable measurement of outcomes in one or more of the five essential instructional areas in the K-3 grade span supports the delivery of instruction in these areas throughout the entire state—not just for schools participating in the Reading First program.

A review of all state Reading First applications approved by ED prior to Oct. 1, 2004, was conducted to answer the following questions:

- How many states administer reading assessments to virtually all students in one or more grades in the K-3 span?
- How many states identify their K-3 statewide reading assessments as outcome measures for Reading First programs?
- For which of the five essential areas of reading instruction are K-3 statewide reading assessments identified?

This information was summarized on the State Assessment Review Form (see Appendix E) using the following procedure:

First, the reviewer determined what, if any, reading assessments were administered by the state to all students in any one of grades K-3. Next, the reviewer determined whether or not the state assessment was identified in the application as a Reading First outcome measure and, if so, whether or not the application indicated for which of the five essential components. If the components were identified, the reviewer indicated whether or not the state assessment was the only outcome measure for each component.

A statewide assessment was included in this review if it was clear that the assessment was in place when the Reading First application was approved and that it could be used for measuring Reading First outcomes. If a state only required school districts to administer assessments selected from an approved list, or if a state only required school districts to administer a particular assessment because they were implementing a special initiative, these assessments were considered to be statewide if virtually all districts (>90 percent) chose the same assessment or participated in the program or initiative.

Findings

This section presents the results of the reviews of state reading content standards and assessments. These results address the twofold purpose of this study—to evaluate how well state standards reflect the five essential components of reading instruction, and to determine the role of state assessments in measuring Reading First outcomes. Results of analyses of the relationship between how well state standards reflect these components and the use of state assessments are also provided.

Representation of Essential Elements by State Reading Standards

Reading comprehension is the most represented of the essential elements.

Presumably, the number of standards clearly representing each of the essential elements suggests the relative emphasis the state reading standards are placing on each element. An average of 104 K-3 reading standards per state were identified as representing the five essential elements (see Table E-1 in Appendix E).² Almost 80 percent of these standards were judged to do so in a clear and explicit manner. There is a very large range in the number of relevant standards identified across the 20 states—from 19 to 227.

An example of a standard that a reviewer judged to clearly represent phonics is:

Use letters sounds, word patterns and parts of simple compound words to decode unfamiliar words when reading.

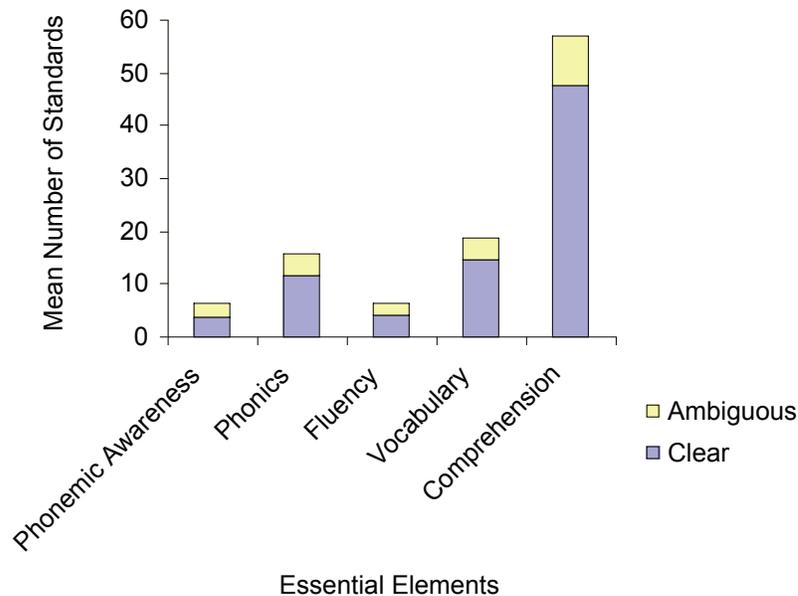
An example of a standard not clearly representing phonics is:

Identify letters, words and sentences.

The average number of standards representing each essential element also varies considerably across the essential elements (see Figure 1). The highest average number of the standards identified was in the area of comprehension (57) and this area has the highest percentage of clear standards (84 percent). The second most frequently represented element is vocabulary; the average number of standards is 19, and phonics comes in third with an average of 16. The smallest average number of standards was identified in the areas of phonemic awareness and fluency (6), and these areas also have the smallest percentages of clear standards (60 percent and 66 percent, respectively).

² Reviewers were not asked to identify standards that did not represent the five elements since some states do not clearly delineate which standards represent reading. Identifying all reading standards that did not represent any of the five elements would have been beyond the scope of this review.

Figure 1
Mean Number of Clear and Ambiguous K-3 Standards
Representing Each Essential Element, 2003-04



The reviewers found that half of the states did not make a clear distinction between standards representing phonemic awareness and phonics. For example, one state presents a standard entitled, “Phonemic Awareness, Word Recognition and Fluency” and lists more specific expectations for kindergarten students, including

- Identify and complete rhyming words and patterns.
- Distinguish the number of syllables in words by using rhythmic clapping, snapping or counting.
- Distinguish and name all upper- and lowercase letters.
- Recognize, say and write the common sounds of letters.
- Hear and say the separate phonemes in words, such as identifying the initial consonant sound in a word, and blend phonemes to say words.
- Read one-syllable and often-heard words by sight.

According to the reviewers, the first two expectations represent phonological awareness, the next two represent phonics, the next represents phonemic awareness, and the last fluency.

Most standards were judged to be placed at the appropriate grade.

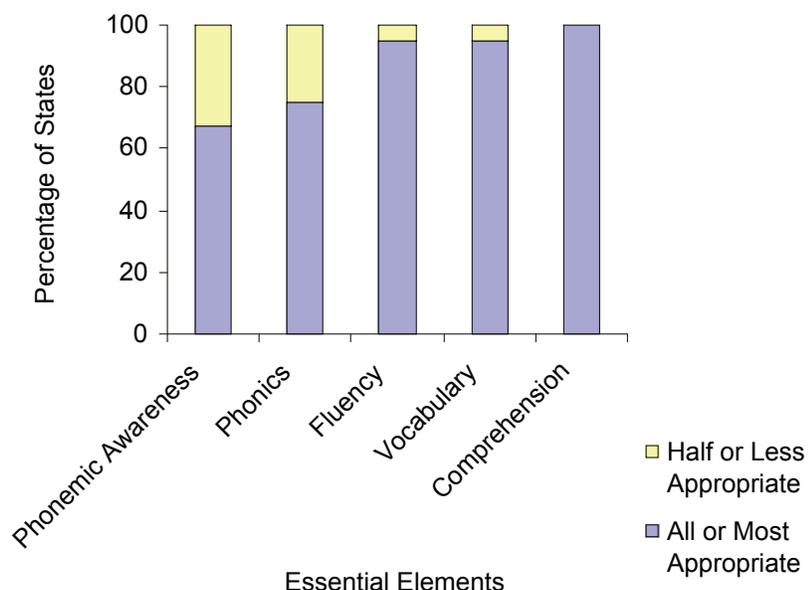
The grade appropriateness of state standards is relatively high for all five elements (see Table F-2 in Appendix F and Figure 2). Virtually all sampled states have at least most of their comprehension, vocabulary, and fluency standards at an appropriate grade level. The degree of grade appropriateness for standards representing phonics and phonemic awareness, however, is not as high; 25 and 33 percent of the states, respectively, were judged to have half or less of their

standards assigned to an appropriate grade level. For example, two vocabulary standards from a state illustrating appropriate placement at second and third grade are:

Grade 2—Use knowledge of base words to interpret meaning of unfamiliar words

Grade 3—Decode words using knowledge of base words, root words, and common prefixes and suffixes

Figure 2
Percentage of States by Appropriateness to Grade Level of K-3
Reading Standards Representing Each Essential Element in 2003-04



The reviewers' main comment about standards in phonemic awareness and phonics was that the standards were not sufficiently challenging. This comment was found in the review of 13 states. For example, one state placed the following standard at the second grade:

The student demonstrates the ability to segment words by phonemes according to beginning, middle, and ending sounds.

According to a reviewer, this standard should have been placed at kindergarten.

A reviewer comment regarding phonics provides another example:

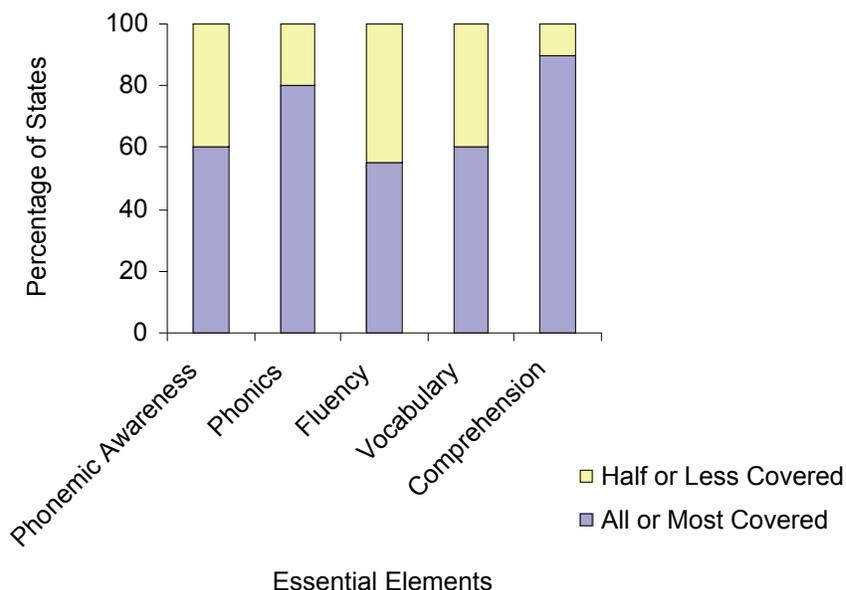
Most standards are one or two grades too late. For example, Grade 2: PS 1 states “decode unknown words using basic elements of phonetic analysis (e.g., common letter-sound relationships).” Students should have mastered this standard in kindergarten/first grade. Second grade students should be using more advanced phonic strategies (spelling patterns, letter combinations, etc.)

Very few comments were made that phonemic awareness and phonics were mentioned in standards in inappropriately early grades.

Most sampled states have standards that adequately cover comprehension and phonics.

The third review item asked for the reviewer’s judgment of how well all of a state’s standards, identified as representing an essential element, cover the student knowledge and skills taught in that area of instruction. Again, standards representing reading comprehension do fairly well. Almost two-thirds of the sampled states were judged to have standards that adequately cover the entire area of comprehension, and 90 percent of the states have standards that provide coverage of all or most of that area (see Table E-3 in Appendix E and Figure 3).

Figure 3
Percentage of States by Adequacy of Coverage of K-3 Reading Standards Representing Each Essential Element, 2003-04



Phonics appears to be well-covered by most states, too. Eighty percent of the sampled states were judged to have standards that provide coverage for all or most of the phonics area. Fluency

is the most poorly covered element, although the results for this area are only slightly lower than vocabulary and phonemic awareness. The reading standards for two states do not address phonemic awareness at all.

The reviewers found a variety of missing content for phonemic awareness (e.g., phoneme isolation, identity, segmentation, blending, manipulation, etc.) The primary coverage issue for fluency appears to be not including all of the subcomponents, namely rate, accuracy, and expression (prosody). Comments about missing content in vocabulary center on failing to include direct instruction or strategies for determining the meaning of new words. A large number of comments point out that vocabulary is not covered at all in certain grades, especially kindergarten and grade 1. Also, there are several references to a tendency for states to place what the reviewers believe is phonics content under vocabulary.

The number of states providing an appropriate level of detail was greatest for comprehension standards, followed by vocabulary, phonics, phonemic awareness, and fluency.

The fourth review item asked how well a state's standards, which were identified as representing an essential element, provide a level of detail appropriate for guiding instruction in that area. The reviewers found 75 percent of the states to have reading comprehension standards that have an appropriate level of detail, sufficiently specific to promote alignment among curriculum, instruction, and assessment, and sufficiently flexible to guide instructional activities tailored to the needs of different students. The other states' comprehension standards are either somewhat too broad or somewhat too specific (see Table E-4 in Appendix E and Figure 4).

Most (70 percent) sampled states' vocabulary standards were also judged to have an appropriate level of detail. The rest were judged somewhat or much too broad. Reading standards representing fluency received the lowest judgments of detail level; 65 percent of the states were rated as having fluency standards that were somewhat or much too broad. Phonemic awareness and phonics fall between vocabulary and fluency.

Here is an example from one state related to phonemic awareness that was rated as too broad:

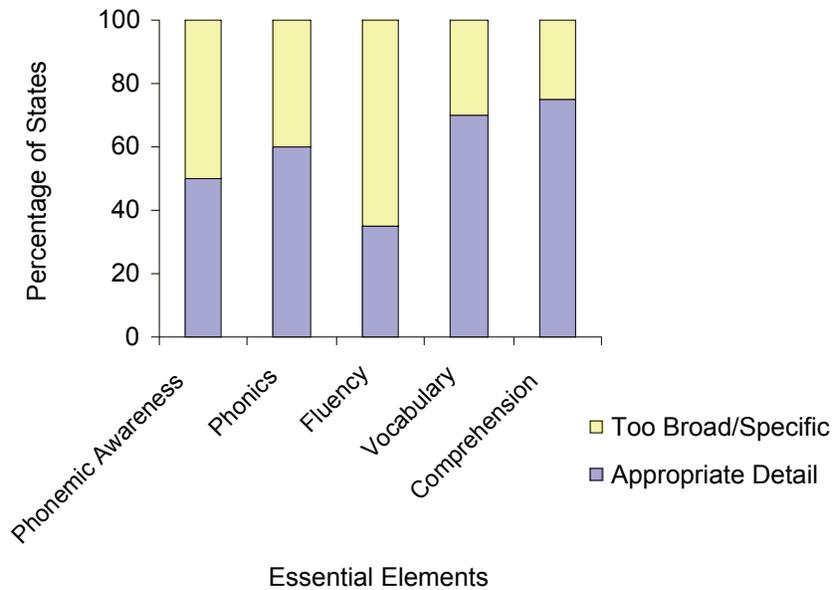
Demonstrate phonemic awareness by blending or segmenting phonemes in a one-syllable word

Here is an example from one state related to phonemic awareness standards rated as an appropriate level of detail:

[S]egment one-syllable spoken words into individual phonemes, including three and four phoneme words, clearly producing beginning, medial, and final sounds

It appears that when state reading standards are not at an appropriate level of detail, with the exception of the area of comprehension, they err on the side of being too broad.

Figure 4
Percentage of States by Level of Detail of K-3 Reading Standards Representing Each Essential Element in 2003-04



The reviewers noted that the standards representing phonemic awareness and phonics most often compress important sub-elements together in a single statement or description of a standard, for example:

The student uses basic elements of phonetic analysis to decode unknown words (e.g., one-syllable words with 3-4 phonemes).

They also cited the grouping together of standards about phonemic awareness and phonics as contributing to the lack of specificity.

The reviewers frequently criticized fluency standards for lack of specificity. For example, a state's standard for grade 1 makes no attempt to delineate fluency into automaticity and expression:

Student will read aloud independently with fluency and comprehension any text that is appropriately designed for emergent readers.

Also, many comments were made about the absence of specific criteria for the rate of reading, for example:

Student reads primarily in large, meaningful phrases with only a few slowdowns for problem solving of words or reading to confirm accuracy or meaning.

All sampled states make comprehension clearly visible in their organization of reading standards.

In addition to the above analyses of reviewer ratings and comments regarding how well state standards represent the five essential elements, this study examined the visibility of these elements in the organization of each state's reading standards for K-3. There are two ways in which the organization can make these elements more visible: the use of language in labels and content which is consistent with these elements, and using this language closer to the top of the organizational hierarchy. Presumably, higher-level descriptions are more visible to teachers and curriculum specialists and are more likely to guide instruction.

The results of this examination varied substantially across the essential elements. Text comprehension is visible in the content standards of all sampled states. For example, in one state English language arts is divided into Reading, Writing, Conventions, and Listening and Speaking. Standards are organized under three areas of focus: (a) word analysis, fluency, and vocabulary; (b) reading comprehension; and (c) literary response and analysis. All essential elements except comprehension are under the first area of focus. Comprehension standards are very visible under the second area.

Standards focusing on phonemic awareness, phonics, fluency, and vocabulary are not always visible. Half of the sample of 20 states use categories of organization or have statements of student expectations at the most specific levels that clearly represent all five elements (e.g., phonemic awareness, word recognition, fluency, vocabulary acquisition, and reading process—concepts of print and comprehension). Another eight states use language that represents one or two elements in addition to comprehension (e.g., reading process and comprehension, analysis of texts, and phonics and word study or analysis). The other two states make only comprehension clearly visible (e.g., applying a variety of comprehension strategies, understanding literature, and understanding information texts).

Most of the states with all elements clearly visible do so with organizing language at the top of the hierarchy; only three do so at an intermediate or most specific level. On the other hand, most of the states with partial representation of the elements do so at the most specific level of organization. Thus, there is a relationship between the completeness with which states represent the essential elements in their organization of reading standards and the level where that representation occurs.

In summary, comprehension and, to a lesser extent, vocabulary are better represented by sampled state K-3 reading standards than are the other three essential elements of reading instruction.

Clearly, the number and quality of standards, as judged by the expert reviewers, favors the area of comprehension of text. Not only do states have a substantially larger number of standards in this area, but these standards are, on average, clearer, more likely to be assigned to an

appropriate grade level, more comprehensive in coverage, at a more appropriate level of detail, and more visible. Conversely, the area of phonemic awareness fared the worst. Looking at the average counts and ratings (see Appendix E), this element is the lowest or second lowest on all criteria.

Level of Representation, Quality, and Organization of Standards

It is difficult to present information about the number, coverage, detail, and grade appropriateness of state reading standards without entertaining the idea that there might be some relationships among these characteristics—perhaps for some of the essential elements, or even all of them. Analyses were carried out to study these relationships and, more specifically, to answer the following questions:

- Is the number of state standards clearly representing an essential element related to the coverage of that element?
- Is the number of state standards clearly representing an essential element related to their grade appropriateness?
- Is the number of state standards clearly representing an essential element related to their level of detail?
- Do standards with more appropriate level of detail provide better coverage?
- How does organizational visibility relate to number and coverage, grade appropriateness, and level of detail?

States with larger numbers of standards have standards that provide more adequate coverage.

Clearly, states with reading standards that provide adequate coverage have more standards—at least twice as many—clearly representing each of the five essential elements (see Table 1).

Table 1
Mean Number of State K-3 Reading Standards Clearly Representing the Essential Elements by How Adequately the Standards Cover Each Element in 2003-04

Essential Element of Reading Instruction	Standards Provide Adequate Coverage *		Standards Provide Inadequate Coverage	
	Number of States	Mean Number of Clear Standards	Number of States	Mean Number of Clear Standards
Phonemic Awareness	12	5.1	8	1.7
Phonics	16	13.8	4	2.8
Fluency	11	5.9	9	2.1
Vocabulary	12	18.2	8	9.8
Comprehension	18	50.6	2	20.2

* Adequate coverage means that the standards cover all or most of the element’s content.

States with larger numbers of standards have standards that are more likely to be at an appropriate grade level.

For reading standards representing phonemic awareness and phonics, states that were rated as assigning most of their standards to an appropriate grade level had many more standards clearly representing these two areas (see Table 2). Although there may be no reason to expect larger numbers of standards to be associated with their grade appropriateness, this finding—combined with the other associations in this section—suggests that states with better standards in general have created relatively larger numbers of standards as well. Because all but one state had their standards in the other three areas rated as mostly appropriate for the assigned grade level, comparisons with states whose standards were not rated mostly appropriate is impossible or difficult.

Table 2
Mean Number of State K-3 Reading Standards Clearly Representing the Essential Elements by Grade Appropriateness in 2003-04

Essential Element of Reading Instruction	Standards Are Mostly Appropriate		Standards Are Not Mostly Appropriate	
	Number of States	Mean Number of Clear Standards	Number of States	Mean Number of Clear Standards
Phonemic Awareness	12	5.3	6	1.8
Phonics	15	14.2	5	3.6
Fluency	19	4.4	1	1.0
Vocabulary	19	15.5	1	1.0
Comprehension	20	47.5	0	--

States with larger numbers of standards have standards that are written more often at an appropriate level of detail.

The average number of standards representing each essential element for states with standards having appropriate detail and for states with standards that are either too broad or too specific is presented in Table 3.

Table 3
Mean Number of State K-3 Reading Standards Clearly Representing the Essential Elements by the Appropriateness of Detail in 2003-04

Essential Element of Reading Instruction	Standards Have Appropriate Detail		Standards Are Too Broad or Too Specific *	
	Number of States	Mean Number of Clear Standards	Number of States	Mean Number of Clear Standards
Phonemic Awareness	9	5.7	9	2.7
Phonics	13	13.0	7	9.0
Fluency	7	6.1	13	3.2
Vocabulary	14	17.2	6	9.2
Comprehension	18	49.8	2	27.5

* Standards were always too broad except for the comprehension element.

Again, for all five of the essential elements, states with standards written at an appropriate level of detail have more standards that clearly represent each element than states with standards judged to be either too broad or too specific.

There is a modest relationship between level of detail and adequacy of coverage.

The relationship between the standards’ level of detail and adequacy of coverage is of interest because some might argue that it is easier to provide greater coverage with standards that are fairly broad in their level of detail. Yet, when states were grouped on these two characteristics above, states with broad standards and states with inadequate coverage had fewer standards, suggesting that the same states might tend to have broad standards and standards providing inadequate coverage. Correlation coefficients calculated between coverage and level of detail ranged between 0.24 (for phonemic awareness) and 0.45 (for fluency), indicating a small, but positive, relationship between these two characteristics of state reading standards. States with standards that have an appropriate level of detail tend to be the same states whose standards provide adequate coverage of the essential elements.

There is a positive relationship between the visibility of the essential elements within the organization of reading standards and how well the standards represent these elements.

Both the number and quality of reading standards—within and across the five elements—were found to be directly related to the degree of element visibility. For example, the average number of standards clearly representing all five elements for the 10 states with all elements visible is 98.6. For the eight states with some elements visible, the average number of standards is 72.0, and for the two states with only comprehension visible, the average is 24.5. This is not simply due to the “better visibility” states having more standards in certain areas such as phonemic awareness, phonics, and fluency. This pattern in the average number of standards is the same for each essential element. For example, the average number of standards clearly representing comprehension of text for states with all, some, or only comprehension elements visible is 55.1, 43.4, and 20.2, respectively.

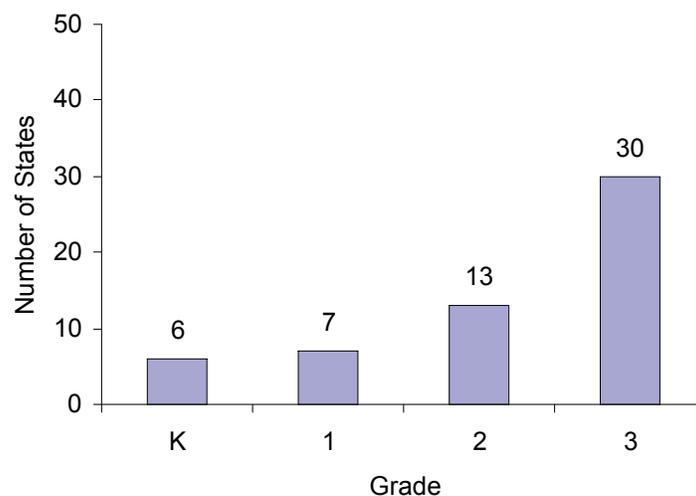
The percentage of states providing coverage for most or all of each element is similarly related to the degree of element visibility. That is, states that organize their standards so that the elements are visible were more likely to be judged to have standards that provide good coverage of the elements. Coverage is also directly related to the level at which the elements are visible. Coverage is best for states that make the elements visible in the top of their hierarchies and worst for states with elements visible at the bottom, most specific level.

State Assessments as Reading First Outcome Measures

Thirty of the 51 states (59 percent) administer statewide reading assessments in at least one grade in the K-3 grade span.

These 30 states all administer statewide reading assessments in the third grade, whereas only 13 (26 percent) do so in second grade, seven (14 percent) in first grade, and six (12 percent) do so in kindergarten (see Figure 5).

**Figure 5
Number of States Administering Statewide
Reading Assessments in Grades K-3, 2003-04**



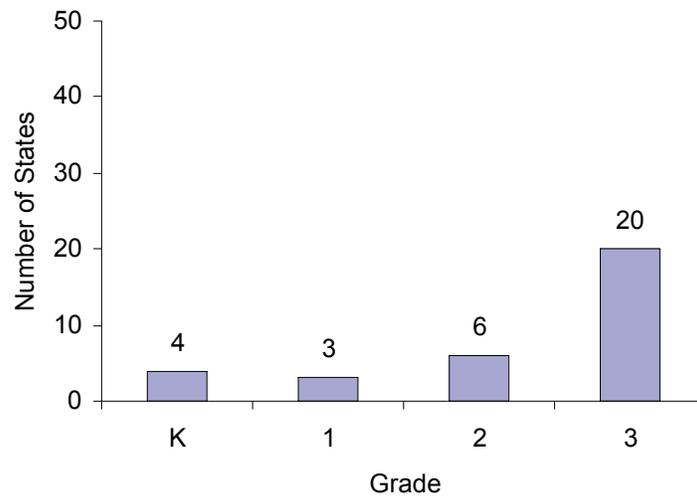
The few states with statewide reading assessments in K-2 include two states (Texas and Virginia) with reading assessments that are not, strictly speaking, required of all students, but, in fact, are administered to virtually all students in these grades.

Twenty-one states (41 percent) identify statewide reading assessments as measures of Reading First outcomes in at least one of the K-3 grades.

Twenty (39 percent) identify their third-grade assessments as Reading First outcome measures. Very few states have reading assessments in K-2, and fewer still also identify these assessments

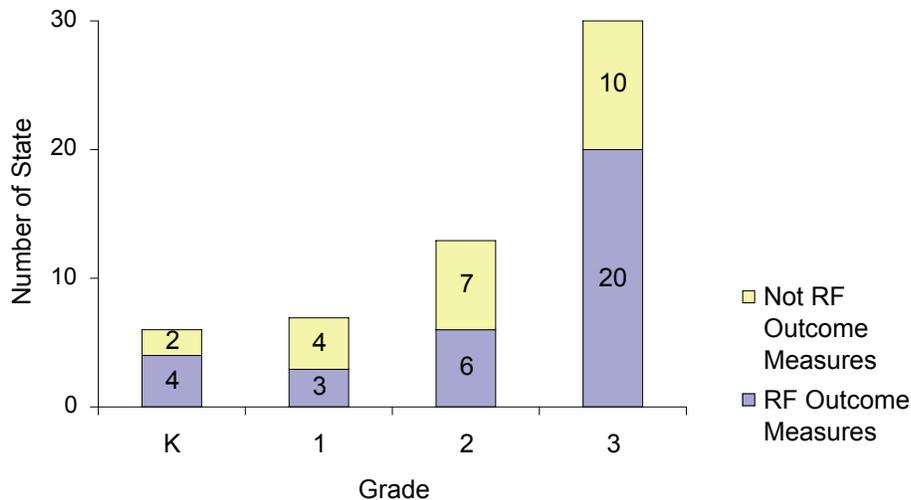
for Reading First—six (12 percent) in second grade, three (6 percent) in first grade, and four (8 percent) in kindergarten (see Figure 6).

Figure 6
Number of States Identifying Their Statewide Reading Assessments in Grades K-3 as Reading First Outcome Measures, 2003-04



Looking only at the 30 states with statewide reading assessments in at least one of the K-3 grades, most (21 or 70 percent) identify their state assessments as Reading First outcome measures in at least one grade. Of the 30 states with statewide reading assessments in third grade, 20 (67 percent) identify them for Reading First. Six of 13 (46 percent) do so in second grade, three of seven (43 percent) in first grade, and four of six (67 percent) in kindergarten (see Figure 7).

Figure 7
Number of States with Statewide K-3 Reading
Assessments Identified as Reading First
Outcome Measures, 2003-04



Most states identifying their statewide assessments as Reading First outcome measures specify the targeted reading components, and they tend to be comprehension and vocabulary.

Of the 21 states that use their statewide reading assessments as Reading First outcome measures, most (15 or 71 percent) specify the components of reading instruction their assessments are expected to measure. At specific grades, 14 of 20 (70 percent) specify the components for third grade, three of six (50 percent) do so for second grade, one of three (33 percent) for first grade, and two of four (50 percent) for kindergarten. Of the six states that do not specify the measured reading components, two indicate that their statewide reading assessments are being used in conjunction with other assessments (e.g., the DIBELS or the Woodcock-Johnson) required by the state for all Reading First districts.

For kindergarten, the two states identifying reading components indicate their statewide assessments are intended to measure all components except fluency. In one of these states, the statewide assessment is the only Reading First outcome measure identified for these elements; in the other state, additional assessments are required as Reading First outcome measures. For grade 1, the one state identifying reading components indicates the statewide assessment measures all components except fluency. That state also requires districts to employ other assessments as Reading First outcome measures for these components.

For grade 2, phonics, vocabulary, and comprehension are the components measured by the statewide reading assessments of the three states. One state identifies its statewide assessment as the only Reading First outcome measure of vocabulary and comprehension, while there are additional outcome measures for phonics. In the other two states, additional outcome measures are required for Reading First districts.

For grade 3, all 14 states identify their statewide reading assessment as measuring comprehension; 11 also identify vocabulary. Phonics is identified by only three states. Nine of these 14 states identify the statewide reading assessment as the only Reading First outcome measure for a component. Five states require other assessments for Reading First districts. Two states use both strategies for different components.

In summary, 30 states administer statewide reading assessments in grade 3, and few do so at grades below 3. Twenty of these states identify their grade 3 statewide reading assessments as measures of Reading First outcomes, primarily for just vocabulary and comprehension. None of the states identify their statewide reading assessments as outcome measures in the area of fluency, presumably because it requires individual assessment of children.

Similarities in How Well Standards and Assessments Represent the Essential Elements

This study looked for similarities in how well state K-3 reading standards represent the five essential elements and whether the state identified its reading assessments as measuring Reading First outcomes. Few relationships were found in the 20 sampled states. There is a moderate difference in the number of reading standards clearly representing the essential elements. States identifying their reading assessments as Reading First outcome measures average 92.6 standards, while states not identifying their assessments and states with no K-3 assessments average 72.1 and 76.1 standards, respectively. Also, the degree of visibility of the five essential elements in the organization of state reading standards was found to relate somewhat to the identification of state reading assessments as Reading First outcome measures. Five of the eight states (62.5 percent) that identify their statewide reading assessments as Reading First outcome measures make all elements visible, compared to 50 percent of the states that do not identify their assessments for Reading First or have no K-3 reading assessments.

Discussion and Conclusions

Degree and Quality of Standards' Representation of the Essential Elements

State reading standards for K-3 represent reading comprehension better than any of the other essential elements of reading instruction in the 20 sampled states. Comprehension of text is represented by the largest number of standards and the highest percentage of clear standards, followed by vocabulary, phonics, fluency, and phonemic awareness. Some standards representing phonemic awareness or phonics were judged unclear due to the confusion and mixing together of standards representing these two elements.

The appropriateness of the grade level assignment of standards was fairly high overall. The lowest percentage of states judged to have assigned most or all standards to an appropriate grade level was 67 percent for phonemic awareness. The highest percentage was for comprehension, followed by vocabulary, fluency, phonics, and phonemic awareness. A typical reviewer comment was that the grade placement of phonemic awareness and phonics standards was too high, suggesting that expectations in these two areas could be increased, especially for students in kindergarten and grade 1.

The coverage of content in each essential element followed a similar pattern. Comprehension standards were judged to cover most or all of the appropriate content in 90 percent of the states. Comprehension was followed by phonics, vocabulary, phonemic awareness, and fluency. Fluency standards appeared to include some but not all of three subcomponents: rate, accuracy, and expression (prosody). The phonemic awareness standards were also faulted for failing to include all subcomponents but not any in particular. Some states left out phoneme identity, some left out phoneme segmentation, etc. The content missing for vocabulary was most frequently direct instruction and strategies for figuring out the meaning of new words.

State reading standards were not judged as high on appropriate level of detail, erring primarily on the side of being too broad. The highest percentage of states with an appropriate level of detail was 80 percent for comprehension of text, followed by vocabulary, phonics, phonemic awareness, and fluency. In most cases, when standards were judged as not having an appropriate level of detail, it was because they were too broad. Fluency standards appeared to be judged too broad because, as in the case of content coverage, they did not include specifics about all three subcomponents: rate, accuracy, and expression.

Overall, standards representing comprehension were most numerous, clear, at an appropriate grade level, comprehensive in coverage, and written at an appropriate level of detail. Vocabulary usually came next. This outcome is consistent with states' having a great deal of experience developing standards in comprehension and vocabulary, and less experience with the other three elements only recently emphasized by the National Reading Panel reports.

There were several interesting relationships observed among the reviewers' judgments about the number and quality of reading standards. States with larger numbers of standards have standards

that provide better coverage, are more likely to be at an appropriate grade level, and are written more often at an appropriate level of detail. A relationship between coverage and level of detail was also found. Apparently, reviewers required a reasonably small “grain size” to be able to see whether there was adequate coverage.

Finally, certain aspects of the organization of reading standards were related to how well the standards represent the essential elements of effective reading instruction. Both the number and quality of reading standards were directly related to the number of essential elements that were clearly visible in the organizational hierarchy. The more elements that were clearly visible, the more standards there were representing each of the elements and the better the coverage that was provided for each element. Coverage was also found to relate to the organization level at which the elements were made visible. Visibility at the highest level related to better coverage of the elements.

Statewide Reading Assessments’ Representation of the Essential Elements

The review of the 50 state and the District of Columbia Reading First applications suggests that statewide reading assessments in place during the 2003-04 school year do not play a significant role in promoting reading instruction in the five essential areas, with the possible exception of vocabulary development and text comprehension in grade 3. Only 30 states administer statewide reading assessments in grade 3, and very few do so at grades below 3. Even in grade 3, only two-thirds of the states with statewide reading assessments (20 out of 30) identify their assessments as measures of Reading First outcomes, and primarily for only vocabulary and comprehension. As states develop statewide reading assessments for grade 3 students to comply with NCLB, they may develop them to be compatible with the Reading First program requirements.

Most states identifying their statewide assessments as Reading First outcome measures also identify the essential elements that are measured. None of the states identifies its statewide reading assessments as Reading First outcome measures in the area of fluency. They target phonemic awareness and phonics as well as early vocabulary development and comprehension skills. The measurement of (oral) fluency presents, and will probably continue to present, challenges to large-scale assessment programs, because it requires individual assessment of children which is costly and time-consuming.

Relationships between Standards’ and Assessments’ Representation of Essential Elements

Modest differences in the number and visibility of reading standards were found between states that identified their statewide reading assessments as Reading First outcome measures and those that did not. It is possible that states identifying their assessments for Reading First outcome measures have paid more attention to whether their assessments and standards are aligned with the essential elements of effective reading instruction.

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Appendices

Appendix A. National Reading Panel Description of the Essential Components of Reading Instruction

Appendix B. Stratified Random Sample of 20 States

Appendix C. Documentation Used in Review of State K-3 Reading Standards

Appendix D. Standards Review Instrument

Appendix E. State Assessment Review Form

Appendix F. Results of Analyses of Ratings of State K-3 Reading Standards

Appendix A. National Reading Panel Description of the Essential Components of Reading Instruction

The following excerpts are taken from the summary report of the National Reading Panel (2000). They provide a brief description of each of the five essential components of reading instruction and the evidence for their impact on learning to read.

Phonemic Awareness

Phonemes are the smallest units composing spoken language. For example, the words “go” and “she” each consist of two sounds or phonemes. Phonemes are different from letters that represent phonemes in the spellings of words.

Instruction in phonemic awareness (PA) involves teaching children to focus on and manipulate phonemes in spoken syllables and words. (p. 7)

Overall, the findings showed that teaching children to manipulate phonemes in words was highly effective under a variety of teaching conditions with a variety of learners across a range of grade and age levels and that teaching phonemic awareness to children significantly improves their reading more than instruction that lacks any attention to PA. (p. 7)

Phonics

The primary focus of phonics instruction is to help beginning readers understand how letters are linked to sounds (phonemes) to form letter-sound correspondences and spelling patterns and to help them learn how to apply this knowledge in their reading. (p. 8)

The meta-analysis revealed that systematic phonics instruction produces significant benefits for students in kindergarten through sixth grade and for children having difficulty learning to read. The ability to read and spell words was enhanced in kindergartners who received systematic beginning phonics instruction. First-graders who were taught phonics systematically were better able to decode and spell, and they showed significant improvement in their ability to comprehend text. Older children receiving phonics instruction were better able to decode and spell words and to read text orally, but their comprehension of text was not significantly improved. (p. 9)

Fluency

Fluent readers are able to read orally with speed, accuracy, and proper expression. Fluency is one of several critical factors necessary for reading comprehension. (p. 11)

... [T]he Panel concluded that guided repeated oral reading procedures that included guidance from teachers, peers, or parents had a significant and positive impact on word recognition, fluency, and comprehension across a range of grade levels. (p. 12)

Vocabulary

There are two types of vocabulary—oral and print. A reader who encounters a strange word in print can decode the word to speech. If it is in the reader's oral vocabulary, the reader will be able to understand it. If the word is not in the reader's oral vocabulary, the reader will have to determine the meaning by other means, if possible. Consequently, the larger the reader's vocabulary (either oral or print), the easier it is to make sense of the text. (p. 13)

The findings on vocabulary yielded several specific implications for teaching reading. First, vocabulary should be taught both directly and indirectly. Repetition and multiple exposures to vocabulary items are important. Learning in rich contexts, incidental learning, and use of computer technology all enhance the acquisition of vocabulary. (p. 14)

Text Comprehension

... [C]omprehension is an active process that requires an intentional and thoughtful interaction between the reader and the text... Thus, readers derive meaning from text when they engage in intentional, problem solving thinking processes. (p. 14)

... [T]he evidence suggests that teaching a combination of reading comprehension techniques is the most effective. When students use them appropriately, they assist in recall, question answering, question generation, and summarization of texts. When used in combination, these techniques can improve results in standardized comprehension tests. (p. 15)

Appendix B. Stratified Random Sample of 20 States

State	Enrollment	Region
Pennsylvania	1,821,627	Northeast
New York	2,872,132	Northeast
New Jersey	1,341,656	Northeast
Massachusetts	973,140	Northeast
Virginia	1,163,091	Southeast
South Carolina	691,078	Southeast
North Carolina	1,315,363	Southeast
Louisiana	731,328	Southeast
Florida	2,500,478	Southeast
Ohio	1,830,985	Central
Missouri	909,792	Central
Minnesota	851,384	Central
Michigan	1,730,668	Central
Illinois	2,071,391	Central
Wyoming	88,128	West
Washington	1,009,200	West
Texas	4,163,447	West
Nevada	356,814	West
New Mexico	320,260	West
California	6,248,610	West
Total	32,990,572	
Percent of U.S. Enrollment	69.2%	
U.S. Enrollment	47,687,871	

Sampling Method: Each of the 50 states and the District of Columbia was assigned to one of four geographic regions (using the first definition in the *Digest of Education Statistics, 2002*). The total student enrollment for each state was taken from the Build A Table resource of the Common Core of Data, 2001-02. The states were stratified by region and a probability sample of 20 states was drawn with the probability of being sampled proportionate to total enrollment. This procedure facilitated drawing states that were geographically representative of the country and serving relatively large numbers of students.

Appendix C. Documentation Used in Review of State K-3 Reading Standards in 2003-04

The documents used to review the K-3 reading content standards for each of the 20 sampled states are listed below. The Internet address where these standards documents were found is also provided. (These addresses were last accessed successfully on or about Jan. 31, 2004.)

California

English-Language Arts Content Standards for California Public Schools: Kindergarten Through Grade 12

<http://www.cde.ca.gov/cdepress/standards-pdfs/english-language-arts.pdf>

Florida

Language Arts Standards: Pre-K-2 and 3-5

Grade Level Expectations for the Sunshine State Standards: K-2

Grade Level Expectations for the Sunshine State Standards: 3-5

Grade Level Expectations for the Sunshine State Standards: K, 1, 2, and 3

<http://www.firn.edu/doe/curric/prek12/frame2.htm>

(Provides access to all of the above.)

Illinois

English Language Arts: State Goals: 1-5

<http://www.isbe.state.il.us/ils/english/english.html>

English Language Arts Performance Descriptors

http://www.isbe.net/ils/pdfs/English_PDs_1-5.pdf

Louisiana

Content Standards

<http://www.doe.state.la.us/lde/uploads/2909.pdf>

English Language Arts (ELA) Grade Level Expectations

<http://www.doe.state.la.us/lde/uploads/3906.pdf>

Massachusetts

Massachusetts English Language Arts Curriculum Framework, June 2001

<http://www.doe.mass.edu/frameworks/ela/0601.pdf>

Michigan

Michigan Curriculum Framework (English Language Arts Section)

http://michigan.gov/documents/MichiganCurriculumFramework_8172_7.pdf

Draft Grade Level Content Expectations—Reading K-5

(Not posted on Internet. Obtained from state.)

Minnesota

Minnesota Academic Standards: Language Arts K-12, May 19, 2003

<http://education.state.mn.us/content/009200.pdf>

Missouri

The Show-Me Knowledge Standards: Communication Arts

<http://dese.mo.gov/standards/comarts.html>

Framework for Curriculum Development in Communication Arts K-12

<http://dese.mo.gov/divimprove/curriculum/webframeworks/01CA.PDF>

Communication Arts Grade-Level Expectations—Aug. 15, 2003

http://dese.mo.gov/divimprove/curriculum/GLE/Comm_Arts_Grade-Level_Expectations_8.15.03.pdf

Nevada

Nevada English Language Arts Content Standards for Kindergarten and Grades 1, 2, 3, 4, 5, 6, 7, 8, and 12

<http://www.nde.state.nv.us/sca/standards/standardsfiles/ela/elacont.pdf>

New Jersey

New Jersey Core Curriculum Content Standards for Language Arts Literacy

<http://www.nj.gov/njded/cccs/02/lal.pdf>

New Mexico

New Mexico Curriculum Framework—Language Arts

http://164.64.166.11/cilt/downloads/standards/stand_la.pdf

New York

Learning Standards for English Language Arts. March, 1996

<http://www.emsc.nysed.gov/ciai/ela/pub/elalearn.pdf>

English Language Arts Resource Guide: Core Curriculum

<http://www.emsc.nysed.gov/ciai/ela/pub/ccela.pdf>

Early Literacy Guidance: Prekindergarten—Grade 3

<http://www.emsc.nysed.gov/ciai/ela/early.pdf>

North Carolina

English Language Arts Curriculum (Selected Sections/Links)

<http://www.ncpublicschools.org/curriculum/languagearts/>

(click on “Curriculum Approved: 1999” link)

Ohio

Academic Content Standards: K-12 English Language Arts

http://www.ode.state.oh.us/academic_content_standards/pdf/ENGLISH.pdf

Pennsylvania

Academic Standards for Reading, Writing, Speaking and Listening

<http://www.pde.state.pa.us/k12/lib/k12/Reading.pdf>

Standards and Eligible Content

http://www.pde.state.pa.us/a_and_t/cwp/view.asp?A=108&Q=98808#blueprint

South Carolina

South Carolina English Language Arts Curriculum Standards 2002

<http://www.sde.state.sc.us/offices/cso/standards/ela/documents/standards.pdf>

Texas

Texas Administrative Code (TAC), Title 19, Part II

Chapter 110. Texas Essential Knowledge and Skills for English Language Arts and Reading

<http://www.tea.state.tx.us/rules/tac/chapter110/>

Virginia

English Standards of Learning for Virginia Public Schools, Nov. 20, 2002

<http://www.pen.k12.va.us/VDOE/Superintendent/Sols/EnglishSOLFinal02.pdf>

Washington

Essential Academic Learning Requirements—Reading

<http://www.k12.wa.us/curriculumInstruct/reading/ealrs.aspx>

Grade Level Expectations Reports

<http://www.k12.wa.us/curriculumInstruct/reading/pubdocs/ReadingEALR-GLE.pdf>

Wyoming

Wyoming Language Arts Content and Performance Standards—July 7, 2003

<http://www.k12.wy.us/eqa/nca/pubs/standards/lang.pdf>

Appendix D. Standards Review Instrument

How Well Do the Standards Represent **Phonemic Awareness**?

1. Identify the state standards that describe student knowledge and skills in the area of **Phonemic Awareness**. Write, copy, or reference each standard in one of the columns below that best describes how clearly and explicitly the standard represents this area of reading instruction. If referencing, please use a code, such as an outline identifier used in the state’s documentation, that accurately and uniquely identifies the standard in the state’s documentation. Also, indicate the grade level of the standard by placing a K, 1, 2, or 3 in parentheses next to it.

Standards that clearly and explicitly represent Phonemic Awareness	Standards that require some interpretation or “reading between the lines” to make the connection to Phonemic Awareness	Standards that are only vaguely or remotely related to Phonemic Awareness
<p>Describe below any standards or features of the state’s organization of its standards that might be inconsistent with instruction in Phonemic Awareness that is based on reading research reported by the National Reading Panel. Give or reference examples.</p>		

2. How well do the standards representing **Phonemic Awareness** describe student knowledge and skills appropriate for the grades to which the standards have been assigned by the state? (Indicate which column is the best response by checking, circling, bolding, underlining, etc.)

All are appropriate	Most are appropriate	About half are appropriate	Few are appropriate	None are appropriate
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If all are appropriate, go to item 3. If not, please explain here how these standards are not grade-appropriate, e.g., inappropriate sequencing, difficulty, or complexity. Identify which standards and which areas of **Phonemic Awareness** are affected.

3. How well do the standards provide complete coverage of the student knowledge and skills in the area of **Phonemic Awareness**? (Indicate which column is the best response.)

All are covered	Most are covered	About half are covered	Few are covered	None are covered
-----------------	------------------	------------------------	-----------------	------------------

If all knowledge and skills are covered, go to item 4. If not, please explain here what student knowledge and skills are missing. If coverage varies across grades, please describe how.

4. How well do the standards representing **Phonemic Awareness** provide an appropriate level of detail? An appropriate level of detail would provide sufficient specificity to promote alignment among curriculum, instruction, and assessment and sufficient flexibility to provide curricular guidelines that could be translated into instructional activities tailored to the needs of different students? (Indicate which column is the best response.)

Much too broad/general	Somewhat too broad/general	Appropriate level of detail	Somewhat too specific	Much too specific
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If the standards provide an appropriate level of detail, go to item 5. If not, please describe and give examples of how these standards provide too little or too much detail. Explain how instruction in the area of **Phonemic Awareness** would be affected.

5. Are there any other comments you would like to make that would help us understand how well this state's standards represent the reading instructional area of **Phonemic Awareness**?

Additional comments:

How Well Do the Standards Represent **Phonics**?

1. Identify the state standards that describe student knowledge and skills in the area of **Phonics**. Write, copy, or reference each standard in one of the columns below that best describes how clearly and explicitly the standard represents this area of reading instruction. If referencing, please use a code, such as an outline identifier used in the state’s documentation, that accurately and uniquely identifies the standard in the state’s documentation. Also, indicate the grade level of the standard by placing a K, 1, 2, or 3 in parentheses next to it.

Standards that clearly and explicitly represent Phonics	Standards that require some interpretation or “reading between the lines” to make the connection to Phonics	Standards that are only vaguely or remotely related to Phonics
<p>Describe below any standards or features of the state’s organization of its standards that might be inconsistent with instruction in Phonics that is based on reading research reported by the National Reading Panel. Give or reference examples.</p>		

2. How well do the standards representing **Phonics** describe student knowledge and skills appropriate for the grades to which the standards have been assigned by the state? (Indicate which column is the best response by checking, circling, bolding, underlining, etc.)

All are appropriate	Most are appropriate	About half are appropriate	Few are appropriate	None are appropriate
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If all are appropriate, go to item 3. If not, please explain here how these standards are not grade-appropriate, e.g., inappropriate sequencing, difficulty, or complexity. Identify which standards and which areas of **Phonics** are affected.

3. How well do the standards provide complete coverage of the student knowledge and skills in the area of **Phonics**? (Indicate which column is the best response.)

All are covered	Most are covered	About half are covered	Few are covered	None are covered
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If all knowledge and skills are covered, go to item 4. If not, please explain here what student knowledge and skills are missing. If coverage varies across grades, please describe how.

4. How well do the standards representing **Phonics** provide an appropriate level of detail? An appropriate level of detail would provide sufficient specificity to promote alignment among curriculum, instruction, and assessment and sufficient flexibility to provide curricular guidelines that could be translated into instructional activities tailored to the needs of different students? (Indicate which column is the best response.)

Much too broad/general	Somewhat too broad/general	Appropriate level of detail	Somewhat too specific	Much too specific
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If the standards provide an appropriate level of detail, go to item 5. If not, please describe and give examples of how these standards provide too little or too much detail. Explain how instruction in the area of **Phonics** would be affected.

5. Are there any other comments you would like to make that would help us understand how well this state’s standards represent the reading instructional area of **Phonics**?

Additional comments:

How Well Do the Standards Represent **Fluency**?

1. Identify the state standards that describe student knowledge and skills in the area of **Fluency**. Write, copy, or reference each standard in one of the columns below that best describes how clearly and explicitly the standard represents this area of reading instruction. If referencing, please use a code, such as an outline identifier used in the state’s documentation, that accurately and uniquely identifies the standard in the state’s documentation. Also, indicate the grade level of the standard by placing a K, 1, 2, or 3 in parentheses next to it.

Standards that clearly and explicitly represent Fluency	Standards that require some interpretation or “reading between the lines” to make the connection to Fluency	Standards that are only vaguely or remotely related to Fluency
<p>Describe below any standards or features of the state’s organization of its standards that might be inconsistent with instruction in Fluency that is based on reading research reported by the National Reading Panel. Give or reference examples.</p>		

2. How well do the standards representing **Fluency** describe student knowledge and skills appropriate for the grades to which the standards have been assigned by the state? (Indicate which column is the best response by checking, circling, bolding, underlining, etc.)

All are appropriate	Most are appropriate	About half are appropriate	Few are appropriate	None are appropriate
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If all are appropriate, go to item 3. If not, please explain here how these standards are not grade-appropriate, e.g., inappropriate sequencing, difficulty, or complexity. Identify which standards and which areas of **Fluency** are affected.

3. How well do the standards provide complete coverage of the student knowledge and skills in the area of **Fluency**? (Indicate which column is the best response.)

All are covered	Most are covered	About half are covered	Few are covered	None are covered
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If all knowledge and skills are covered, go to item 4. If not, please explain here what student knowledge and skills are missing. If coverage varies across grades, please describe how.

4. How well do the standards representing **Fluency** provide an appropriate level of detail? An appropriate level of detail would provide sufficient specificity to promote alignment among curriculum, instruction, and assessment and sufficient flexibility to provide curricular guidelines that could be translated into instructional activities tailored to the needs of different students? (Indicate which column is the best response.)

Much too broad/general	Somewhat too broad/general	Appropriate level of detail	Somewhat too specific	Much too specific
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If the standards provide an appropriate level of detail, go to item 5. If not, please describe and give examples of how these standards provide too little or too much detail. Explain how instruction in the area of **Fluency** would be affected.

5. Are there any other comments you would like to make that would help us understand how well this state's standards represent the reading instructional area of **Fluency**?

Additional comments:

How Well Do the Standards Represent **Vocabulary**?

1. Identify the state standards that describe student knowledge and skills in the area of **Vocabulary**. Write, copy, or reference each standard in one of the columns below that best describes how clearly and explicitly the standard represents this area of reading instruction. If referencing, please use a code, such as an outline identifier used in the state’s documentation, that accurately and uniquely identifies the standard in the state’s documentation. Also, indicate the grade level of the standard by placing a K, 1, 2, or 3 in parentheses next to it.

Standards that clearly and explicitly represent Vocabulary	Standards that require some interpretation or “reading between the lines” to make the connection to Vocabulary	Standards that are only vaguely or remotely related to Vocabulary
<p>Describe below any standards or features of the state’s organization of its standards that might be inconsistent with instruction in Vocabulary that is based on reading research reported by the National Reading Panel. Give or reference examples.</p>		

2. How well do the standards representing **Vocabulary** describe student knowledge and skills appropriate for the grades to which the standards have been assigned by the state? (Indicate which column is the best response by checking, circling, bolding, underlining, etc.)

All are appropriate	Most are appropriate	About half are appropriate	Few are appropriate	None are appropriate
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If all are appropriate, go to item 3. If not, please explain here how these standards are not grade-appropriate, e.g., inappropriate sequencing, difficulty, or complexity. Identify which standards and which areas of **Vocabulary** are affected.

3. How well do the standards provide complete coverage of the student knowledge and skills in the area of **Vocabulary**? (Indicate which column is the best response.)

All are covered	Most are covered	About half are covered	Few are covered	None are covered
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If all knowledge and skills are covered, go to item 4. If not, please explain here what student knowledge and skills are missing. If coverage varies across grades, please describe how.

4. How well do the standards representing **Vocabulary** provide an appropriate level of detail? An appropriate level of detail would provide sufficient specificity to promote alignment among curriculum, instruction, and assessment and sufficient flexibility to provide curricular guidelines that could be translated into instructional activities tailored to the needs of different students? (Indicate which column is the best response.)

Much too broad/general	Somewhat too broad/general	Appropriate level of detail	Somewhat too specific	Much too specific
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If the standards provide an appropriate level of detail, go to item 5. If not, please describe and give examples of how these standards provide too little or too much detail. Explain how instruction in the area of **Vocabulary** would be affected.

5. Are there any other comments you would like to make that would help us understand how well this state's standards represent the reading instructional area of **Vocabulary**?

Additional comments:

How Well Do the Standards Represent **Comprehension**?

1. Identify the state standards that describe student knowledge and skills in the area of **Comprehension**. Write, copy, or reference each standard in one of the columns below that best describes how clearly and explicitly the standard represents this area of reading instruction. If referencing, please use a code, such as an outline identifier used in the state’s documentation, that accurately and uniquely identifies the standard in the state’s documentation. Also, indicate the grade level of the standard by placing a K, 1, 2, or 3 in parentheses next to it.

Standards that clearly and explicitly represent Comprehension	Standards that require some interpretation or “reading between the lines” to make the connection to Comprehension	Standards that are only vaguely or remotely related to Comprehension
<p>Describe below any standards or features of the state’s organization of its standards that might be inconsistent with instruction in Comprehension that is based on reading research reported by the National Reading Panel. Give or reference examples.</p>		

2. How well do the standards representing **Comprehension** describe student knowledge and skills appropriate for the grades to which the standards have been assigned by the state? (Indicate which column is the best response by checking, circling, bolding, underlining, etc.)

All are appropriate	Most are appropriate	About half are appropriate	Few are appropriate	None are appropriate
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If all are appropriate, go to item 3. If not, please explain here how these standards are not grade-appropriate, e.g., inappropriate sequencing, difficulty, or complexity. Identify which standards and which areas of **Comprehension** are affected.

3. How well do the standards provide complete coverage of the student knowledge and skills in the area of **Comprehension**? (Indicate which column is the best response.)

All are covered	Most are covered	About half are covered	Few are covered	None are covered
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If all knowledge and skills are covered, go to item 4. If not, please explain here what student knowledge and skills are missing. If coverage varies across grades, please describe how.

4. How well do the standards representing **Comprehension** provide an appropriate level of detail? An appropriate level of detail would provide sufficient specificity to promote alignment among curriculum, instruction, and assessment and sufficient flexibility to provide curricular guidelines that could be translated into instructional activities tailored to the needs of different students? (Indicate which column is the best response.)

Much too broad/general	Somewhat too broad/general	Appropriate level of detail	Somewhat too specific	Much too specific
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If the standards provide an appropriate level of detail, go to item 5. If not, please describe and give examples of how these standards provide too little or too much detail. Explain how instruction in the area of **Comprehension** would be affected.

5. Are there any other comments you would like to make that would help us understand how well this state's standards represent the reading instructional area of **Comprehension**?

Additional comments:

General Questions

1. Summarize the major ways in which the state's reading content standards provide support for the type of reading instruction called for in the five essential areas. How could the state improve the level of this support?

2. Summarize the ways in which any of the state's reading content standards are inconsistent with the five essential areas of reading instruction identified based on reading research reported by the National Reading Panel. What could be done to reduce these inconsistencies?

**Appendix E. State Assessment Review Form
Sample Page**

State	Grade	Statewide Reading Assessments	Used for RF Outcome?	Component(s) Specified?	Phonemic Awareness	Phonics	Fluency	Vocabulary	Compre-hension	Date RF Application Approved
Alabama	K	Name of Assessment	Yes/No	Yes/No	Only/Plus	Only/Plus	Only/Plus	Only/Plus	Only/Plus	
	1									
	2									
	3									
Alaska	K									
	1									
	2									
	3									
Arizona	K									
	1									
	2									
	3									
Arkansas	K									
	1									
	2									
	3									
California	K									
	1									
	2									
	3									

Appendix F. Results of Analyses of Ratings of State K-3 Reading Standards

Table F-1
Number of State Standards Representing Student Knowledge and Skills in Each Essential Element in 2003-04

Essential Element of Reading Instruction	Number of Standards Clearly and Explicitly Representing Element			Number of Standards Ambiguously Representing Element			Total Number of Standards Representing Element		
	Range	Mean	%	Range	Mean	%	Range	Mean	%
Phonemic Awareness	0-11	3.8	60.3	0-8	2.5	39.7	0-14	6.3	100.0
Phonics	0-40	11.6	73.9	0-14	4.1	26.1	1-40	15.7	100.0
Fluency	0-14	4.2	65.6	0-8	2.2	34.4	2-16	6.4	100.0
Vocabulary	1-35	14.8	79.6	0-13	3.8	20.4	3-40	18.6	100.0
Comprehension	9-123	47.5	83.5	0-25	9.4	16.5	9-130	56.9	100.0
All Five Elements	12-216	81.9	78.9	4-40	21.9	21.1	19-227	103.8	100.0

Table F-2
Distribution of States by Appropriateness of Grade Level to Which Standards Representing Each Essential Element Are Assigned in 2003-04

Essential Element of Reading Instruction	All Are Appropriate		Most Are Appropriate		About Half Are Appropriate		Few Are Appropriate		None Are Appropriate		Mean Appropriateness*	
	N	%	N	%	N	%	N	%	N	%	M	Label
Phonemic Awareness**	6	33.3	6	33.3	4	22.2	1	11.1	0	0.0	2.3	Most/Half
Phonics	8	40.0	7	35.0	4	20.0	1	5.0	0	0.0	2.2	Most
Fluency	13	65.0	6	30.0	1	5.0	0	0.0	0	0.0	1.7	All/Most
Vocabulary	15	75.0	4	20.0	1	5.0	0	0.0	0	0.0	1.7	All/Most
Comprehension	16	80.0	4	20.0	0	0.0	0	0.0	0	0.0	1.5	All/Most

* Rating categories were coded 1 (for All) through 5 (for None) before calculating the mean. The labels were assigned to the resulting averages based on the following rules: 1-1.25=All, 1.25-1.75=All/Most, 1.75-2.25=Most, 2.25-2.75=Most/Half, 2.75-3.25=Half, etc.

** Two states had no standards representing phonemic awareness.

Table F-3
Distribution of States by Adequacy of Coverage of Standards Representing Each Essential Element in 2003-04

Essential Element of Reading Instruction	All Are Covered		Most Are Covered		About Half Are Covered		Few Are Covered		None Are Covered		Mean Coverage*	
	N	%	N	%	N	%	N	%	N	%	M	Label
Phonemic Awareness	7	35.0	5	25.0	2	10.0	4	20.0	2	10.0	2.7	Most/Half
Phonics	4	20.0	12	60.0	1	5.0	3	15.0	0	0.0	2.4	Most/Half
Fluency	6	30.0	5	25.0	8	40.0	1	5.0	0	0.0	2.4	Most/Half
Vocabulary	4	20.0	8	40.0	6	30.0	2	10.0	0	0.0	2.5	Most/Half
Comprehension	13	65.0	5	25.0	1	5.0	1	5.0	0	0.0	1.6	All/Most

* Rating categories were coded 1 (for All) through 5 (for None) before calculating the mean. The labels were assigned to the resulting averages based on the following rules: 1-1.25=All, 1.25-1.75=All/Most, 1.75-2.25=Most, 2.25-2.75=Most/Half, 2.75-3.25=Half, etc.

Table F-4
Distribution of States by Appropriateness of Level of Detail of Standards Representing Each Essential Element in 2003-04

Essential Element of Reading Instruction	Much Too Broad/General		Somewhat Too Broad/General		Appropriate Level of Detail		Somewhat Too Specific		Much Too Specific		Mean Level of Detail*	
	N	%	N	%	N	%	N	%	N	%	M	Label
Phonemic Awareness**	0	0.0	9	50.0	9	50.0	0	0.0	0	0.0	2.2	Somewhat Broad/ Appropriate
Phonics	2	10.0	6	30.0	12	60.0	0	0.0	0	0.0	2.2	Somewhat Broad/ Appropriate
Fluency	4	20.0	9	45.0	7	35.0	0	0.0	0	0.0	1.9	Somewhat Broad
Vocabulary	1	5.0	5	25.0	14	70.0	0	0.0	0	0.0	2.5	Somewhat Broad/ Appropriate
Comprehension	0	0.0	2	10.0	15	75.0	3	15.0	0	0.0	3.0	Appropriate

* Rating categories were coded 1 (for Much Too Broad) through 5 (for Much Too Specific) before calculating the mean. The labels were assigned to the resulting averages based on the following rules: 1-1.25=Much Too Broad, 1.25-1.75=Much Too Broad/Somewhat Broad, 1.75-2.25=Somewhat Broad, 2.25-2.75=Somewhat Broad/Appropriate, 2.75-3.25=Appropriate, etc.

** Two states had no standards representing phonemic awareness.



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