

Recommendations for the use of Diagnostic Tests in *Reading First* Schools

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Purpose and Overview

This paper is written to provide guidance for the use of diagnostic reading measures in Reading First schools. The four sections will address: 1) the purposes of diagnostic assessments; 2) the use of diagnostic measures within the context of the other assessments that are part of each school's Reading First assessment plan; 3) research evidence on the validity of various diagnostic approaches in reading instruction; and, 4) summary and examples of the use of diagnostic tests for specific purposes.

Purpose of diagnostic assessments in Reading First

The major purpose for administering diagnostic tests to K-3 children in Reading First schools is to provide information that is useful in planning more effective instruction. Diagnostic tests should only be given when there is a clear expectation that they will provide new information about a child's difficulties learning to read that can be used to provide more focused, or more powerful instruction. Because they are expensive and time-consuming to administer, diagnostic tests should not be given routinely to every struggling reader in a class or grade. Rather, they should only be given in special cases in which insufficient information is currently available to guide instruction.

An example of an appropriate use of a diagnostic instrument would be to discover which components of reading are impaired in a child who has performed below grade level on a year-end test of reading comprehension. In this case, it would be useful to know if the child is impaired in reading fluency or accuracy, knowledge of word meanings, general background knowledge, or use of efficient comprehension strategies. It might also be helpful to know if the child has special difficulties on group administered, multiple choice tests (if that is the kind of test used in the year end outcome assessment). If the diagnostic test revealed that the child was a very dysfluent or inaccurate reader, that would suggest a need for instruction to strengthen these areas.

In another example, if a child was struggling to acquire fluent and efficient phonemic decoding skills (phonics), it would be useful to know something about the child's level of phonemic awareness and letter knowledge. An important note here is that most reliable and valid diagnostic reading tests do not provide complete information about which letter/sound correspondences are unknown, or which specific phonemes the child might be struggling with. Rather, diagnostic tests typically provide information about the relative level of skill a child has across several different components of reading or intellectual functioning. Information at a very specific level (i.e., which letter/sound

correspondences are known fluently) must typically be obtained through administration of an informal reading inventory or a classroom or curriculum based test.

Diagnostic measures in the context of the overall Reading First Assessment Plan

All Reading First schools are required to administer four types of reading assessments as part of their Reading First plan. These assessments are:

1. Screening instruments for the early identification of children who may need various levels of instructional intervention in order to maintain adequate growth in reading;
2. Classroom assessments, or progress monitoring assessments, to provide information about the child's progress in acquiring critical reading skills;
3. Diagnostic assessments to provide specific information to help focus instruction most effectively for individual children; and
4. Outcome assessments to monitor the extent to which children have met grade level expectations in reading.

If schools are implementing screening, progress monitoring, and outcome assessments in a reliable and valid way, diagnostic measures may be necessary only in unusual circumstances.

For example, there are reliable and valid screening and progress monitoring measures available in K-3 for phonemic awareness, letter knowledge, phonics, and reading fluency. If these constructs are reliably assessed several times a year with screening and progress monitoring instruments, there should be little need for additional assessment of these areas with a diagnostic test in cases where children have participated fully in the assessment plan throughout the school year. If vocabulary (knowledge of word meanings) and reading comprehension are reliably assessed in the yearly outcome assessment, information about these constructs will also be available, and they need not be reassessed using a diagnostic instrument unless there is some question about the validity or reliability of the outcome assessment. Before a diagnostic assessment is given, the child's teacher and grade level team should determine whether the diagnostic assessment that will be given actually can provide more information about the child's strengths and weaknesses in reading than they already possess. If it will provide additional information, then they also need to ask whether this new information will be useful to them in planning additional instruction for the child.

One obvious case in which a diagnostic assessment might be useful would occur when a child who had not been participating in a Reading First assessment plan moves into the school. If the child appears to be a struggling reader, then a diagnostic assessment might provide a useful way to measure a range of reading skills so that the child could be properly placed within the ongoing instructional program of the class. Even here, however, a diagnostic assessment might be superfluous if the teacher or school was using valid and reliable screening or progress monitoring

measures to identify the immediate instructional needs of students. Alternatively, the teacher might be using a core reading program that has its own placement tests that would allow the child to be integrated efficiently into ongoing instruction in the classroom.

To summarize the main point of this section, the other elements of a good Reading First assessment plan (screening, progress monitoring, and outcome assessment) often provide valid and reliable “diagnostic” information related to the child’s instructional needs. Because they are time consuming and expensive to administer, complete diagnostic reading tests should typically be administered only in unusual circumstances. A more common occurrence might be to use specific subtests from diagnostic instruments to provide information in areas not assessed by screening, progress monitoring, or outcome assessments. For example, if word knowledge (vocabulary) is not reliably assessed in screening or progress monitoring measures, and the teacher desires a mid year assessment to determine whether her instruction has been effective for a child with low vocabulary scores from the previous year end outcome measure, then a diagnostic test of vocabulary knowledge might appropriately be given.

Research based information about instructional utility of various diagnostic measures

The use of diagnostic tests in Reading First schools should be guided by current research on the instructional utility of various types of diagnostic assessment. For example, there are many tests that claim to diagnose specific cognitive or language skills that are important for reading growth. These tests measure such constructs as verbal short-term memory, visual processing ability, auditory processing ability, rapid automatic naming skill, spatial or visual memory, etc. Although some of these constructs may have strong or moderate predictive relationships with reading growth, there is no compelling evidence that knowing a child’s score on any of these tests can help teachers provide more effective instruction in reading. These constructs are sometimes assessed to determine whether a child has a “learning disability” in reading, but, according to the preponderance of evidence from research, they do not help plan more effective instruction for students with learning disabilities. For example, children who perform poorly on measures of rapid automatic naming of digits and letters frequently have difficulties acquiring fluent reading skills. In fact, very low performance on this measure can indicate the presence of a learning disability in reading. However, there are no interventions available to directly improve children’s performance on this construct. Rather, what is currently indicated by low performance on this measure is the need for careful attention to the acquisition of fluency at all stages of learning to read. If fluency on phonemic awareness tasks, letter knowledge tasks, phonemic decoding tasks, and text reading is regularly monitored during reading instruction, then teachers will be alerted in a timely fashion to students who require more support for the development of reading fluency.

The current research base indicates that diagnostic assessments in reading should focus on measuring language/reading skills that can be directly taught, and that make a difference to reading outcomes. These constructs have been identified as phonemic awareness, phonics, fluency, vocabulary (word knowledge), and comprehension

strategies. Currently, we have available reliable and valid measures of four of these constructs (phonemic awareness, phonics, fluency, and vocabulary) but not the fifth. We can, of course, reliably measure reading comprehension itself, but there are currently available no standardized procedures for determining the extent to which a child actively and efficiently uses appropriate reading strategies to increase comprehension. Other things that likely make a difference to individual differences in reading growth are motivation and attitudes about reading, parental support, extent and richness of the child's knowledge base, language ability, and general intelligence. Some of these constructs, such as motivation and parental support, are not usually assessed with "diagnostic tests" and others, such as the child's general knowledge base or intelligence, are not a specific part of reading instruction. Although teachers are encouraged to activate the parts of a child's knowledge base that might be helpful to understanding a given reading selection, this is a strategy used to help a child use what is already known about a specific topic, not to provide all the background knowledge required to understand the nuances of the selection.

Summary points and examples to guide the use of diagnostic assessments in Reading First schools

The four most important points from the forgoing discussion of diagnostic measures in reading first schools are:

1. Diagnostic measures should be used only in cases where there is a high probability they will provide new information to help plan more effective instruction.
2. In cases where a full Reading First assessment plan is being reliably implemented, the information typically provided by diagnostic assessments may already be available from screening, progress monitoring, or outcome assessments.
3. Not all information provided by "diagnostic tests" in the reading area is actually useful for planning instruction.
4. Diagnostic assessments should focus on areas of reading and language knowledge/skill that can be directly taught, and that will have an impact on reading growth if they are taught more effectively.

Examples to guide use of diagnostic measures in Reading First schools

Kindergarten

Example 1 – Johnny B. has received small-group instruction for 30 minutes three times a week to build phonemic awareness and letter/sound knowledge because the screening test in September indicated that he was particularly low in this area. On the December general progress monitoring assessment, he still performed in the "high risk" categories on these measures. Should a formal diagnostic test be given?

Answer: Probably not. If the concern is that Johnny has not made adequate progress in

acquiring phonemic awareness and letter/sound knowledge, a diagnostic test is not likely to provide information beyond what is already known. A diagnostic test will show that Johnny is low in phonemic awareness and letter knowledge, which is already known from the progress assessments. Although a diagnostic test might break phonemic awareness down into different kinds of tasks (i.e. segmenting, blending, elision, rhyming), these tests are highly correlated with one another, and the teacher should already know which kinds of tasks Johnny struggles with based on her instruction. The most effective course of action at this point will likely involve increasing the intensity of the instruction, or changing to a more explicit and systematic method of teaching.

Example 2 – Sara R. is making good progress in February in acquiring phonemic awareness and phonics skills, but she seems less able to respond appropriately during class discussions that emphasize the meaning of selections that the teacher reads to the students. Should a formal diagnostic test be given?

Answer: Perhaps. Sara’s difficulty comprehending passages read by the teacher may signal a seriously underdeveloped vocabulary, or other lack of facility with language comprehension. A diagnostic test that assessed vocabulary or listening comprehension would provide information not already available from screening or progress monitoring tests (unless these skills were, in fact, assessed as part of the progress monitoring assessment). Low performance on a measure of oral language vocabulary might indicate the need for very focused and systematic instruction in this area.

First Grade

Example 1 – In the February progress monitoring test, Shakira performed in the “high risk” category for oral reading fluency, even though she had been a member of the smallest instructional group in her first grade class since the beginning of the year. She also performed in the “high risk” group on the assessment of phonemic awareness and phonemic decoding fluency that were part of the progress monitoring assessment. Should a diagnostic test be given?

Answer: Probably not. In Shakira’s case, her teacher already knows she remains weak in phonemic awareness and phonics, which are both prerequisite skills to the growth of oral reading fluency. A diagnostic test might be used to confirm these weaknesses, but it is unlikely to provide additional information beyond that available from the progress monitoring assessment. Her teacher might also wonder about Shakira’s general word knowledge as it affects her ability to understand the meaning of what she reads. If Shakira was in a Reading First school the previous year, there should be information available from the outcome assessment about her oral language vocabulary. If the teacher questioned that assessment, or desired more current information about vocabulary growth, then the vocabulary subtest from a diagnostic measure might be given. Shakira’s most urgent need at this point, however, is to master the alphabetic principle so that her reading becomes more accurate and she is more capable of reading independently.

Example 2 – Alex’s teacher feels that he has made tremendous progress since the beginning of the year in becoming a more fluent and accurate reader. He has been receiving 1:3 instruction in a special group that has received instruction focused on building reading accuracy and fluency. However, when the February progress assessment was done, Alex’s score in the reading fluency category was still in the “high risk” category. His scores on the measures of phonemic awareness and phonics are in the “low risk” category. Should a diagnostic assessment be done?

Answer: Probably not. A diagnostic assessment at this level will likely give scores in phonemic awareness, phonics, fluency, vocabulary, and reading comprehension. The teacher already knows that Alex is doing well in both phonemic awareness and phonics, but remains deficient in text reading fluency. Administration of a measure of Rapid Automatic Naming might indicate if Alex has a specific disability that might predict continued difficulty in the reading fluency area, but it would not help the teacher plan more effective instruction. At this point in Alex’s growth, the best predictor of future reading fluency growth is the current assessment of fluency in the progress monitoring measures. Alex should be provided ample opportunities to build fluency in reading through repeated reading practice that focuses on building a “sight word” vocabulary of frequent and high utility words.

Second Grade

Example 1 – Tanisha’s second grade teacher notes that Tanisha performed substantially below grade level on the reading comprehension and vocabulary measures at the end of first grade. The first progress assessment in second grade (which can also be considered a screening assessment) indicates that Tanisha is currently performing in the “high risk” category in phonemic decoding fluency and oral reading fluency. Should a diagnostic test be given?

Answer: Probably not. A diagnostic reading test is unlikely to provide more information than is already available about Tanisha’s reading skills. The teacher knows that Tanisha is still struggling with basic world level reading skills, and that she is also lagging behind in the growth of her vocabulary. All these factors are the most probable explanation for her poor performance on the reading comprehension measure at the end of first grade. The information currently available indicates that Tanisha should receive immediate and intensive intervention that works to build her accuracy and fluency in reading text, as well as her vocabulary and effective use of reading comprehension strategies.

Example 2 – In the progress monitoring assessment in December, Tony R. continues to perform in the “high risk” category on the oral reading fluency measure. He also performs at the “high risk” category on the measure of phonemic decoding skills. Tony R. moved into the Reading First school this fall, so detailed data about his reading progress in kindergarten and first grade is not available. Should a diagnostic test be given?

Answer: Perhaps. Since Tony is new to the school, and he is clearly struggling in reading, it might be useful to administer a diagnostic measure of phonemic awareness, as well as a measure of oral language vocabulary. If Tony performs poorly on the measure of phonemic awareness, this will alert the teacher to the full extent of Tony's problems acquiring alphabetic reading skills, and that more "in depth" instruction in phonemic awareness and phonics may be needed than is typically provided in her second grade classroom. If Tony performs adequately on the measure of vocabulary, this will alert the teacher to focus on increasing Tony's reading accuracy and fluency as the highest instructional priority for him.

Third Grade

Example 1 – In October, Elvira's teacher notices that she is continuing to struggle with understanding the main ideas from passages that she is asked to read in class. Compared to most of the other children in the class, Elvira is not able to adequately comprehend the meaning of the third grade passages they are reading together in class. Should a diagnostic test be given?

Answer – Probably not for purposes of guiding instruction. Elvira has been a student in this Reading First school since kindergarten, so the teacher has available a relatively complete record of her growth in the knowledge and skills necessary for reading comprehension. The second grade outcome measures indicate that Elvira is very weak in general vocabulary, and the beginning of the year progress test (or screening test) showed that she is still performing in the "high risk" category in reading fluency. The last progress assessment in second grade also showed that she continued to struggle with phonemic decoding fluency. From the information the teacher has currently available, it is apparent that Elvira needs small group instruction that provides systematic and explicit support for the growth of basic word reading skills, as well as vocabulary and comprehension strategies. The teacher might want to give a placement test if she is using a remedial program that has a test for this purpose, or she might want to administer an informal reading inventory to determine the specific extent of Elvira's letter/sound knowledge, sight word knowledge, and text reading skills in order to develop a more detailed picture of her instructional needs in these areas. If the teacher and school believe that Elvira cannot receive the instructional support she needs within a regular classroom setting, then a diagnostic test may be required to establish Elvira's eligibility for extra support from a Special Education teacher.

Example 2 – Jackie S's initial screening (progress monitoring) assessment in the September indicated that she was performing in the "moderate risk" category in oral reading fluency. She is new to the school district, having moved in from another state. Her records indicate that she was mildly below grade level on the reading comprehension test she took at the second grade in her previous school. Should a diagnostic test be given.

Answer – Probably not. Although not very much is currently known about Jackie's reading skills other than the fact that she is moderately below grade level in reading fluency and reading comprehension, Jackie's teacher will learn a lot more about her

reading capabilities during the small group instructional period in the 90 minute reading block. Based on her “moderate risk” reading fluency score, Jackie should probably be assigned to one of the smaller instructional groups in her classroom, one in which the teacher will have ample opportunities to observe her reading and discussing written material. From these observations, the teacher should be able to determine Jackie’s instructional needs more accurately than through the administration of a formal diagnostic assessment