Comprehensive Reading Assessment Grade 4

User Information	
Name:	Doe, Jane
Date of Birth:	Jan 01, 1995
Current Grade in School:	8th
Grade in School at Evaluation:	4th
Evaluation Date:	Jun 23, 2004

Background

The identification of learning difficulties involves the examination of two kinds of evidence. The first source of evidence is a childhood history that may contain events or characteristics that have been shown to be related to the subsequent development of learning problems. The second source of evidence is the administration of cognitive and psychological tests that provide indicators of whether a learning difficulty is present. Neither source of evidence by itself is conclusive. However, in combination the developmental history and the testing results provide a basis for determining the source of an individual's learning problems. This report contains information about both of these sources of evidence.

Reading Difficulties

Reading difficulties have a number of causes. Some children have difficulty learning to read because they have not had early experiences that lead to an understanding of what reading is about (a way of deriving meaning from text). These children when they are young also often lack knowledge of letters, and a sense that letters make sounds that map onto the spoken language they have already acquired. These children are often identified in kindergarten or first grade by school personnel and can catch up with their peers in reading skill with appropriate school-based interventions. An intervention is any special instructional activity that is designed to strengthen a weak academic skill.

Other children have difficulties that appear to be brain based. This means that the source of their difficulties is probably inherited and it means that their reading difficulties are much more difficult to eliminate with regular educational interventions. Children that have this second kind of difficulty are often diagnosed as having a specific **reading disability** or **dyslexia**. The report to follow provides an evaluation of Jane's general reading skills and discusses the reasons why or why not Jane might have a specific reading disability.

Specific Reading Disabilities

Specific reading difficulties are primarily caused by difficulties in processing the component sounds of oral language. For example, a young student who has difficulty in processing the component sounds of language would have difficulty telling if two words rhymed or started with the same sound. The technical term for this difficulty is difficulty in processing phonological information. A phoneme is the smallest segment of sound making up a word so phonological information consists of the individual sounds that make up words. This difficulty creates problems in learning to read because a student with phonological processing problems has difficulties attaching speech sounds to letters and letter combinations. If a beginning reader cannot attach sounds to letters, they cannot use sounding out procedures to identify words, and this greatly slows down the acquisition of reading skills. For example, a beginning reader who has difficulty in attaching speech sounds to letters and letter combinations would have difficulty attaching the sound "cuh" to the letter "c" in the word "cat" and would have even greater difficulty in sounding out the entire word and then repeating the sounds rapidly so that the word could be identified.

Background on Educational and Cognitive Assessment

Students with a specific reading disability display deficiencies in reading performance that are not matched by deficiencies in other types of cognitive functioning. For example, reading disabled students can recognize letters and numbers with no more difficulty than an average student. However, the word recognition performance of a disabled reader is typically slower and/or less accurate than the word recognition performance of a normal reader. There are other reading tasks as well that differentiate between disabled and non-disabled readers. For instance, disabled readers have considerable difficulty pronouncing non-words such as "plok", "sistend" and so on. Disabled readers are also poorer than normal readers at activating the meaning of words and they have difficulty comprehending written sentences and paragraphs. However, their listening comprehension is equivalent to that of their classmates and they often excel at activities such as science and mathematics.

The cognitive assessments we describe in this report take advantage of known deficiencies in the reading performance of disabled readers. Some of the tasks Jane completed, which are described in some detail below, are ones that have not been shown to produce differences between reading disabled and non-disabled readers. Others do show differences between disabled and non-disabled readers. In combination, performance on the two types of tasks provides an indication of the likelihood that a student has a specific reading disability.

CAAS Assessment Tests

Our assessment efforts involve measuring academic performance using Sentence Verification Tests (SVT) of listening and reading comprehension, and computer-based assessments of reading competencies. All of these assessment procedures were developed and validated at the Laboratory for the Assessment and Training of Academic Skills at the University of Massachusetts, Amherst.

Listening Comprehension and Reading Comprehension Assessments. The computer-based listening comprehension tests are administered by having the student listen to a recorded passage and then respond to a series of verbally presented test sentences that are designed to measure how well the student has understood the passage. After completing the listening part of the assessment, the student completes a reading test that is parallel in difficulty with the listening test.

The relationship between reading and listening performance is of particular interest in the assessments. For instance, children with specific reading disabilities often comprehend a text much better if they listen to it than they do if they read the text. In contrast, children with Attentional Disorders (ADD-sometimes accompanied by hyperactivity) sometimes have much higher reading performance than listening performance. The reason for this difference is that some ADD students seem unable to maintain focus on an oral message that they have a single opportunity to grasp. This contrasts to reading where they have the opportunity to re-read information that was not initially comprehended.

Basic Reading Assessments. The Cognitive Aptitude Assessment Software (CAAS) that Jane used for this reading evaluation presents students with a series of reading tasks and then collects both time (speed of performance) and accuracy (percent of task items completed correctly) data when the tasks are being performed.

The measurement of both the speed and accuracy of performance is a unique aspect of the CAAS system for the purpose of identifying reading difficulties. Typical assessment procedures only measure the accuracy of reading performance. The measurement of speed of performance not only makes the CAAS system a powerful procedure for identifying learning difficulties, it also makes it an excellent procedure for measuring educational progress associated with attempts to improve a student's reading performance.

Administration of a CAAS task involves presenting a reading stimulus on the computer screen and the student then responds to the stimulus by speaking into a microphone. When the stimulus first appears a clock is started in the computer and the clock stops when the student makes a vocal response into the microphone. This timing process is accurate to a fraction of a second. After the response, the accuracy of the response is recorded. Jane completes at least 20 trials for each task and the CAAS program automatically converts the data into statistical units (means and standard deviations). Accuracy and response time scores can subsequently be combined to yield a single index (speed and accuracy) of performance, and this index can then be converted into a percentile score using CAAS norms for a student's grade level.

A percentile score is a measure of how results compare to the results for others the same age on the same task. The percentile score ranges in value from 1 [lowest] to 99 [highest]. For example a percentile score of 89 means that the score is as good as or better than 89% of people the same age. A person who is exactly average will be in the 50th percentile.

Jane completed versions of our assessment instruments that are appropriate for elementary/middle school students. A description and discussion of the tasks that Jane completed is listed below.

Simple response time: This task involves presenting *** or +++ on the computer screen whereupon the student responds **star** or **plus** into the microphone. Simple response time assessment provides an index of general cognitive processing efficiency, and is useful in identifying other problems such as vision difficulties.

Students with a specific reading disability perform at about the same level on this task as do normal students. The task is useful, however, for picking up students who may have a visual difficulty or who may have a more global learning problem like mental retardation.

Letter recognition: This is an assessment of the speed and accuracy of letter recognition. It involves presenting an upper or lower case letter on the computer screen and having the student say the name of the letter into the microphone. For example, the student might see the letter "B" on the computer screen and then respond with the name of the letter into the microphone.

Again, this is a task that typically does not differentiate between disabled and non-disabled readers. There are occasional students who do have letter recognition problems but these are rarely seen beyond the first grade. It should be mentioned that there is a common belief that students with dyslexia "see" text differently than normal readers. For example, one might hear that they see letters backward or they read from right to left rather than from left to right. These beliefs are myths. Letter reversals are no more prevalent in a dyslexic population than they are in a population of normal readers. Dyslexia is a sound processing problem, not a visual processing problem.

Word recognition: This is an assessment of a student's speed and accuracy in identifying words that are of average difficulty. The task involves presenting a word on the screen and having the student say the name of the word into the microphone.

Poor word recognition is the most common characteristic of a reader with a specific reading disability. Students with a reading disability (dyslexia)are almost always slow at word recognition and they are sometimes inaccurate as well.

Non-word recognition: This task assesses the speed and accuracy with which a student can name a pronounceable non-word such as PLOK, LAINT, and so on. Pronounceable non-words are also sometimes referred to as pseudowords. The task is administered in the same manner as the word naming task, and the non-words are generated by changing letters in words that appeared in the word task. Non-word performance is indicative of a student's ability to sound out unfamiliar words, and is an important skill involved in the acquisition of new reading vocabulary words and the reading of difficult text.

As noted above, students with a specific reading disability have problems with word identification and they have even greater problems with pronouncing non-words.

Disabled readers with sufficient practice can learn to pronounce frequently occurring words, sometimes as fast and as accurately as non-disabled readers. However, since they never see non-words they must rely on their ability to sound out letter sequences in order to pronounce the non-words and this is exactly what disabled readers have a great deal of difficulty doing. The non-word task is a very important part of identifying a reading disability.

Word meaning activation: This task measures the speed and accuracy with which students can access the meaning of words. The task is administered by indicating to students that they will see pairs of words on the screen that come from categories such as furniture names, fruits, animals and so on. The task then involves saying whether or not two words appearing on the screen came from the same category.

Students with a reading disability generally perform worse on this task than students who are normal readers. The reason is that their poor word recognition makes them slower than their non-disabled counterparts. However, occasionally a very bright disabled reader with an excellent oral vocabulary can perform at near average levels on the task.

Sentence Understanding: A sentence appears on the screen that has a blank in it and a word appears above the blank and below the blank. The words vary in semantic appropriateness and the student says the name of the word into the microphone. For instance: **Jill stroked the cat's fur/claws.**

Disabled students generally perform more poorly on this task than do non-disabled readers.

Interpretation of Background information

Early Childhood Factors that are Related to Specific Reading Difficulties:
Individuals with learning difficulties often have a childhood history that has a number of characteristics that are predictive of subsequent problems. No single characteristic predicts the subsequent development of a reading difficulty with certainty, but the presence of several factors that are known to be related to a specific reading difficulty provide evidence that a specific reading disability might be present.

Information was collected about a number of developmental characteristics that have been shown to be related to the subsequent development of reading disabilities. The first of these is whether or not there appeared to be delays in language acquisition. Individuals with reading disabilities frequently had language learning difficulties as young children. Jane did not exhibit delays in learning to speak as a child.

The next question that was asked was whether or not Jane exhibited persistent articulation difficulties as a young child. Articulation difficulties are difficulties in correctly pronouncing words. Typically children with articulation difficulties not only have difficulty pronouncing words correctly; they also have difficulty hearing the fact that they are mispronouncing words. Again, persistent articulation difficulties have been

shown to be related to the subsequent development of reading disabilities. Jane did not have persistent articulation difficulties as a young child.

The question about articulation difficulties was followed by a question about whether or not Jane received speech therapy as a young child. Persistent articulation difficulties are sometimes severe enough to warrant the attention of a speech therapist. Articulation difficulties severe enough to warrant speech therapy services are especially predictive of the development of reading difficulties. Jane did not receive speech therapy services as a young child.

The next question asked whether or not Jane had ever tried to learn pig latin as a child, and if so, whether or not she was successful. Learning pig latin requires a considerable amount of phonological processing skill and individuals who develop reading difficulties typically have a great deal of difficulty learning it. The reason is that pig latin involves taking the beginning sound of a word and moving it to the end of the word and then attaching the sound "ay" to the word. So, for example, the word "can" becomes "ancay". Individuals who develop dyslexia cannot manipulate the phonology (sounds) of words and thus have difficulty learning pig latin. It was indicated that Jane did not attempt to learn pig latin.

The next question asked whether or not Jane had experienced excessive ear infections as a young child. Children who experience delays in speech acquisition and have articulation disorders often do have phonological processing problems that are subsequently associated with reading difficulties. However, sometimes the origin of these difficulties is associated with frequent and severe ear infections. Severe and/or excessive ear infections may explain why speech delays or articulation difficulties develop. If they develop because of ear infections, it is unlikely that the child will have a specific reading disability. The response to the question about ear infections indicated that she did not have excessive ear infections as a child.

Family Background Factors that are Related to Specific Reading Difficulties: The next set of questions asked about the Jane's family background. Learning difficulties appear to have a genetic component and children with reading difficulties often have close relatives who also have reading difficulties. The first question was whether or not Jane had siblings. It was indicated that Jane does not have siblings.

The next questions asked whether any close relative was known or suspected as having a learning disability. It was indicated that there were no such close relatives.

Educational History: Jane displayed no evidence of learning difficulties as a young child. In addition, she has never completed a formal diagnostic procedure and has never had an IEP (Individualized Education Plan) during her academic history.

Cognitive Testing

Prior to interpreting the testing results it should be noted that percentile scores are based on a restricted norm sample and this should be taken into account when interpreting them. However, they provide a good baseline against which future academic progress can be measured. The profile of performance derived from the percentile scores is stable and research has shown that the profiles are good indicators of learning difficulties. The data listed in table and graph below show Jane's performance on the CAAS reading tasks used it this evaluation.

	Task	Speed (sec)	Accuracy (%)	Percentile (%)
1	Reaction Time	0.72	100.0	73.0
2	Letter Naming	0.60	100.0	85.0
3	Grade 3-5 Word Naming	1.11	86.5	6.0
4	Grade 3-5 Non-Word Naming	1.32	77.8	19.0
5	Grade 3-5 Word Meaning	1.97	78.9	5.0
6	Grade 3-5 Sentence Understanding	3.48	80.0	9.0
7	Grade 4 Listening Comprehension	2.74	80.0	71.0
8	Grade 4 Reading Comprehension	0.42	57.8	11.0

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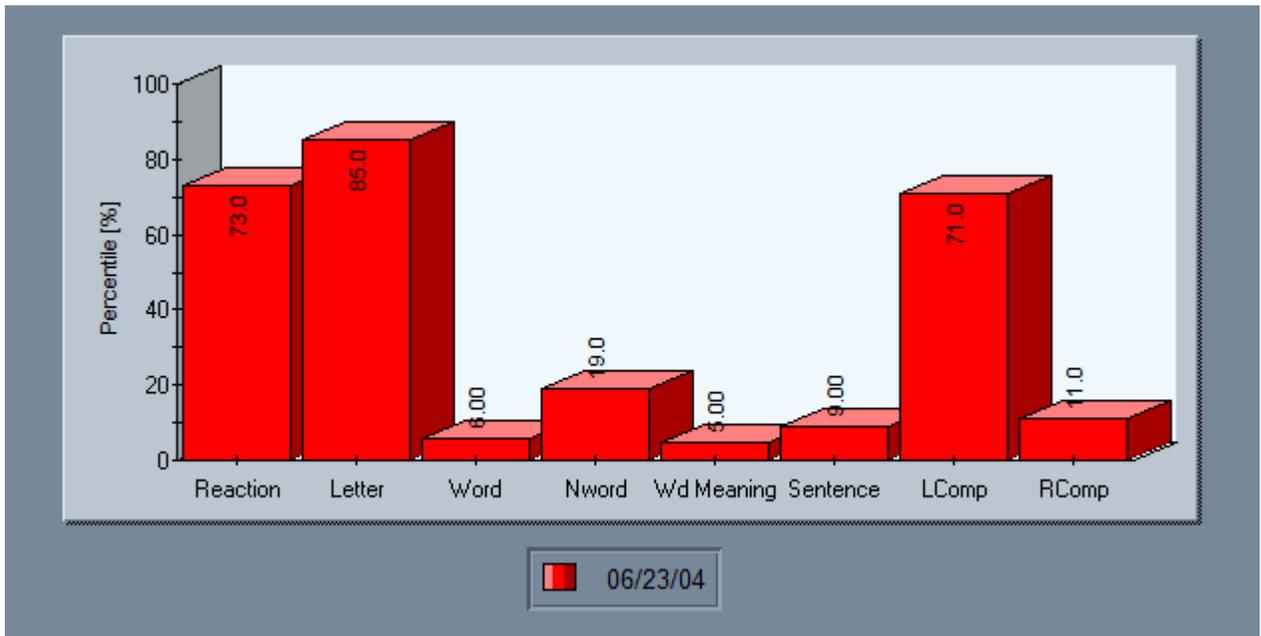
Listening and reading comprehension: The relationship between reading and listening performance is of particular interest in the assessments as children with specific reading disabilities often have much higher listening comprehension performance than reading comprehension performance. A child with a specific reading disability will often have difficulty comprehending information when read, but have little difficulty comprehending similar information when listened to. Jane's listening comprehension performance is at the 71st percentile while her reading comprehension is at the 11st percentile.

Basic reading performance: Individuals with a specific reading disability typically exhibit a profile of performance with a distinct pattern. Such a reader typically will score in the average to above average range on the simple reaction and the letter naming tasks,

and have difficulty on the remaining tasks. The reason for this pattern of performance is related to the underlying causes of a specific reading disability. Reading disabilities are caused by difficulties in attaching speech sounds to letters and letter combinations. The inability to attach sounds to letters makes it difficult for a reader to identify words by sounding them out, and this in turn causes delays in learning to read. It is important to note that current research indicates that reading disabilities have nothing to do with visual processing. This means that individuals with dyslexia (specific reading disability) typically have little difficulty with a task that primarily involves visual processing such as the simple response task and the letter recognition task. They do, however, have difficulty in reading tasks that involve attaching sounds to letter patterns. In short, they have difficulty on Word Recognition, Non-word Recognition, Word Meaning, Sentence Understanding, and Reading Comprehension tasks. It is also noteworthy that the difficulty they experience on the Non-word Recognition task is generally greater than the difficulty they experience on the Word Recognition task. The reason is that non-word recognition is more dependent on sounding out ability that is word recognition.

Analysis of the pattern of performance is a very powerful tool for identifying a variety of other reading problems [if any] that range from a general poor reading skill to inconsistent reading due to attention deficit problems. The particulars of Jane's pattern of performance will be discussed later in the section titled **Overall Interpretation**.

Jane's performance on the Simple Response task is at the 73rd percentile and her performance on the Letter Recognition task is at the 85th percentile. Jane performed at the 6th percentile on the Word Recognition task, at the 19th percentile on the Non-word Recognition task, at the 5th percentile on the Word Meaning task, and at the 9th percentile on the Sentence Understanding task.

Overall Interpretation

Jane's overall pattern of performance on the questionnaire and the CAAS assessments is similar to the pattern commonly seen in individuals with a specific reading disability. Individuals who do have specific reading disabilities often have speech acquisition difficulties at an early age that can delay learning to speak and that may create difficulties in learning to pronounce words (articulation difficulties). Also, individuals with learning disabilities often have close relatives who have learning problems. In addition, individuals with a reading disability often display early problems that trigger formal evaluations that are conducted either by a school-based evaluation team or by private diagnosticians. These evaluations often result in the development of an Individualized Education Plan (IEP) that describes the provision of specialized services that are designed to improve reading performance.

Early Childhood History. Jane's early child history has no evidence of problems acquiring speech. She experienced no speech delays, no articulation difficulties, and did not receive speech therapy. However, other aspects of her evaluation are consistent with the patterns of performance commonly seen in reading disabled individuals.

Family History. It was indicated in the questionnaire that she did not have any close relatives with learning problems. However, other aspects of her evaluation are consistent with the patterns of performance commonly seen in reading disabled individuals.

Educational History. A final historical indicator of the presence of a reading disability is the early identification of a problem often accompanied by a formal evaluation process that results in a diagnosis and the development of an Individualized Education Plan (IEP). Jane's educational history does not fit this pattern. She experienced no learning problems. However, other aspects of her evaluation are consistent with the patterns of performance commonly seen in reading disabled individuals.

Jane's pattern of performance on the CAAS assessment tests also closely resembles the pattern of performance seen in an individual who has been diagnosed with a specific reading disability. Commonly, reading disabled individuals will have normal to superior performance on the listening comprehension test, the simple reaction test and the letter identification test. Their performance will be much lower on the remaining tests and it will quite often be the case that performance on the word identification test is better than the performance on the non-word identification test. Both of these though are generally well below the average performance of same age peers. Jane's profile of test performance fits this pattern as can be seen by examining the task performance results shown in the table and graph above.

Listening and reading comprehension: Jane's performance on the listening and reading comprehension tests is similar to what we have seen with other students who have been diagnosed as having a specific reading disability. Specifically, the typical student with a reading disability performs considerably better on the listening comprehension test than on the reading comprehension test. A child with a reading disability will often have difficulty comprehending information when read, but have little difficulty comprehending the same information when listened to.

Jane's performance fits this profile in that his listening comprehension performance is at the 71st percentile while her reading comprehension is at the 11st percentile and is noticeably lower than her listening performance. This means that Jane is able to listen to and understand material that she would have difficulty in understanding if the material was read.

There are a number of reasons why someone might have difficulty comprehending information that was read, but little difficulty comprehending similar information when it was listened to. One possibility consistent with the diagnosis of a specific reading disability (dyslexia) is that the recognition of words is so slow and/or inaccurate that it makes it difficult to read text with comprehension. Slow and or/inaccurate word reading performance can greatly inhibit reading comprehension performance because of a part of the human cognitive system called working memory. Working memory is that part of our cognitive system that we are consciously aware of at any given point in time. Working memory can be thought of as being analogous to RAM memory on a computer. We have lots of memory storage capacity in our cognitive system but the vast majority of that is in

the form of permanent memory (analogous to hard disk storage on a computer). When we engage in either reading or listening comprehension we have to get a meaningful unit of speech or text into working memory in order to interpret it. The problem with slow and inaccurate word reading is that working memory can only hold information for about 10 seconds and then it decays. If you are slow at reading words, by the time you get the last word of a meaningful text segment in working memory, the first words may have decayed. This means that you have to go back and reread the text segment from the beginning, making reading slow and laborious, and making reading comprehension very difficult.

Basic reading performance: Jane's performance on the CAAS basic reading tasks provides an indication of whether her difficulty in reading comprehension is related to slow and/or inaccurate word recognition ability. Individuals with a specific reading disability typically will score in the average to above average range on the simple reaction and the letter naming tasks, and have difficulty on the remaining tasks. The reason for this pattern of performance is related to the underlying causes of a specific reading disability. Reading disabilities are caused by difficulties in attaching speech sounds to letters and letter combinations. The inability to attach sounds to letters makes it difficult for a reader to identify words by sounding them out, and this in turn causes delays in learning to read. It is important to note that current research indicates that reading disabilities have nothing to do with visual processing. This means that individuals with dyslexia (specific reading disability) typically have little difficulty with a task that primarily involves visual processing such as the simple response task and the letter recognition task. They do, however, have difficulty in reading tasks that involve attaching sounds to letter patterns. In short, they have difficulty on Word Recognition, Non-word Recognition, Word Meaning, Sentence Understanding, and Reading Comprehension tasks. It is also noteworthy that the difficulty they experience on the Non-word Recognition task is generally greater than the difficulty they experience on the Word Recognition task. The reason is that non-word recognition is more dependent on sounding out ability that is word recognition.

Jane's performance on the Simple Response task is at the 73rd percentile and her performance on the Letter Recognition task is at the 85th percentile. Jane's performance on the remaining reading tasks is also generally consistent with the typical pattern for a reading disabled student. Jane performed at the 6th percentile on the Word Recognition task, at the 19th percentile on the Non-word Recognition task, at the 5th percentile on the Word Meaning task, and at the 9th percentile on the Sentence Understanding task. This pattern of performance is consistent with the pattern of performance seen in the typical student diagnosed with a specific learning disability.

Summary: This profile of performance on the CAAS tasks suggests that Jane's ability to visually process simple stimuli and letters is normal but she has specific deficits in reading tasks at the word level and beyond. This profile of performance on the CAAS tasks is consistent with her profile of performance on the listening and reading comprehension tasks. That is, Jane's listening comprehension performance was normal but her reading comprehension performance was lower than that of her average age peer.

The performance on the basic skills section of the CAAS indicates that this poor reading comprehension performance was associated with poor word recognition ability.

Intervention Plan

An intervention is a special instructional activity that is designed to strengthen a weak academic skill. An intervention plan addresses the specific needs of the student with a reading problem.

Jane appears to have a particular deficit in the area of rapidly and accurately identifying words, activating the meaning of words (the category task), and understanding sentence length material. Jane also has considerable difficulty in using letter-sound rules to sound out pronounceable sequences of letters as measured by the non-word task. Performances in these areas can improve strikingly if the student engages in a carefully designed intervention program.

The word recognition difficulty shown in Jane's profile of performance generally can be seen as early as the second grade and if not remediated, it causes even greater difficulties as a student moves into junior and senior high school and is asked to read text in subject matter areas such as science, math and social studies.

The origin of the problem for most students who have a specific reading disability is difficulty in attaching speech sounds to letters and letter sequences. This difficulty delays the process of attaining the **alphabetic principle**, which is the realization that the constituent sounds of speech (the individual sounds that make up words) map onto letters of the alphabet. This difficulty in mapping speech sounds to letters makes it very difficult for a reader to use word recognition strategies like sounding out letters and then blending the letter sounds to make a word as a procedure for identifying unfamiliar words.

Given this description, Intervention plans for students who have a specific reading disability should follow a sequence. The first intervention that should be tried, particularly with young children, involves systematically teaching word decoding skills. These are generally called phonics based intervention approaches. There are many variants of phonics-based approaches and no research indicating that one approach is superior to another.

The impact of phonics-based interventions should be **carefully** monitored. If they are going to have a positive impact, that impact can generally be seen within six months. Phonics-based interventions should not be continued for longer than a year if there is little or no evidence that the student is reducing the gap between the student's reading performance and the reading performance of age peers. Continued use of phonics-based interventions in the absence of evidence of positive impact can, over extended time, do more harm than good. The problem is that continued teaching of phonics over extended periods of time teaches the child to sound out every word they encounter. This discourages the development of a sight vocabulary and it results in the development of a

habit that slows down reading time and has a deleterious impact on reading comprehension.

The alternative to continued use of phonics is the use of techniques that train students to rapidly and accurately identify words. Building word recognition skills means increasing the number of words that a student can recognize effortlessly and without thought. Words that can be recognized effortlessly and without thought are words that that student can recognize "automatically". The logic behind building automatic word recognition skills is based on the idea that words that are recognized by thinking about them makes reading a laborious process. This can cause increasingly greater difficulties as a student moves into junior and senior high school where the reading load in subject matter areas such as science, math and social studies greatly increases. If word recognition for a large number of words can be made "automatic", then reading will be easier and a student will be more likely to keep up with peers as reading load increases. A reader with a large sight vocabulary will be able to instantly identify words without having to sound out the words. Instant word recognition by sight greatly increases reading fluency and reading comprehension.

Again, there are a number of programs that teach such skills. One is the intervention program contained in the CAAS Skill Builder. The CAAS Skill Builder Module has proven to be effective in improving the reading skills of students who have fallen behind their peers in word identification ability. The Skill Builder provides practice on words that are sorted into grade levels. Practice consists of rapid naming of sets of words and the Skill Builder program then plots the results of a practice session in terms of the speed and accuracy with which a student named the words. After one set of words is mastered to automaticity, the program presents the student with another set of words, and practice continues.

Based on Jane's performance results and background information, we would recommend starting Jane with the Grade 3 Words intervention sets. With the Skill Builder Interventions it is best to err on the side of the set being too easy as opposed to too hard, as we want to build in success from the start. If this recommended level seems too difficult, try one grade lower. Also, there is a set of intervention materials available that do not refer to explicit grade levels.

It should be noted that in practicing and mastering sets of words, the student is not merely adding words to his/her sight vocabulary. The student is also learning how to decode new words. The research shows that not only is the student getting faster recognizing the words practiced, but also he/she is also getting faster recognizing words that are not practiced. This improvement in skill of decoding unfamiliar words is extremely important because it enables the student to recognize a word when reading a passage rather that simply skipping over an unrecognized word.

The Skill Builder interventions contain general reading materials appropriate for students from grade 2 to college, and they contain special materials designed to ease the reading of

science, math, and social studies text from grades 5 to college. More information about the CAAS Skill Building materials is available on the Reading Success Lab website:

www.ReadingSuccessLab.com

Improving word identification and word meaning ability in content areas. The Laboratory for the Assessment and Training of Academic Skills (LATAS) at the University of Massachusetts has had considerable success with an exercise that is designed to develop rapid and effortless word identification and word meaning ability in content areas (e.g., science, social studies). The process begins with textbooks that are going to be used in future courses. The student with a reading difficulty is asked at the beginning of the summer to bring in the textbooks they are going to use next year. The glossary words in the texts are then copied into the CAAS computer file so they can become part of the CAAS Skill Builder exercises. Five times a week the student sits down and names about 160 of the words as fast as possible while trying to maintain accuracy. The Skill Builder program records the time required to name the average word in seconds and plots the performance on a graph. Over repeated practice sessions the line on the graph will level off and the student then moves to the next set of words and repeats the process. When all of the words have been mastered the task is repeated, but this time the student says anything that comes to mind that indicates she knows the meaning of the word. This might mean providing a synonym or antonym, or providing a context word. For instance, if the word was **electricity**, the student might say **light bulb**.

Completing this activity for all of the words in a textbook glossary allows the student to enter the reading and study process having already mastered the technical vocabulary that will be encountered in the book. This, in turn, will make the process of reading and understanding the text much easier.

The CAAS Skill Builder program contains many words from subject matter textbooks taken from junior and senior high textbooks in science, social studies and mathematics. The Skill Builder program also allows a parent or teacher (or even the student himself or herself) to enter their own words from their own textbooks as practice materials.

NEXT STEPS

Next Steps For Educators: If you are an educator testing a reader using the Cognitive Aptitude Assessment System test, the section of this report labeled Overall Interpretation summarizes the test results. If this summary indicates a pattern commonly seen in individuals with learning difficulties in all areas of cognitive functioning, with inconsistent reading, or with a specific reading disability, then an appropriate intervention plan is needed.

If inconsistent reading or a reading disability is indicated, the following steps are recommended:

1. Conduct further assessments, if necessary, to confirm these test results and further pinpoint the specific reading disability.

2. Share with the reader and the reader's family the results of the assessments. Given the hereditary nature of dyslexia it's quite possible that other family members may have similar difficulties.

3. Develop an implementation plan for the reader consistent with the recommendations in the **Intervention Plan** section of this report and with any subsequent assessment that is conducted.

As described in this report, an intervention strategy that trains the reader to rapidly and accurately identify words may have greater long-term success than a phonics-based system alone. Additional information is available on the Reading Success Lab website.

Additional information on this assessment test, dyslexia, case studies, periodic reassessment, and intervention strategies is available online at:

www.ReadingSuccessLab.com

Next Steps For Parents: As described in this report, the Cognitive Aptitude Assessment System test identifies a variety of cognitive difficulties and reading difficulties. Your child's school is also likely to have assessment testing available.

1. Use this assessment report when discussing your child's situation with the school. The results indicated on this assessment report may make it easier to obtain additional testing and subsequent resources to assist your child. If your child's school will not schedule your child for additional testing or services, consider obtaining another full diagnostic assessment from a local private diagnostician recommended by the school. This additional testing would then give you two independent assessments on your child that you can share with the school.

2. Consider direct involvement in assisting your child if a specific reading disability is indicated. The school may recommend skill-building exercises you can do with your child at home. In addition, Skill Builder modules are available for working with your child at home in addition to the assistance your child is getting at school. Additional information is available on the Reading Success Lab website.

3. Consider obtaining assessments for other family members (child and adult). Reading disabilities are often hereditary and with proper assessment they can be identified and intervention initiated. Skill-building exercises can be just as helpful for adults as for a child.

4. Consider periodic reassessment for your child to track progress that is being made with the intervention plan. Reassessment testing is likely available at your child's school and is also available from Reading Success Lab.