

A Whole Language Reading Intervention: A Case Study

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Abstract

The study presents a reading intervention for children having a variety of reading deficits. For this study it was found that most of the children had not responded positively to phonics instruction. Based on brain imaging studies, it has been shown that there are positive changes in the left brains of readers with dyslexia who receive phonemic and phonics training early, thus there has been a strong emphasis on phonemic and phonics training in schools. It is believed that if children receive this instruction early, reading difficulties can be avoided, and children develop into both accurate and fluent readers. The authors see this as valuable, however, they question the continued use of phonics for children who do not respond. While research shows that reading pathways in the right hemisphere register for readers with dyslexia, the authors suggest this could be a strength for a whole language reading intervention. Also, research shows that children with dyslexia are less sensitive to the rhythm of natural speech and that can lead to poor phoneme production and reading failure.

A Whole Language Reading Intervention: A Case Study

Introduction

The authors of *A Whole Language Reading Intervention* present a reading intervention for severely reading-impaired children with a variety of reading deficits. Most of the children had not responded positively to phonics instruction (a strategy for learning letter-sound relationships). When children do not respond to phonics, more of the same only adds to their dislike of reading. The authors consider reading too important to school success to accept this as the only approach for these children. The authors describe their program in the context of today's reading research, which shows that an initial right hemisphere focus with whole language benefitted struggling readers as evidenced by significantly improved reading scores and increase in the number of schools implementing the program.

Their research with hundreds of children shows that when interesting books are presented in an orderly way, using specific reading strategies, including phrase-cued reading and repeated reading, children with reading impairments can become readers who love to read.

The following comment is one of twenty similar comments received from the principals of the elementary schools where the *Whole Language Reading Intervention Program* was implemented.

“I can honestly say that as a principal of seventeen years and as a former reading specialist, I have never before seen such positive results with so many children who have had severe reading problems. I participate in the program by having the children read their books to me when a book is completed. It is an absolute joy to listen to them read with fluency and understanding. One of the most important aspects of the program is the tremendous growth in self-esteem that these children exhibit. They suddenly feel competent, motivated

and excited about reading. Children stop me on the playground to tell me how many books they've read and ask when they can come and read another one to me." *Elementary School Principal*

Review of Literature

Reading Interest

Reading includes recognizing patterns in print, using strategies for sounding out words (phonics), and constructing meaning. Reading involves the brain's limbic system which manages stress. A supportive and safe reading environment reduces stress and promotes interest in reading and motivation to read. (Willis 2008).

Brain Imaging Studies

According to Sally Shaywitz (2003, p.87), "The core problem in dyslexia is phonologic: turning print into sound". Based on brain imaging studies showing positive reading changes in the left brains of readers with dyslexia who receive phonemic and phonics training early, there is now a strong emphasis on phonemics and phonics training in schools. Sally Shaywitz and Bennett Shaywitz, (2003), believe that if children receive this instruction early, reading difficulties can be avoided, and children develop into both accurate and fluent readers.

Sally Shaywitz (2003), classifies struggling readers into two groups: the classic reader with dyslexia was born with a glitch in the left posterior reading systems responsible for rapid, automatic word recognition. This can also affect spelling. The classic reader with dyslexia has strong language skills, but relies on systems on the right side of the brain and the front of the left brain, for accurate but slow and difficult reading. The language deficient reader with dyslexia is the result of a poor language environment and / or poor reading instruction. In this group, the system for reading is there but was never activated properly, and without effective intervention this group remains poor readers (Shaywitz 2003). While both groups of individuals with dyslexia were represented in our case study, the terms struggling reader and dyslexia are used interchangeably in this paper.

Lateralized Cognitive Processes

Both hemispheres of the brain work best together, yet, the hemispheres show different specializations. The left hemisphere involves language production, grammar, syntax, and literal meaning. Neuroimaging research has shown that typical readers use mostly four areas in the left hemisphere, while individuals with dyslexia show under activation in those areas (Helland et al., 2011).

The right hemisphere takes in the whole picture. It learns holistically and processes emotional, rhythmic, intonation, and melodic aspects of language along with humor and metaphors (Toga & Thompson, 2003). Prosodic language includes rhythm, expression, and intonation. These are mostly lateralized to the right hemisphere (Ross & Monnot 2008).

Right Hemisphere Reading Circuits

Research shows that when individuals with dyslexia process print, it follows a pathway to the right hemisphere, where print can be processed, but very slowly (Shaywitz, 2003).

According to Dehayne (2009, p. 259) “After instruction for dyslexia, brain activity often increases in several areas of the right hemisphere at locations symmetrical to those of the normal reading circuit. It seems likely that in the presence of a left hemisphere impairment, equivalent regions of the right hemisphere take over.” This is important because the right hemisphere processes language as a whole.

Whole Language

Based on current brain hemisphere research studies, it seems that children who do not do well with phonemics and phonics might relate to a whole language approach that builds on reading meaning and right hemisphere strengths. Also, important to the approach, Usha Goswami (2003), found that children with dyslexia were less sensitive to the rhythm of natural speech – partly determined by how the sounds in words change through stress and beat patterns. This can lead to poor phoneme representation and reading failure. In whole language, children use print, grammar, and meaning to understand text. While the main focus of whole language is on meaning, our approach for this study uses whole language for learning to read and reading to learn.

At-Risk Readers

Even with the best instructional programs taught by experienced teachers, there are still children who are resistant to learning to read. While the author was working as a curriculum specialist for a county office of education, many schools expressed their concerns about children going into second grade who were still nonreaders. The author met with the special education resource specialist at a local school. They discussed trying a different approach with these children. Because a phonics approach had not worked, they decided to try a whole language approach. Popular children’s books were used and specific teaching strategies were researched. The strategies included: tracking, phrase-cued reading, repeated reading, slower paced reading, and timed reading. The strategies chosen were a combination of the authors experience with teaching reading to struggling readers and research regarding repeated reading in which children are taught to read by reading a text until it can be read fluently. Using a whole language approach and the teaching strategies, children would be taught to read and to understand what they were reading.

Oral Reading

Listening to a child read aloud provides a window to the child’s reading ability. It explains what a child knows and does not know about words (Wolf 2007). “Reading aloud underscores for children the relationship between their oral and their written language” (Wolf, 2007, p. 118). According to Rasinski (2003, p. 21), “It is the expressive reading by the teacher that makes oral reading so special.” Another advantage of the oral reading approach is that one of the brain’s reading pathways responds to saying and articulating each word orally (S. Shaywitz 2003). Reading orally includes multiple sensory modalities. In the program, children learn to read while reading a book orally. They see, pronounce, and hear the words, which helps them remember the words. When children hear oral reading with expression, they have a model for fluent reading.

Reading Strategy 1: Tracking

While the teacher reads, children follow under the words with their dominant hand. This is called tracking. While tracking assures that children focus on the words, it does more: Breznitz

(2006), suggests an asynchrony, a timing gap between the visual and auditory inputs that interfere with reading. Tracking helps children develop a synchronization between phonological and visual components of reading, and develops their eye and hand coordination.

Reading Strategy 2: Oral Reading Fluency

Oral reading fluency is reading text quickly, accurately, and with expression. By listening to the teacher read, children naturally pick up oral reading cues and use them in their reading.

Reading Strategy 1: Repeated Readings

Samuels (1979), described a reading method called repeated readings. In this method, children read a passage several times. After each practice the children's reading rate (wpm) and error rate improves. In repeated readings, children learn to read by reading the text many times. The method transfers to new and more difficult texts and leads to automaticity. According to Lebarge and Samuals (1974), for children to improve comprehension they must work toward automatic and fluent word recognition.

Reading Strategy 4: Reading in Phrases, Phrase-Cued Reading

Phrase-cued reading is a special kind of repeated reading. Struggling readers mostly read word-by-word. Once they become locked into word by word reading, it is difficult for them to read in phrases. "When teachers read a book with expression and natural phrase pauses, readers are helped to read in meaningful phrases and comprehension improves. With practice, this transfers to their other reading material." (Rasinski, 1994, p. 165). Phrase-cued reading provides visual cues, usually a slash (/), to help students follow natural phrases and pauses in a reading selection (Rasinski, 2003).

Reading Strategy 5: Slower Reading

Reading slower helps with asynchrony, the time between when a child sees and hears a word. Breznitz (2006). "Also, researchers found that eighty percent of language-impaired children had auditory cortex neurons that were firing too slowly; therefore, they lost large amounts of language information" (Doidge, 2007, p. 69). "Tallal's research (Doidge, 2007, p. 69) showed that children with language disabilities have auditory processing problems with common consonant-vowel combinations that are spoken quickly, and are called the fast parts of speech. The children have trouble hearing them and as a result, reproducing them accurately." Slowing the presentation can help students keep pace with the reading and help to strengthen weak auditory neurons.

Reading Strategy 6: Reading with Expression

In repeated reading, reading with expression provides a model of good reading. In oral reading, phrasing includes prosodic cues such as delivery, diction, intonation, inflection, and pauses. From the program's beginning, children hear reading with expression. Soon students may be reading with expression, just as they have heard the book read to them. According to Miller and Schwanenflugel (2008), children who read with adult-like prosody in the first and second grades could comprehend text better at the end of the third grade.

Reading fluency, reading accuracy and reading rate, are important to prosody. Poor decoding limits prosody for most young readers. Their timing and phrasing are disrupted. (Schwanenflugel, Hamilton, Wisenbaker, Kuhn, & Stahl, 2004).

Timed Reading (Above First Grade)

Timed reading helps reading become automatic. Putting too much energy into recognizing words interferes with comprehension (LaBerge, & Samuels, 1974). Breznitz, (2008) found that poor readers were characterized by problems with processing speed. Wolf, (2007) describes the most severe reading problems as children with deficits in processing speed and phonology.

Method

A Whole Language Reading Intervention

Participants

The children in the study were in grade one and above. They were a combination of special education and regular education struggling readers. Children were chosen by the resource specialists and classroom teachers based on reading assessment results. The children included were non-readers and children with the lowest reading scores at the school. They were taught one-to-one by trained aides consisting of students, parents, and teachers. There were twenty private and public elementary schools involved in the program.

Development of: A Whole Language Reading Intervention Program

Book Organization

To begin the program, the study chose popular children's books and organized them into reading levels for a smooth transition from one book's reading level to the next. The books started at pre-primer and went through grade four reading levels. The focus looked for certain features in the books. For example, at beginning levels, the features were highly predictable stories with illustrations, rhymes, and repeated phrases.

It was found, that predictable, easy readers worked well. With predictable readers, children have easy-to-read short stories. The pictures in the readers tell the stories. Repeated phrases help children follow and understand the story lines. Repeating the words helps put them into long term memory. The books have many high-frequency reading words. Often, the books include rhyme.

Series books also worked well. Some of the series books we used were:

- *Amelia Bedelia* by Peggy Tarish, (Grade Level: .5 - 2.0) Harper Collins;
- *Mouse Tales* by Arnold Lobel (Grade Level: Primer +) Scholastic;
- *Nate the Great* by Marjorie Weiman Sharmat (Grade Level: 2.0 - 3.0), Dell Publishing;
- *Frog and Toad* by Arnold Lobel (Grade Level: 2.0 - 3.2).

It is recommended that teachers have a set of their own books, or school sets of books after pre-primer, so that they can put phrased-cued markers in the books.

Phrase-Cuing Text

While reading the text, teachers add marks between the natural pauses that occur in and between sentences. Marking is based on the expression and phrasing that teachers hear as they read. One slash mark (/) is made between phrases. Make a slight pause at each phrase marker. Two slash marks (//) are made between sentences. Two slashes (//) are also used at end-of-sentence markers. Teachers pause slightly longer at two slashes (Rasinski, 1994). Two examples of text with phrased-cued markers follow.

Bears

Bears / are big animals. // They are strong. // They have thick fur. //
Some bears / sleep all winter. // They get ready. // They eat a lot of
food. //

Glavach and Associates (2012)

A Lighthouse

It is / a cold night. // The fog / makes it hard / to see. //
A ship / has lost its way. // The people / on the ship / see a light. //
The light / gets bright. // It is from / a lighthouse. //

Now / the ship / can find / its way. //

Glavach and Associates. (2012)

Following are the steps included in the program. The steps were chosen after testing the steps and sequence with a group of twelve non-readers in second grade.

STEP 1: Determine the Reading Level

If teachers know the child's reading level, they start the child with the first book at that level. The child may read at higher reading levels but exhibit problem reading characteristics such as: reading word-by-word, and exhibit difficulties in expression and rhythm. They start children at the level where they exhibit the problem reading characteristics. It is better to start children at an easier level to insure success. Teachers also can administer an easy-to-use reading inventory such as the *Slosson Oral Reading Test (SORT)*.

STEP 2: Introduce the Book

For beginning reading books, teachers go through the book's pictures and discuss what the book might be about. Teachers link the book to information the child knows. For example, if there is a picture of a park, they ask "Have you been to a park?" or "What kinds of things do you see in a park?" For higher level reading books, they discuss pictures and chapter titles.

STEP 3: Tracking

To begin, teachers sit across from the child, tracking on top of the words while the child tracks under the words. After the child is able to track, they sit next to him or her. When they start, the child moves under each word. As children develop, they track smoothly under the phrases. As children gain fluency and their eyes can follow the print, tracking can be used as needed.

STEP 4: Read the Book or Book Part to the Child

For short books, pre primer, and primer, teachers read the whole book. For longer books, they divide the book into parts. For the first reading, read at a slow pace, with expression. (For the second reading, read the same text at a regular pace with expression.) The child continues to track under the words as the teacher reads.

STEP 5: Teacher Reads Book or Book Part with the Child. Child Reads

The child reads the words and phrases with the teacher and tracks under the words. After practice, the child reads alone. The teacher reads words that are difficult for the child and the child continues the reading.

Teachers do not stop to sound out the words. Children do repeated readings with limited, if any, interruptions. If the child is constantly interrupted, he or she begins to anticipate the interruption and the interruptions lead to word-by-word reading.

For difficult parts of books or passages, the teacher reads a sentence, and the child reads the sentence right after the teacher. Then the teacher reads several sentences or more as the child is able. After practice, the child should be able to read the book at a seventy percent correct level.

A Seventy Percent Reading Score: A Path to Success

Most of the children in the program had not read a book successfully. They had developed a failure syndrome, just giving up. The first goal was to help them read a book successfully and experience the joy of reading. To do this, the level of correct words read was 70 percent or better.

Initially, there were questions about the 70 percent correct level. According to Gillet & Temple (2000), a child should read at an accuracy rate of ninety to ninety-five percent or comprehension will be compromised. At a ninety percent accuracy rate, most of the children lose interest and give up. After teachers began to see the excitement and improved self-esteem of the children, most reading their first book, it became obvious that this was an important component of the program. Their success makes the children want to read their books again and again - to anyone who will listen. They see many of the same words again in new books. Teachers also had children review books. As children gain success, their level of correct words read goes up, to 90 percent or better. Teachers made adjustments to book levels as necessary.

STEP 6: Use Timed Reading (Above First Grade)

Timed reading helps the child's reading become automatic and helps with comprehension. For beginning children, the teacher types 50 words from a book or a book part previously read. For more advanced children, the teacher types 100 words from a previously read book or book part. When children are able to read a book part fluently, use that book part to check their reading rates. If the child reads a word incorrectly, the teacher reads the word and the child is not given credit for the word. Children practice until they reach an 80% correct reading or higher. Make a Reading Progress Chart. While reading speed helps coordinate reading components in the brain, the outcome of reading fluency is not to be the fastest reader, but to read fluently with expression and understanding.

STEP 7: Reading Fluently with Expression

The teacher reads the text with expression. Then the child reads the text with expression. This was great fun for them, they loved to read the book with expression just as the book had been read to them.

Additional Activities:

Phonics from Book Context

While most of the children had tried phonics and did not respond well, it was thought there would be benefit to include phonics and spelling in the program. Once a child had completed a book, we developed phonics activities based on the words in the books they were reading. The children responded to the activities. To minimize confusion, the children completed the reading of a book or book part before introducing phonics activities. Writing activities were also included after a book or book part had been read.

Assessment Results

Most children demonstrated solid reading gains. School assessments also showed significant gains in comprehension. While not measured, but noteworthy, is that the children were reading in phrases with prosody. Approximately, twenty percent of the children were E.S.L (English as a Second Language).

Assessment Results

#1: Twenty students received thirty minutes of individual reading instruction daily for one year. See test scores. *Elementary School Principal*

#2: Eighty struggling readers were provided individual reading instruction of thirty minutes every other day for six months. Yearly school pre- and post-test results on the California Test of Basic Skills indicate an average reading growth of eight months to one and one-half year's growth". *Elementary School Principal*

#3: The results for the first few children were so encouraging that the teachers in grades 2 through 5 gave up their classroom aides to implement the program more widely. The program now serves 55 students in grades 1 through 5, about 20 percent of the school population. Staff and parents alike continue to be extremely positive about the results of the program. *Elementary School Principal*

Summary

Current reading research suggests that when children with dyslexia react to print, it follows a pathway to the brain's right hemisphere, and with phonemic and phonics practice, the child's brain repairs itself, and the child reads as a normal reader, using left hemisphere reading components (S. Shaywitz, 2003).

All of the children in this study were already identified as exhibiting difficulties in reading. Most of the children who completed the whole language reading approach that included learning to read and reading to learn became successful readers. Apparently, when some readers with

dyslexia react to print, and the print follows a pathway to the brain's right hemisphere, the children may respond to a whole language approach to reading. The fact that the children's reading, phonics, and spelling ability improved might also suggest that they were beginning to use left hemisphere reading components.

There is still much to know about brain function and reading acquisition. The authors see their research as bringing another approach, another chance for success, to struggling readers who had not responded to phonics.

Table 1
Test Scores, Grade 2

STUDENTS	PRETEST	POST TEST	GAIN
J.V.	.4	2.5	2.1
J.S.	.6	2.2	1.6
J.W.	.3	2.3	2.0
L.H	.1	2.2	2.1
E.M	.9	3.2	2.3
C.S.	.5	3.5	3.0
A.H.	.0	1.2	1.2
M.B.	.6	1.0	.4
R.R	.4	1.6	1.2
K.T.	.4	.6	.2
O.L.	.3	1.6	1.3
J.G.	.4	1.7	1.3
J.A.	.3	1.0	.7
A.B.	1.4	3.4	2.0
W.H.	.1	3.7	3.6
T.D.	.6	3.7	3.1

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Matthew Glavach, Ph.D., Teacher, Researcher, and Writer: Matthew Glavach graduated from Western Michigan University with a major in biology. He received a master's degree in special education from California State College in Los Angeles, California, and a Ph.D. in Psychology. Matthew has taught regular education and special education. He also has taught for Dominican University. He currently works with The Old Schoolhouse Magazine providing on-line reading lessons for children with reading problems including dyslexia. His research and writing include numerous educational programs including *Reading with Donny and Marie Osmond*, an original music based reading program for younger readers, and research articles, including "Breaking the Failure Pattern" in the Journal of Learning Disabilities. More recent research articles include "The Brain, Prosody, and Reading Fluency" and "A Reading Strategy for Content Area Teachers. In 2005, his reading program *Core Reading* was among programs chosen by the National Institute of Child Health and Human Development, NICHD, for a possible visit by First Lady Laura Bush. He is currently on the editorial board of The Journal of the American Academy of Special Education Professionals (JAASEP) an online peer-reviewed journal committed to advancing the professional development of special education professionals.

Warren Pribyl, M.A. Teacher, Researcher, and Writer: Warren Pribyl graduated from Chico State College in 1965 with a Bachelor of Arts Degree. During the ensuing forty-three years (1967-2010) he taught 5th grade, 6th grade, and special education. His work in special education covered a period of thirty-six years (1974-2010) during which time he completed a Master of Arts in special education. Warren worked with Dr. Matthew Glavach at the county office of education on a special reading program, *A Whole Language Reading Intervention*, for struggling readers. The program was based on children's literature. Warren was involved in the development, teaching, and training of the program. Based on the success of the program, he applied for a grant from a national company doing business in the community, and was successful in being awarded a monetary grant to expand the program for English reading students. Because of the documented success of the grant/program, Warren submitted another grant for the next school year, adapting the English reading strategies for use with the Hispanic students experiencing difficulty learning to read in Spanish before transitioning to English. The monetary grant was awarded, with year-end test results showing solid reading gains.