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A Short Monograph on How the Orton-Gillingham Method of Instruction Helps Children with Dyslexia to Learn to Read with Greater Fluency

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Abstract

This short monograph focuses on the effectiveness of the Orton-Gillingham Method of reading instruction, particularly when used with children with dyslexia. The original draft of this essay was presented as a paper to meet the requirements for the Masters degree at the Concordia University, St. Paul, Minnesota. I am grateful to my teachers for their guidance and help.

Since Orton-Gillingham Method of reading instruction takes a phonetic approach, a definition and brief history of phonics instruction will be given. The Orton-Gillingham Method will be defined along with some background on the founders of this method for better understanding. Orton-Gillingham's unique multi-sensory approach to reading instruction will be presented and evaluated. The reading disability of dyslexia will then be approached, including a definition, its impact on the instruction of reading, and the scope of this reading disability.

Sources for this short monograph will highlight research on the effectiveness of the Orton-Gillingham Method when used with children who have dyslexia. For the sake of contrast, some unfavorable reviews are also included. Other methods of reading instruction will also be briefly explained, such as the Sight Reading Method, along with the resulting increase in the diagnoses of dyslexia. This presentation will then give conclusions and possible application for instructional practices.

Key words: Dyslexia, Orton-Gillingham Method, phonics, reading instruction

Chapter 1: Introduction--Phonics

Definition

Webster's Unabridged Dictionary defines the term "phonics" as, "1. The science of sound; acoustics. 2. Phonetics. 3. The use of elementary phonetics in teaching beginners to read or enunciate" (Webster, 1983, p. 1348). Phonics has been used to teach beginners to read for centuries. Phonics, simply put, is the association of specific sounds with the corresponding letters of the alphabet.

"To learn to read and spell using phonics, children have to learn the relationship between letters (graphemes) and sounds (phonemes), and then remember the exact letter patterns and sequences that represent various speech sounds" (Vaughn & Linan-Thompson, 2004, p. 30) Generations of school children have spent many hours in kindergarten and first grade classrooms learning the names and corresponding sounds of the letters of the alphabet, commonly referred to by teachers at that time as "learning your A, B, C's."

History

A study of the history of phonics shows that phonetic methods were used to teach reading as long ago as the 15th century in conjunction with the use of *Hornbooks* and *Spellers* (Brown, 2014) Although primarily known as a physicist and a mathematician, Blaise Pascal, in 1655, invented something known as synthetic phonics for reading instruction (Rodgers, 2001, pp. 279 – 280). This method was adapted and used by Noah Webster, best known for having compiled *Webster's Dictionary* (Brown, 2014).

Popularity and Effectiveness of Various Programs Employing Phonics

The popularity and effectiveness of much more recent programs employing phonics for reading instruction are well known. For example, "Hooked on Phonics," was first developed in 1987 by a father who was trying to help his son overcome his reading difficulties (Sandviks HOP, Inc., 2014). Since then, Hooked on Phonics has won numerous awards, such as the Teacher's Choice Award. Other programs which have been successful in teaching children to read include "Simply Phonics" and "Go Phonics Reading Program."

In an article by Lane, Eisele, Pullen, and Jordan, titled "Preventing Reading Failure: Phonological Awareness Assessment and Instruction," phonological awareness, also known as understanding the sound structure of language, "has been shown to be shown to be both a reliable predictor of reading achievement and a key to beginning reading acquisition" (Lane, R., Pullen, & Jordan, 2005, p. 69).

Moreover, "The National Reading Panel report (2000) indicates that phonemic awareness helps students with disabilities, students with reading difficulties, very young students (preschoolers), kindergarteners, 1st graders, students from a range of socioeconomic groups, and ESL students" (Vaughn & Linan-Thompson, 2004, p. 10).

Phonetic instruction is generally structured in a logical and systematic manner, sequentially building upon previous lessons. Educators Publishing Service has something called a "Language Tool Kit." It is a box of 246 cards. Each card has a letter or a combinations of letters on one side and examples of words that contain those letters or letter combinations on the other side.

For example, the card with the letter "a" on one side has the following words on the reverse side: "short vowel sound—at, saddle, combat; long vowel sound—nation, maple, made, debate; uh sound—around, about, comma, extra."

These cards are divided into two groups. The first group of cards contain the following letters: a, t, b, h, i, j, k, m, p, and f. The second group of cards contain the following letters and letter combinations: g, o, r, l, n, th, u, ch, e, s, sh, d, w, wh, y, v, and z. The consonants and consonant blends are on white cards and the vowels are on salmon-colored cards to help the student to differentiate between letters that are consonants and those that are vowels.

The teacher using these flash cards follows the same four steps for each letter or combination of letters:

1. The teacher will show the card to the student and say the name of the letter on the card.
2. The student then repeats the name of the letter.
3. Next, the teacher makes the sound of that the letter makes.
4. The student then repeats the sound that the letter makes.

The teacher uses each card to help the student make two specific associations: "A. Associating the symbol (visual) with the name of the letter. B. Associating the symbol with the sound of the letter (auditory)" (Gillingham & Stillman, 1997, p. 30) Vaughn and Linan-Thompson (2004) describe the goals of such instruction.

> The goals of phonics and word study instruction are to teach children that there are systematic relationships between letters and sounds, that written words are composed of letter patterns representing the sounds of spoken words, that recognizing words quickly

and accurately is a way of obtaining meaning from them, and that they can blend sounds to read words and segment words into sounds to spell. (Vaughn & Linan-Thompson, 2004, p. 31).

The Orton-Gillingham Method

A particular approach to reading instruction using phonics which has been very successful, especially in teaching children with reading disorders such as dyslexia, is the Orton-Gillingham Method. This paper will attempt to answer the question "How does Orton-Gillingham help children with dyslexia to learn to read with greater fluency?"

This directly relates to the "Grand Tour Question" of this course of study: "In light of what we know about how children learn and educational policy and practice, how shall we best teach literacy in educational settings today?" Research and studies indicate that a phonetic-based approach to teaching reading is, by and large, the most successful method for reading instruction. Furthermore, for children and adults with reading disabilities such as dyslexia, the multi-sensory technique used in the Orton-Gillingham Method is effective in helping them to learn to read with greater fluency.

History of the Orton-Gillingham Method

The founders of the Orton-Gillingham Method are Samuel T. Orton (1879-1948) and Anna Gillingham (1878-1963). Orton was a neuropsychologist who specialized in language processing difficulties now commonly associated with dyslexia. Gillingham was an educator and a psychologist with a special interest in the structure of the English language. Both doctors worked at Columbia University in New York City. Using research developed by Dr. Orton, and

with the help of her colleague Bessie Stillman, Anna Gillingham published the first training manual for Orton-Gillingham in 1935. Since that time, there have been many enlargements, updates, and revisions to what is now commonly known among reading instructors and specialists as *The Gillingham Manual* (Gillingham & Stillman, 1997, pp. vii-vii).

Chapter 2: Research on Orton-Gillingham's Effectiveness

Research on the effectiveness of the Orton-Gillingham Method is readily available and abundant. Studies critical of the Orton-Gillingham Method included one study performed by Best Evidence showed that the Orton-Gillingham Method showed "limited evidence for effectiveness for beginning reading" (John Hopkins University-Center for Data-Driven Reform in Education, 2014)

Another scholarly article published by the Graduate School of Education at the University of Pennsylvania proposed that "OG and OG-based reading instruction is still too immature to draw scientifically valid conclusions on the effectiveness of this type of reading instruction on reading and reading-related outcomes" (Turner III, 2008, p. 67)

Nevertheless, the vast majority of the studies available indicate that the Orton-Gillingham Method showed significant improvements in the reading skills of the children who were instructed using the techniques supported by Orton-Gillingham.

Research and studies conducted on the Orton-Gillingham Method have been conducted by the International Dyslexia Association, the Institute for Multi-Sensory Education, and the U.K. School District based in London, England. Some of these, as well as other studies, will be referred to in this paper in order to demonstrate the effectiveness of this approach in teaching learning-disabled children to read.

An article published in *The Journal of Special Education* reported that in nine out of 12 studies, the Orton-Gillingham Method was found to be more effective as a method of

teaching reading than other interventions. In the quote below, "OG" is used to refer to the Orton-Gillingham Method of reading instruction.

> Twelve studies that employed quasi-experimental or experimental designs are reviewed. These studies included elementary students, adolescents, and college students. Of the 12 studies, 5 reported that the OG instruction was more effective than were comparison or control interventions for all measured outcomes, 4 reported that the OG instruction was more effective for at least 1 (but not all) outcomes in comparison to other intervention(s), 2 reported that the alternate instruction was more effective than the OG instruction, and 1 reported no significant differences once covariates were included. (Ritchey & Goeke, 2006, p. 171)

The fact that five out of 12 of these studies showed Orton-Gillingham to be "more effective… for all measured outcomes" and that in nine out of 12 were found to be more effective as a method of teaching reading than other interventions appears significant.

Another scholarly article about a study that took place in a school in Singapore was published in the *British Journal of Special Education*. It revealed what was judged to be "significant improvement" in at least two areas—word recognition and word expression.

> This article, written by Assistant Professor Noel Chia from the National Institute of Education, Nanyang Technological University, Singapore and Professor Stephen Houghton from the Centre for Child and Adolescent Related Disorders, University of Western Australia, reports an empirical evaluation of a one-year Orton-Gillingham instruction based reading intervention programme. The programme was conducted with 77 (61 male and 16 female) Singaporean primary school-aged children with dyslexia and

> a pre-test/post-test experimental group design was incorporated into a hybrid multiple baseline to inform analysis. A multivariate analysis of variance revealed a highly significant main effect for pre-post on the composite dependent variable made up of word recognition age (WRA), word expression age (WEA) and sentence reading age (SRA) scores. Univariate F tests revealed significant improvements in WRA and WEA. These effects were modest (7% and 8% variance accounted for, respectively) but high enough to be considered educationally significant. (Hwee & Houghton, 2011, p. 143)

The above study, performed in Singapore, is also significant because it shows that the Orton-Gillingham Method is not limited in its effectiveness to children being instructed in Western school settings.

An interview with a reading specialist who uses the Orton-Gillingham Method cited in the Wisconsin State Journal told the story of a struggling reader named "Tony" who, with intervention from the instructor using Orton-Gillingham techniques was able to "graduate from high school and to go on and attend college." The conclusion was that "Orton-Gillingham is a useful approach to teaching reading to children with special needs" (Bliss, 2000).

Another study showing the effectiveness of the Orton-Gillingham Method comes from an article written in November 2010 about the Universal Institute Charter School in South Philadelphia. This charter school has a 100% African-American student body, 75% of which is eligible for free or reduced-price lunches due to their low socioeconomic status. After implementing the Orton-Gillingham reading Method at this school, the improvements in the students' reading skills was no less than remarkable. "For the 2008-09 school year, 65% of the participating students moved from a low basic or basic reading level to a proficient or advanced

level according to the Pennsylvania System of State Assessments" (Walk, November 2010, p. 48).

John Alexander is the principal of Groves Academy in St. Louis Park, Minnesota. Groves Academy is a unique school in that it exists for the sole purpose of educating children who have learning disabilities. Patrick Leeming graduated from Groves after having attended the school for eleven years. Once a struggling reader, his reading skills are presently at college level. He is just one of hundreds of children who been helped by the intervention that took place at this remarkable school.

In Mr. Alexander's article, "Dealing with Dyslexia," he says the following about the need for early intervention to help children struggling with dyslexia to overcome their reading problems:

> There are no quick fixes or silver bullet cures when it comes to dyslexia. However, there is hope. According to a multitude of research studies sponsored by the National Institute of Child Health and Human Development (NICHD), we know with certainty that early identification and the proper form of intervention make huge differences in narrowing the gap between a child's potential to read and his/her actual reading ability. According to replicated research, 90% to 95% of poor readers can increase reading skills to an average level if the problem is identified in its early stages and the proper form of intervention is implemented. (Alexander, 2014, p. 1)

The specific "form of intervention" Mr. Alexander recommends is described later in the article. He states that the reading specialist or teacher needs to have "an explicit understanding of phonemic awareness, phonics, and morphology" among other necessities (Alexander, 2014, p.1).

The Orton-Gillingham Method emphasizes the skills Mr. Alexander mentions in his article. The teachers at Groves Academy are all trained in the Orton-Gillingham Method of reading instruction.

Sally Shaywitz, author of *Overcoming Dyslexia*, echoes this assessment regarding early intervention.

> Early identification is important because the brain is much more plastic in younger children and potentially more malleable for the rerouting of neural circuits. Moreover, once a child falls behind he must make up thousands of unread words to catch up to his peers who are continuing to move ahead. (Shaywitz, 2003, pp. 30-31)

The Multi-Sensory Approach to Teaching

One of the reasons for the success of the Orton-Gillingham Method is the use of a multi-sensory approach to teach children to read. For example, if a teacher wants to reinforce the sound of the letter "A," a common method would be for the teacher to have the child say the "A" sound while writing the letter "A" in the air. In this way, the child uses his sight, his hearing, and the sense of touch to reinforce the sound that the letter "A" makes. Another method would be to have the child draw the letter in shaving cream or in wet sand while simultaneously making the sound associated with that letter.

> Orton-Gillingham is highly structured and systematic, tries to engage all the senses in learning about letters and sounds (a child taps each finger to his thumb as he sounds out a word), and typically is taught one-to-one or in small groups. (Shaywitz, 2003, p. 366)

A scholarly article published in the journal *The Annals of Dyslexia* studied the effectiveness of a multi-sensory method of reading instruction.

> The purpose of the present study was to examine the efficacy of the multisensory teaching approach to improve reading skills at the first-grade level. The control group was taught by the Houghton-Mifflin Basal Reading Program while the treatment group was taught by the Language Basics: Elementary, which incorporates the Orton-Gillingham-based Alphabetic Phonics Method. The results showed that the treatment group made statistically significant gains in phonological awareness, decoding, and reading comprehension while the control group made gains only on reading comprehension. (Joshi, Dahlgren, & Boulware-Gooden, 2002 Volume 52)

The following quote on the website of The Lexicon Reading Center also explains the benefit of a multi-sensory approach in teaching children with dyslexia to read:

> Using a multisensory teaching technique means helping a child to learn through more than one sense. Most teaching techniques are done using either sight or hearing (visual or auditory). The child's sight is used in reading information, looking at text, pictures or reading information based from the board. The hearing sense is used to listen to what the teacher says. The child's vision may be affected by difficulties with tracking or visual processing. Sometimes the child's auditory processing may be weak. The solution for

these difficulties is to involve the use of more of the child's senses, especially the use of touch (tactile) and movement (kinetic). This will help the child's brain to develop tactile and kinetic memories to hang on to, as well as the auditory and visual ones. (A.V., 2014, p. 1)

As the quote above demonstrates, children with reading disabilities, such as dyslexia, are slowed down considerably when learning to read by challenges they may be experiencing when attempting to track the words on a page. Moreover, any auditory processing problems will also complicate the problem of learning to read.

Dyslexia--Definition

Some basic definitions may be in order at this point, such as what is meant by tracking or by auditory processing. Simply put, tracking in reading instruction generally refers to the ability of the student to follow (or track) the words on a page. Dyslexic students sometimes experience difficulty sequentially following the words of text on a page. They can sometimes skip a line, or become confused about where they were on the page or where they are supposed to be.

Auditory processing is the ability to "process" or to sort out auditory information, speech in particular. An auditory processing disorder is attributed to a dysfunction in the central nervous system (the brain). This usually leads to difficulty in recognizing and/or interpreting sounds, especially speech. It is often referred to as auditory processing disorder (APD) or central auditory processing disorder (CAPD).

Consequently, some of the physical/neurological requirements that come rather easily to unimpaired children can make the task of learning to read seem almost insurmountable to children with reading disorders. For such children, the multi-sensory approach, involving both the sense of touch and movement, greatly facilitates the process of learning to read.

In order to better understand what is meant by the multi-sensory approach, here is an explanation of what is involved in the "Four-Point Program," also known as "Simultaneous Oral Spelling (S.O.S.)," used by Orton-Gillingham. Although it is called the "Four-Point Program" it actually consists of five steps. Paraphrasing from The Gillingham Manual, here is an explanation of this technique.

In this technique, is important for the student to name the letters aloud as each is being written. In this way, the visual-auditory-kinesthetic linkages or associations will be made. Making such connections is very important for the child who has dyslexia, due to the integration, processing, and/or attention problems that dyslexia commonly causes. The following five steps provide the practice and reinforcement necessary to improve spelling and to help retain the information.

- In the first step, the teacher says the word aloud. The student hears his teacher's voice. This is auditory.
- In the second step, the student repeats the word. In this way, the student hears his own voice and feels his speech organs as they say the word. This is auditory-kinesthetic.
- In the third step, the students breaks us (or segments) the sounds and names the letters. This step will give the teacher an opportunity to correct any errors before the writing

takes place. The reason for this is that it is important to "imprint" the word correctly in the student's "mind's eye."

- In the fourth step, the student writes the letters, naming each letter aloud and he forms it on the paper or surface. Because the student both sees the letters and feels his hand forming the letters, this is visual-kinesthetic.
- Finally, in the fifth step, the student reads what he has written, In this way, the student sees, hears, and even feels (in his vocal cords) the word. This is visual-auditory-kinesthetic.

This method also enables the student to proofread what he has written (Gillingham & Stillman, 1997, p.35-36).

Dyslexia—The Scope of This Reading Disability

It is necessary to have an understanding of both the problem and scope of dyslexia. Dyslexia is a commonly diagnosed reading disorder. It is defined in The Gillingham Manual as "difficulty in the use and processing of arbitrary linguistic/symbolic codes. This is an aspect of a language continuum, which includes spoken language, written language, and language comprehension" (Gillingham & Stillman, 1997, p. 363).

A common problem with dyslexia is the inversion of letters, such as, seeing a "d" where there is a "b," or even an "s" where there is a "z." Consequently, where a non-dyslexic person will see the "bed," a dyslexic person will read "deb." This inversion can take place with entire words in both reading and in speaking, as demonstrated in the quote below.

> Both reversals and confusions are familiar to teachers. In the visual field, for example, the word *go* may be read *og*; *was* may be called *saw*. A well-educated woman glanced at *eat* and read it *tea*. In the auditory field one may hear *loop* called *pool*. (Gillingham & Stillman, 1997, p. 7)

There have been many attempts to explain this phenomena. Many have attributed it to the complex interaction that takes place between the two hemispheres of the brain.

> Paul Broca, writing in France in 1861, formulated his classic statement that language is controlled by the hemisphere of the brain opposite the more skilled hand. Brian surgeons have accepted this premise for years, using it to help predict whether a brain injury will cause impairment of language. (Gillingham & Stillman, 1997, p. 7)

It is also known to be an inherited characteristic. "It is believed that over fifty percent of dyslexics may have inherited the genetic pattern from one or both of their parents" (Gillingham & Stillman, 1997, p. 7).

Studies have shown that dyslexia specifically affects the ability to master the phonological component of language. Sally Shaywitz explains this weakness in the quote below.

> Dyslexia does not reflect an overall defect in language, but, rather, a localized weakness within a specific component of the language system: the phonological module. The word *phono-logic* is derived from the Greek word *phone*, meaning *sound* (as in *phonograph* and *telephone*). The phonological module is the language factory, the functional part of the brain where the sounds of language are put together to form words and where words

> are broken down into their elemental sounds… the phonologic module provides a cogent explanation as to why some very smart people have trouble learning to read. (Shaywitz, 2003, p. 40).

Dyslexia is a common problem. As many as one out of five school children are believed to be dyslexic or to at least possess characteristics of dyslexia. Sally Shaywitz claims that "reading disability affects approximately one child in five" (Shaywitz, 2003, p. 30).

Gillingham and Stillman concur with this.

> Approximately ten percent or more of the school population experience sufficient difficulty in reading and spelling to be seriously impeded in their school progress, while an additional five to ten percent are on the borderline, falling in reading and spelling skill far below their ability to comprehend the content. (Gillingham & Stillman, 1997, p. 8)

Research also verifies the claim that dyslexia is not due to factors such as "laziness, low intelligence, economic status, or poor teaching" (Gillingham & Stillman, 1997, p.8). Well-known people who had (or have) dyslexia include inventor Thomas Edison, novelist Vince Flynn, author Hans Christian Anderson, and actress/comedienne Whoopie Goldberg. The fact that dyslexia has nothing to do with laziness contradicts the often-heard idea that the pupil "is bright; he just isn't trying hard enough."

It actually has very little to do with how hard the child is trying to learn. He may be trying very hard and still not succeeding, through no fault of his own. This is because dyslexia is a neurologically-based learning disorder. This is also why other approaches or techniques, such

as using multi-sensory methods of instruction, have succeeded in teaching children with dyslexia to learn to read with greater fluency.

With as much as 20% of the student population showing characteristics of dyslexia, it would behoove all reading teachers to be familiar with the techniques that have been the most helpful in teaching students with reading challenges such as dyslexia to learn to read with greater fluency.

Impact of Orton-Gillingham on Children with Dyslexia

A study published by the International Dyslexia Association (IDA) has confirmed that 95% of students with dyslexia have been significantly helped by the multi-sensory approach used in the Orton-Gillingham Method of reading instruction. "All the latest scientific, independent, replicated reading research supports the Orton-Gillingham sequence and methodology as 'best practices' when teaching reading to students with dyslexia" (Barton Reading and Spelling System, 2014)

Project Against Failure, a phonics-based method of reading instruction also uses the Orton-Gillingham methods to help learning disabled students to learn to read with greater fluency (Failure, 2014).

Wilson Reading System (WRS) is a reading program which is often used in conjunction with Orton-Gillingham in reading instruction. It is based upon many of the same principles which have made Orton-Gillingham successful. Using a systematic, multi-sensory approach and emphasizing early intervention, Wilson Reading System has helped many children with dyslexia

to learn to read with greater fluency. Sally Shaywitz notes that Wilson is especially effective when used with "older elementary students through adults" (Shaywitz, 2003, p. 266).

The Failure of the Sight Reading Method of Instruction

Other methods of reading instruction, especially those that are not phonics-based, have not been shown to be as successful. For example, sight word instruction (sometimes referred to as whole word instruction) as a method of teaching reading, has not had the success rate of phonics and is in no way comparable to the effectiveness of the Orton-Gillingham Method. Sight word instruction teaches children to read based upon the idea of viewing the word, not as a combination of symbols (or letters) which represent sounds, but as a complete picture. According to Diane McGuiness, author of *Early Reading Instruction*:

> We know that time spent memorizing sight-words can cause a negative outcome by promoting a strategy of 'whole word guessing.' This is where children decode the first letter phonetically and guess the rest of the word based on length and shape. This strategy is highly predictive of reading failure." (McGuiness, 2004, pp. 114-115)

The rationale behind this concept is that many words we use regularly are not phonetic, and therefore, cannot be sounded out phonetically. The problem with this theory is two-fold.

First of all, although English does contain many words that are not phonetic (such as "knight," "enough," and "talk"), the vast majority of our words in English are phonetic. In fact, "in spite of its irregularity, English is essentially a phonetic language, and less than twelve to fifteen percent of our words are truly non-phonetic" (Gillingham & Stillman, 1997, p.96).

Increase in Dyslexia

Secondly, children who are instructed using the sight word instruction method have been found to have a much higher rate of dyslexia, or what is commonly referred to as "dyslexia equivalence" (Potter, 2014)The reason for this is obvious. If a word is viewed as a picture instead of being sounded out from left to right, as in the phonetic method, it does not matter if the word is seen from left to right or from right to left. It is merely a picture that stands for an entire word. "To children taught by the whole-word recognition or 'sight' method, words become just things, and a child has to try to remember what they are just by looking at them" (Gillingham & Stillman, 1997, p.24).

Evaluations of the sight word instruction have shown that it is a poor method of reading instruction. Sight word instruction requires the child to memorize literally thousands of words in order to be able to read even on a rudimentary level. In the time it takes an average child to learn 5,000 words using sight word instruction, a similarly average child who is taught using phonics will know about 50,000 words, literally ten times as many words (Wren, 2014)

Other Effects on Children and Adults

Research has shown that numerous teachers have seen firsthand the negative effects of this poorer method of reading instruction on those who have been taught using this method. Reading becomes much more of a chore for the student, and reading level skills also suffer as a result.

Of course, with languages that are not phonetically based, such as Chinese and Japanese, which use ideograms instead of letters, the only way to learn to read is through sight word instruction. This would indicate that the rate of dyslexia would be considerably lower for those students learning to read such languages. Nevertheless, the rate of dyslexia even among children learning to read in languages that are not phonetic, is about the same as it is among those learning alphabetic languages.

> At one point it was thought that dyslexia affected only those who spoke alphabetic languages, such as English and German, and that those who spoke languages that are primarily logographic, such as Chinese and Japanese, were not at risk. This assumption has been proven to be false. Researchers have found comparable prevalence rates for dyslexia among American, Japanese, and Chinese children. (Shaywitz, 2003, p. 31)

Another myth concerning dyslexia is the notion that dyslexia primarily affects boys; that girls are much less likely to be or become dyslexic. "It had been generally assumed that reading disability was far more common in boys than in girls; studies had indicated that dyslexia affected anywhere from four to six times as many boys and girls" (Shaywitz, 2003, p. 31). We now know this idea to be false.

> We found no significant difference in the prevalence of reading disability in the girls and boys we identified. In general, when each child in a school or school district is individually tested, researchers report as many reading-disabled girls as boys. (Shaywitz, 2003, p. 32)

Chapter 3: Research Summary and Conclusions

The conclusion based upon the information above is that dyslexia is both global and transgender, affecting both boys and girls nearly equally, as well as those learning to read in many countries and languages. Consequently, the need for early and aggressive intervention is also both global and transgender.

Research indicates that approximately 20% of the global elementary student population struggles to some degree with the task of learning to read. Since this problem occurs nearly equally in both boys as well as girls and is experienced in a multitude of languages and educational settings, the need for teachers equipped to help students with reading challenges is significant.

It would be difficult to overestimate the importance of being able to read in today's world. Literacy is like a key that unlocks many doors of opportunity, socioeconomically and otherwise. Conversely, illiteracy keeps these same doors of opportunity locked tightly.

Considering both the scope and severity of dyslexia, along with the effectiveness of early detection and intervention, the Orton-Gillingham method empowers students to learn to read with greater fluency and is a very attractive option for reading teachers.

The majority of the research cited here is conclusive concerning the effectiveness of the Orton-Gillingham Method. In brief, studies have shown that it works well to improve reading skills, especially in students who struggle with dyslexia or other reading problems. The reason for this is the two-pronged approach of systematic phonics-based reading instruction along with using the use of multi-sensory teaching methods. This has helped children, especially those who

have struggled in learning to read, to learn to read with greater fluency, whether they are dyslexic or have other reading disabilities.

Studies have demonstrated that the Orton-Gillingham Method has been found to be effective in diverse settings, socioeconomic groups, and even different age groups. It has primarily been shown to be effective in beginning readers—kindergarten and first grade—but has also been used to help adolescents and even adults to learn to read with greater fluency.

Groves Academy, referred to on page 8, specializes in educating children with learning disabilities. All of the teachers who work at Groves Academy are trained in the use of Orton-Gillingham reading instruction methods. Many of the children who learn to read at Groves Academy were not successful when trying to learn to read previously in more traditional school settings. The smaller classroom size at Groves Academy is certainly a contributing factor to the success their teachers experience in educating children with learning disabilities. However, in reading instruction in particular, it is the phonetic and multi-sensory based approach, such as those used in the Orton-Gillingham Method, which has helped many children with dyslexia--children who once believed that they simply could not learn to read--to be able to do so.

Although the Orton-Gillingham Method is not the only means available of helping those who struggle in learning to read, studies and research that have been conducted on Orton-Gillingham have shown it to be, for the most part, very effective.

Chapter 4: Discussion/Applications

As stated earlier, Orton-Gillingham uses a two-pronged approach to help teach students and adults with dyslexia to be able to learn to read with greater fluency. This is:

(a) Systematic phonetic-based reading instruction. This is sequential, building upon previous lessons to help the student learn to sound out words.

(b) Multi-sensory techniques. This is using more than sight and hearing to teach the association between letters and their corresponding sounds.

These two aspects of the Orton-Gillingham Method work together smoothly. "A strong foundation using a multisensory approach to reading is one that can be accomplished only through an alphabetic/phonetic approach" (Gillingham & Stillman, 1997, p. 29).

The use of flashcards, such as those found in the Language Tool Kit published by Educators Publishing Services, are helpful in systematic phonetic-based reading instruction. For approximately 45 to 60 minutes each school day, using the cards with letters on them to teach the association between specific letters and the sounds they make.

One of the multi-sensory techniques the teacher uses is the Simultaneous Oral Spelling (S.O.S.) technique. Paraphrasing from The Gillingham Manual, here is how it works:

1. The teacher says the word or phoneme.
2. The student repeats the word.
3. The student segments the sounds and spells the word aloud.
4. If correct, the student writes the letters, saying each letter as he or she writes.
5. The student reads the word he or she has written.

Sometimes instead of writing the letter on paper, the student may trace it, write it in wet sand or in shaving cream, or draws it in the air. (Gillingham & Stillman, 1997, p. 28).

The reason for a multi-sensory techniques is that, especially for children with learning disabilities, this helps the student to better remember both the phonics involved as well as the spelling of the words used in this technique. The use of the kinetic-sensory approach reinforces this learning process.

> In direct contrast to current practices, the Orton-Gillingham-Stillman approach starts with the individual sounds, and then use these sounds to build words. This "word-building method" also builds close association or link between what the student sees in print (visual), what the student hears (auditory), and what the student feels as he or she makes the sounds of the letters and writes (kinesthetic—large muscle movements, and tactile—sensations in the mouth and on the fingertips). This technique is referred to as the "language triangle" or multisensory approach. (Gillingham & Stillman, 1997, p. 29-30)

The methodology often employed by reading specialists who follow the Orton-Gillingham Method includes the following nine-part "Complete Lesson" taken from *The Gillingham Manual:*

1. **Drill card review** (*a, h, t, m* or other phonograms as needed)
    - While the teacher is showing the card to the student, the student gives the letter name, key word, and sound while writing the cursive letter on the rough surface or paper.

2. **Word lists to be read** (words made up of phonograms discussed)

hat ham mat

at am *mam*

tat tam *nam* (*nonsense syllables*)

3. **Spelling drill** (the teacher holds the yellow card, but the face of the card is not shown)

   An early example:

   - *"Tell me the name of the letter that makes the sound* \a\."

     Eventually the teacher will just say the sound, and the student will automatically say the name.

   - The student says, a, apple, \a\ while writing the letter in cursive on the rough surface.

   - *"Tell me the name of the letter that has the sound* \t\." The student says, t, top, \t\ while writing the letter in cursive on the rough surface, and so on.

4. **Spelling words** (Remember to use the S.O.S. procedure. Also, use words at this point that can only be spelled one way—e.g., "since" has many phonetic variations.)

   hat tat

   at mat

   ham tam

   man *nam* (*nonsense syllable*)

   am

5. **Handwriting practice**

   Teacher dictates words containing previously learned letters to

   - increase fluidity in writing
   - reinforce motor memory of letter formation
   - improve legibility
   - learn and practice the connectors which tie the letters together

6. **Dictation** (remember to write sight words on a card for the student to copy)

   Mat the man.

   Tam the ham.

7. **Reading** (remember to underline the sight words)

   I am Tat.

   Tam the ham.

8. **Introduce new concept**

   - Concepts to be taught include letters, diphthongs, digraphs, blends, spelling patterns, silent e endings, compound words, spelling generalizations, silent letters, syllable types, rules for division, accent patterns, and affixes.

9. **Listening comprehension**

Common Ground by Priscilla Vail (Modern Learning Press, 1991) lists stories at individual grade levels that are good for oral reading. Jim Trelease's book, *The Read-*

Aloud Handbook (Penguin Press, 1995) lists many resources and stories that are especially suited for this type of reading activity (Gillingham & Stillman, 1997, p. 39-40).

Many other examples of drills and techniques are available in *The Gillingham Manual* which have been effective when used with readers on a variety of reading levels.

Bibliography

A.V., P. (2014, June 15). *What is Multisensory Teaching Techniques?* Retrieved from Lexicon Reading Center: http://www.lexiconreadingcenter.org/what-is-multisensory-teaching-techniques.html

Alexander, J. (2014, June 15). *Dealing with Dyslexia*. Retrieved from Groves Academy: http://www.grovesacademy.org/literacy/what-we-know-about-learning-disabilities/dealing-with-dyslexia/

Barton Reading and Spelling System. (2014, June 10). Retrieved from Barton Reading and Spelling System-Research on Orton Gillingham Approach: http://www.bartonreading.com/research2.html#orton

Bliss, B. (2000). Children With Learning Disabilities Must Stop Falling Through The Cracks. *Wisconsin State Journal*, 3.

Brown, E. (2014, June 15). *History of Readig Instruction*. Retrieved from The Phonics Page: http://www.thephonicspage.org/On%20Phonics/historyofreading.html

Failure, P. A. (2014, June 10). *About PAF*. Retrieved from PAF: http://www.pafprogram.com/about_paf.html

Gillingham, A., & Stillman, B. W. (1997). *The Gilllingham Manual : Remedial Training for Children with Specific Disability in Reading, Spelling, and Penmanship.* Cambridge and Toronto: Educators Publishing Service.

Hwee, N. C., & Houghton, S. (2011). The Effectiveness of Orton-Gillingham-based Instruction with Singaporean Children with Specific Reading Disability (Dyslexia). *British Journal of Special Education*, 143-149.

John Hopkins University-Center for Data-Driven Reform in Education. (2014, June 15). *Program Overviews*. Retrieved from Best Evidence Encyclopedia: http://www.bestevidence.org/overviews/O/Orton-Gillingham-Approach.htm).

Joshi, R. M., Dahlgren, M., & Boulware-Gooden, R. (2002 Volume 52). Teaching Reading in an Inner City School through a Multisensory Teaching Approach. *Annals of Dyslexia*.

Lane, H. B., R., E. M., Pullen, P. C., & Jordan, L. (2005). Preventing Reading Failure: Phonological Awareness Assessment and Instruction. In Z. Fang, *Literacy Teaching and Learning* (pp. 69-80). Upper Saddle River: Pearson Prentiss Hall.

McGuiness, D. (2004). *Early Reading Instruction: What Science Really Tells Us About How to Teach Reading.* Denver: Bradford Books. Retrieved from Reading Made Easy Blend Phonics.

Potter, D. (2014, June 10). *Sight Words*. Retrieved from Reading Made Easy Blend Phonics: http://blendphonics.org/?page_id=68

Ritchey, K. D., & Goeke, J. L. (2006). Orton-Gillingham and Orton-Gillingham-Based Reading Instruction: A Review of the Literature. *The Journal of Special Education*, 171-183.

Sandviks HOP, Inc. (2014, June 15). *Our History*. Retrieved from Hooked on Phonics: https://www.hookedonphonics.com/about-us/our-history).

Shaywitz, M. (2003). *Overcoming Dyslexia.* New York: Random House, Inc.

Turner III, H. M. (2008). This systematic review empirically documents that the effectivenss of Orton-Gillingham and Orton-Gillingham reading instruction remains to be determined. *Evidence-Based Communication Assessment & Intervention*, 67-69. doi:10.1080/17489530802037564

Vaughn, S., & Linan-Thompson, S. (2004). *Research-Based Methods of Reading Instruction Grades K-3.* Alexandria: Association for Supervision and Curriculum Development.

Walk, J. (November 2010). Streamlining Literacy. *Principal Leadership*, 48.

Webster, N. (1983). *Webster's New Universal Unabridged Dictionary (2nd Edition).* New York: Simon & Schuster.

Wren, S. (2014, June 10). *Developing Research-Based Resources for the Balanced Reading Teacher*. Retrieved from Balanced Reading: http://www.balancedreading.com/sightword.html

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