

The Davis Model of Dyslexia Intervention: Lessons from One Child

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ABSTRACT

Ronald Davis developed a theoretical base for the Davis model of understanding dyslexia. The model describes the cause of dyslexia and prescribes certain strategies for intervention. The strategies consist of three main components. The first is the Davis Orientation Counselling procedure, while the second is the Davis Symbol Mastery procedure and finally the Davis Reading Exercises. Annie is a 9-year-old child diagnosed with dyslexia with major problems in the area of visual perceptual skills, which manifest academically in the area of reading and writing. The Davis strategies were used to help correct her dyslexia symptoms. The results suggest that the Davis Orientation Counselling method has helped to correct her visual perceptual problems, which in turn improves her reading and writing skills. Furthermore, the Davis Symbol Mastery was able to help identify and correct her problems with reversals. Finally, the Davis Reading Exercises helped her in tracking and in word recognition. Therefore, it is suggested that the Davis method offers a plausible explanation for Annie's dyslexic symptoms.

Keywords: Davis Model, dyslexia, intervention

INTRODUCTION

Dyslexia is one of the most widely known learning disabilities (Sanders, 2001). Generally, the term dyslexia is often used to refer to a reading deficit that cannot be accounted for by low intelligence, sensory deficits, emotional problems, or the lack of educational opportunities (Vellutino, Fletcher, Snowling and Scanlon, 2004). Reading problems at word level emerge as a key factor in developmental dyslexia. The latest definition of dyslexia, adopted by the National Institute of Child Health and Human Development (NICHD) and The International Dyslexia Association (IDA), defines dyslexia as characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities (Lyons, Shaywitz and Shaywitz, 2003). In particular, Vellutino

(1979, cited in Pressley, 2002) made the first exceptionally strong case that dyslexia was a result of a language deficit rather than a visual-perceptual deficit. Converging evidence from the past four decades of research evaluating the hypothesized causes of dyslexia suggests that the most common explanation for dyslexia stems from an underlying phonological deficit - a difficulty in processing the speech sounds of the native language (Vellutino, Fletcher, Snowling and Scanlon, 2004). Thus, the main focus on the remediation of dyslexia has been to address this particular weakness. Children are first taught individual letter-sound relations and then to blend these letters together to read words and sentences using a visual-auditory-kinesthetic-tactile (VAKT) procedure referred to as multisensory. Most methods to teach

Received: 30 September 2009

Accepted: 20 January 2010

children with dyslexia are derived from the Orton-Gillingham approach (Stahl, 2002). The Orton-Gillingham method of instruction (Henry, 1998) uses multisensory, structured, and explicit instruction to teach phonological awareness, decoding, and spelling.

The possibility that dyslexia may be more than just a language disorder and that there may be a variety of perceptual deficits which can result has gained more respectability in the recent years (Martin, 1995, cited in Pressley, 2003). In this study, an alternative model of understanding dyslexia, the Davis model, is given attention.

THE RESEARCH PROBLEM

The traditional model of dyslexia, i.e. the phonological processing representation, cannot adequately explain certain symptoms of dyslexia reported by children with dyslexia. Such symptoms include reversing of letters, problems differentiating alphabets, moving letters/words, as well as disappearing letters/words or jumbled and reassembled letters and words into different sequences. Lee Lay Wah (2004) reported on cases of children with dyslexia in Malaysia which showed such symptoms. These children have problems differentiating between letters such as 'b/d' and 'j/g' as well as problems reversing such letters. In one of the cases reported, the child with dyslexia complains of letters floating from the page. The child's response was to lower his head in order to press the letters down as he reads. This particular child also sees the letter 'N' floating and turning to become 'Z'. The traditional models of dyslexia do not adequately explain such symptoms and such symptoms are mostly ignored with emphasis given to sounds of language and the process of decoding for word recognition. However, these seemingly bizarre symptoms cannot be ignored as it obviously hinders the child's word recognition process in particular and affects the child's reading process in general. A new perspective on dyslexia put forward by Ronald Davis (1994) seems to offer a plausible explanation for the symptoms described.

FRAMEWORK OF THE STUDY

Ronald Davis offers a new perspective on what dyslexia is (Davis, 1994; Davis and Braun, 2003). About 15 years ago, Davis, an engineer and sculptor, discovered something about his own dyslexia that did not fit into the established label of dyslexia. Davis and his team of researchers found that for someone to be dyslexic, three things had to be present; these include a certain way of thinking (picture thinking), a natural ability to disorientate (a perceptual talent), and a specific way of reacting to the disorientation. According to Davis, these three ingredients are responsible for all the symptoms of dyslexia.

Dyslexics think primarily in pictures. They naturally think through mental or sensory imagery rather than through words or sentences. According to Davis, picture thinkers tend to use global logic and reasoning and are usually good at strategizing and creative endeavours. This could explain the unexpected perceived strength found in children with dyslexia which does not correspond to their reading problems. However, this ability among dyslexics can also be a foundation for a problem, which he called disorientation. The principle of disorientation has to do primarily with perception. Davis defines orientation as a state of existence where a person accurately perceives the environment. Disorientation is a state of existence where one does not accurately perceive the environment. According to Davis, disorientation is the key to the puzzle of dyslexia. As dyslexics are essentially picture thinkers, when a child comes across words whose meanings cannot be pictured, blank pictures are produced in the thinking process. The blank pictures contain a feeling of confusion. Davis calls the words which trigger blank pictures and lead to confusion as trigger words. As the blank pictures accumulate, the feeling of confusion intensifies to a point where the person cannot tolerate any more confusion. At this point, disorientation is stimulated and perception becomes distorted. This results in the appearance of symptoms found in dyslexia when a child reads such as reversals, substitutions, omissions, transposition, and words starting to

move or disappear. In fact, according to Davis, the only factor limiting these symptoms is the imagination of the disoriented person. For that split second, the person experiences an alternate reality. Apart from visual distortions, audio distortions or distortion in the sense of balance, movement and time may also occur. These are the negative effects of disorientations. According to Davis, this perceptual ability to distort is also a perceptual talent which explains the gift of people with dyslexia such as is often reported in famous individuals like Albert Einstein.

Thus, it can be seen that if disorientation was the cause of the symptoms of dyslexia, logically, by removing disorientation the symptoms would be able to be removed. Davis and his team discovered that it was possible to teach dyslexics to turn off the disorientation which caused them to make mistakes. The process of correction involves helping the child to become aware of this natural perceptual talent and how this perceptual ability could cause disorientations and mistakes. The child is then taught how to control his orientation state. The procedure for this correction is called the Davis Orientation Counselling procedure. Davis Orientation Counselling teaches a dyslexic child a technique for terminating or turning off disorientations. Through Orientation Counselling, the child establishes an orientation 'point' which enables him to perceive the physical environment without perceptual distortions. If a dyslexic child can recognise disorientation and consciously produce a state of orientation at his will, his disorientation can then be turned off whenever it occurs, and thus the symptoms of dyslexia which are manifestations of disorientation will also be terminated.

Apart from Orientation Counselling, another main tool in the Davis model is the Davis Symbol Mastery procedure. According to Davis, the traditional teaching methods are not well suited to the thought processes of a dyslexic. The teaching method for dyslexics needs to take into account the dyslexics' need to form mental pictures which they can use to think with and

associate these pictures with the visuals and sounds of the words. The other element required is the creativity process. Dyslexics need to be allowed to create a personal mental picture of the meaning of the trigger words. This principle is in accordance with the principles of constructivism. Therefore, for a child to be able to understand meaningfully what he or she is learning, the child needs to be able to develop his or her own interpretation of the concept. Through Davis Symbol Mastery, the child learns to master alphabets, punctuation marks, and basic sight words with clay modelling.

Another Davis procedure is the Davis Reading Exercises. There are three techniques involved in the Davis Reading Exercises, and these are known as Spell-Reading, Sweep-Sweep-Spell, and Picture-at-Punctuation. Dyslexic students are known to try to go too fast or concentrate too much on the reading material. These two procedures, Spell Reading and Sweep-Sweep-Spell, are aimed at helping the dyslexic child overcome this habit. Meanwhile, Picture-at-Punctuation is a strategy for text comprehension.

The model of dyslexia proposed by Davis and the resulting intervention procedures departs radically from the commonly accepted phonological processing deficit hypothesis model of dyslexia which focuses primarily on remediating the underlying foundational skills of language.

RESEARCH OBJECTIVES

Firstly, the current study was carried out to explore whether the Orientation Counselling procedure, as prescribed by Davis, could be used to help a child showing disorientation symptoms. Secondly, the study set out to explore whether the Davis Symbol Mastery strategy could be used to help the child correct her problems with reversal in alphabets and numbers. Finally, the researcher aimed to explore whether the Davis Reading Exercises could assist the child in tracking while reading.

METHODOLOGY

A single case study methodology was employed to explore a phenomenon which is still largely new, i.e. applying the Davis procedures to a child exhibiting obvious visual-perceptual symptoms of dyslexia. The child in this research is henceforth known as Annie (pseudonym). Data collection methods included direct observation during the implementation of the Davis procedures by the researcher and parent interviews on the longer term results of the Davis procedures.

Annie

Annie was chosen for this study because she showed symptoms which fit the profile of dyslexia as described by the Davis model. At the time of the study, she was nine years old and had been diagnosed by the Dyslexia Association of KL as having mild dyslexia. She was studying in a vernacular primary school, which uses three mediums of instruction, the Malay Language, English Language, and Mandarin. She reported symptoms such as seeing letters move and turn on the blackboard and letters/words disappearing while reading. Her parents were concerned with her tendency to make mistakes when copying work from the blackboard and from books. When she copied, she had a tendency to leave out letters or words. When reading, she tended to skip words or lines. Annie also had a tendency to reverse the Chinese character strokes. She also exhibited problems with her motor coordination. Nevertheless, she is also a creative child who excels in art and craft work.

RESULTS OF THE DAVIS PROCEDURES

Annie was first assessed using the Davis Perceptual Ability Assessment (Davis, 2000). Annie's assessment indicated positive results. The assessment showed that she had the ability to experience self-created mental images as real and the ability to intentionally shift her perception to look from another perspective. In other words, she could intentionally access the brain's perceptual distortion function and consciously view mental images in three

dimensions. According to the Davis model, having this ability to create and distort mental images were the cause of Annie's learning difficulties and also the reason for her creativity. The positive results also indicate that these abilities can be brought under conscious control using the Davis Counselling procedure and the disorientations intentionally turned off. As the symptoms of dyslexia are also the symptoms of disorientation, the process of correcting dyslexia begins with getting the perceptual distortions under control. Once the child gains the ability to turn off disorientations, the child will stop creating dyslexic symptoms.

In order for Annie to understand the Davis Counselling procedure, the concept of the mind's eye, or the location that one sees from, was explained to Annie. Annie was asked whether she could still 'see' what she had done the day before. She was asked to describe what she saw. The purpose was for her to create a mental picture of the scene the day before. She was asked who was doing the 'seeing' of yesterday's scene when her eyes were looking at the researcher. She said that it was her 'eyes in the mind' that were doing the seeing. This was indeed interesting as Davis himself called the location where one is seeing from as the 'mind's eyes'. It was of note that she was able to grasp the concept of the mind's eye as if it was second nature to her. The Orientation Counselling procedure was then used to help Annie control or turn off her disorientation in order to achieve accurate perceptions. It took about 45 minutes to put Annie through the initial Davis Orientation Counselling session in order for her to practise putting her mind's eye onto the orientation point. Confusion occurs when the mind's eye moves around. Annie was taught to deliberately bring the mind's eye back to the orientation point to turn it off. At the same time, the parents were also taught to help Annie practise using orientation at home.

The parents reported that giving Annie the tools to help her orientate reduced her mistakes. When Annie made mistakes following the treatment, she was asked to check her orientation point and her parents reported that she was able to catch her mistakes faster than before.

Previously, when a mistake occurred and she was told to locate her mistake, she took a long time to do it or she could not locate the mistake at all. With this tool, she was able to spot her mistake quickly without any intervention from her parents.

The Davis Symbol Mastery procedure was then used to help Annie master her trigger letters. Annie was asked to create the alphabets using clay. According to Davis, dyslexics only learn things which are created by them. When the concept of the word is made in clay, and what the word looks like and sounds like are added, the word will be mastered. Annie started with the alphabet mastery procedure. The purpose was to find and eliminate any letters that might trigger disorientation. Three letters were identified as trigger letters for Annie. Her clay letters, 'j', 's', and 'c' were flipped vertically. To help correct her reversals, she was asked to slowly and deliberately touch and say the name of these letter and was then asked to compare them with the printed letters of the correct orientation. The purpose was for her to realise her mistakes. Once she realised this, it was reinforced by questions regarding the shape of the letters. She was allowed to correct her reversals. In order for her to achieve mastery of the letter, she was asked to put her mind's eye at the orientation point while experiencing the letter with her sense of touch. Once the researcher was sure that the letters would not cause further disorientation, she was allowed to stop. The same procedure was done to identify her problem with numbers. It was discovered that she reversed the number '3'. Next, she was taught to create a word using Symbol Mastery. Her mother was taught to help her create words which make her confused whenever she reads at home. It was explained to her mother that small words in the English language are usually words which trigger confusion because these are the words of which dyslexic children find trouble creating mental pictures. It was interesting to note that this made the mother aware that the mistakes Annie makes in Mandarin are also words which are difficult for her to develop mental pictures for, such as the word 'and'.

Finally, the Davis Reading Exercises were taught to Annie. The Reading Exercises trained her eyes to move sequentially from left to right and to recognise letter groups as words for word recognition. This helped her to eliminate her habit of skipping words and lines when she reads. The researcher watched out for any signs of confusion or disorientation during reading and helped the child to check for the orientation.

It would appear that Annie is a dyslexic child who fit the profile of the Davis model. The perceptual ability assessment indicated that Annie is a picture thinker with the perceptual talent of dyslexia. The Orientation Counselling procedure indicated that Annie could have control over a specific mind function for her own betterment. The Davis Symbol Mastery was particularly helpful in helping Annie identify and correct her reversal problems. Finally, the Davis Reading Exercises helped change her habit of skipping words when she reads.

DISCUSSION

One of the major tensions in dyslexia research has been the range of potentially conflicting viewpoints. Dyslexia research has been described as an 'ecosystem' involving a pool of different perspectives with overlapping but often conflicting needs attempting to inhabit the same space (Fawcett, 2002). The Davis model of explaining dyslexia is another viewpoint that departs from the presently accepted model of dyslexia. However, it is interesting to note that the Davis model offers a plausible explanation for the visual-perceptual symptoms which are largely ignored in the academic research on dyslexia. The positive results obtained from this single case study imply that the Davis model should not be dismissed even though it radically departs from the present definition of dyslexia. The preliminary findings from this and other studies indicate – if nothing else – that the Davis model warrants further scientific research.

Another reason that the Davis model should not be dismissed is because the author postulates that even though both methods appear different, they are actually two sides of the same

dyslexia 'coin'. The Davis model focuses on the strengths which dyslexic individuals have - the ability to think holistically in pictures and to see things from a multiple visual perspective - and to use this strength as a method for language intervention. On the other hand, the phonological processing representation hypothesis focuses on the other side of the dyslexia 'coin', which is the deficit side of the dyslexic individual. Since a phonological processing deficit directly leads to problems in decoding, the focus of dyslexia intervention from this side of the dyslexia 'coin' is to remediate the underlying deficits until a stable foundation of reading skills is reached. A synthesis of previous researches on reading instruction for students with learning disabilities has indicated that students benefit from systematic, explicit instruction in foundational skills of phonemic awareness and phonics (Swanson, 2008). On the other hand, it would appear that the Davis model skips the entire alphabetic stage of reading where skills in decoding are based on the alphabetic principle and phonemic awareness are important for word recognition. In the Davis model, on the contrary, automaticity which is the final goal of word recognition (Sanders, 2001) is achieved through a holistic and thorough understanding of the concept of the word, the look of the word and the sound of the word as the child constructs his clay model and clay word based on a constructivist multisensory method of creation. However, it is of interest to note that even though both view dyslexia from diametrically opposite perspectives, both the traditional and the Davis method emphasize instruction that is multisensory. The author postulates that this is the point where the dyslexia 'coin' meets.

CONCLUSIONS

In conclusion, there is a need for more independent and larger scale studies on the Davis model of looking at dyslexia. The postulation above warrants further investigation. Testimonials of the efficacy of the Davis model appear on the Davis website, however, there is little scientific evidence to support or disprove this model. The

current case study is limited to only one child and thus no generalizable conclusions can be drawn from it except to say that it has helped this particular child. However, the positive results from this case study do indicate the possibility that for certain children with dyslexia, especially those showing obvious visual-perceptual deficits such as Annie, other methods of intervention than the traditional may be necessary. As the final goal of reading is comprehension, if either the traditional or the non-traditional path can lead to this final goal, the end will then justify the means.

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The Davis Model of Dyslexia Intervention: Lessons from One Child

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