

Dyslexia, English and Pronunciation

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Although dyslexia is a specific learning disability that is neurological in origin, it is characterized not only by difficulties in spelling and decoding abilities but difficulties in oral fluency and word recognition. These difficulties typically result from a deficit in the phonemic component of a language. English poses a particular problem regarding phonological components and how these phonemes contrast with Dutch. Although dyslexia diagnosis and protocol may address the secondary consequences such as problems with reading and writing are highlighted, the approach of substituting written quizzes with oral quizzes can be equally problematic.

In this article, Tricia Diamond argues that teachers should take the phonemic identification difficulties of dyslexia into consideration during pronunciation exercises and oral examinations.

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Tricia Diamond

Some researchers believe that dyslexia is an inherited condition and have identified a dominant gene on the chromosome 6 which they think is responsible. Research has also indicated that dyslexia results from a neurological disorder. Dyslexics have larger right-hemispheres of their brain than non-dyslexic. In addition, people with dyslexia have been found to have neurons in unusual places in their brains.

Two of the signs that a child may have dyslexia are difficulties not only in learning a foreign language but prevalent in their native language. These two indicators that may have been spotted in grammar school are:

Sequencing Difficulties

Late and Immature Speech Development

Sequencing Difficulties

Dyslexic children have difficulty in putting letters and words into a logical sequence. This not only affects their ability to read and spell correctly but also their ability to pronounce words they have memorised and learned. When learning words for a quiz, for example, they must be able to perceive the letters in sequence. Although a teacher may provide the option of an oral quiz instead of a written quiz, the student will need to recall the word as represented in the sequence of letters or sentences approximated in a string of words. Equipped with a disability which precludes memorizing in sequence, a word such as *name* could be pronounced initially as *amen*. Sequencing would also affect word order, meaning a dyslexic in spoken interaction may also reverse word order, saying *are they* instead of *they are* and leading a language teacher into thinking the student is asking a question instead of making a statement.

Sequencing difficulties would also affect a dyslexic's ability to remembering telephone numbers, months of a year, seasons and the chronological events of a day in the foreign language as well as in the mother-tongue classroom.

Late and Immature Speech Development

Dr Renate Valtin studied one hundred dyslexic and normal children in Germany and found a higher incidence of late speech development and speech disabilities in dyslexics. Physicians worldwide incorporated this research into one of the many symptoms that may indicate a child has dyslexia. In most cases, a baby should be able to understand simple words and commands from the age of approximately nine months. Once a child has reached the age of one, he or she should be able to pronounce their first words. By two, one should have a vocabulary of up to 200 words, and create simple two-word phrases or sentences such as 'drink water'. By three one should optimally have a vocabulary of up to 900 words and be using full sentences without deleting or forgetting words. One may still mix up consonants but speech should be comprehensible to strangers. By four, one should be fully able to talk, although the occasional grammatical error may still appear. If, however, a child persists in speaking immaturely and makes unexpected grammatical errors in speech, parents and teachers should consider the possibility that the child suffers from a learning disability.

Missing Rhythms of Sounds

Dr Usha Goswami of University College London recently published a study results that claim dyslexia is influenced by difficulty in identifying the rhythm of sounds. The fact that dyslexics have subtle spoken language problems has been scientifically acknowledged but Goswami's research into the perceptual problem underlying dyslexia is innovative.

In the new study, Goswami and her colleagues used a test that measures the ability to perceive rhythms in non-speech sounds. They compared dyslexic children with a group of children the same age that did not have reading problems. The researchers also tested a group of children who learned to read at an early age and compared them with same-aged children who had not yet learned to read. Compared with children who did not have reading problems, dyslexic kids were less sensitive to rhythms in sound. Children who started to read early were better at picking up rhythms in sounds than children who had not yet learned to read.

Past research focused on the troubles dyslexic children have in breaking down words into segments or "phonemes" as they learn to read. However, since the new study found that dyslexic children had difficulties hearing the rhythm in sounds that were not words, findings suggest that dyslexia may be based on a disorder in sound perception.

Phonemic Awareness in the Classroom

The English language is made up of just 40 sounds or phonemes, but these can be spelt in more than 1000 different ways. Certain letters sound very much the same - such as "b" and "p." If you consider the minute difference between "b" and "p", you will realise that

the two distinct sounds represented by these two letters happen within ten hundredths of a second. One's must be able to recognise these distinct differences at lightening speed and segment them out of words. This ability is called phonemic awareness. Phonemic awareness forms the basis of all language, influencing and determining what we hear, read, spell and how we pronounce words. Basically, it is the key to understanding, processing and utilising words within a language.

Without phonemic awareness, one will have difficulty learning the relationship between letters and the sounds these letters represent in words, as well as applying those letter/sound combinations to eventually pronounce words. Language teachers must assist all students with phonemic awareness however the manner in which they address phonemes with dyslexic students must address their particular language acquisition challenges.

How to assist Dyslexic Students develop Phonemic Awareness

Video Games

Neuroscientist Paula Tallal helped developed functional magnetic resonance imaging (fMRI) to identify the source of difficulty in brain regions that do not accurately process letter/sound combinations. Her imaging research has shown that those with dyslexia have decreased activity in the brain's language-critical area during phonological processing. Using this information, Dr. Tallal joined forces with neuroscientist Michael Merzenich, PhD, to create neuroplasticity-based computerized video games which attempt to "rewire" the brains of dyslexic children. These games also stimulate the language skills areas of the brain.

They have named their video training program *Fast For Word*. Dyslexic children earn points, for example, by identifying the minute sound differences in "ba" from "pa." When a child masters the language task, the game adjusts its playing level so the child is challenged on a more advanced level the next day, while simultaneously being monitored via the Internet by a professional. Other games are designed to improve the speed of phonemic identification in brain processing and also to specifically train children in all the rules of English grammar.

Of course teachers can assist dyslexic students without the use of video games as well. Phonemic awareness can be developed in context through reading and writing activities. One method would be by discussing letter and sound relationships in the context of reading passages in the text book. Teachers can open such discussing through a shared reading experience with the all of the students. After the other students have read, the teacher could ask the students to discuss the letter and sound relationships or write them down in their notebooks.

Another method would be to ask the students to make a chard of words with letter and sound patterns they did not understand after reading a text. Ask the students to compare these sound patters and letter combinations to their native-language visually. Teachers can also begin with sound patterns in the first class of the year by asking all of the

students to write down the letter and sound patterns for their classmates' names in their native-language and then, as the year progresses, in English.

Factors to consider when administering oral quizzes

Just as teachers have developed a protocol in assessing a dyslexic student's written work, a protocol can be developed in assessing a dyslexic student's oral English skills. English teachers should allow time for self-correction during oral quizzes. By allowing time for self correction, the teacher takes into consideration the student's sequencing disability that he must overcome.

Without directed phonemic exercises during the year, however, it is counterproductive to assume that a dyslexic student will be fluent in English. A teacher could take this lack of phonemic awareness into consideration when a dyslexic student mispronounces a word during an oral quiz. In that respect, the difference between an oral examination and a written examination is non-existent, whereas a teacher must adhere to a specific protocol on a written examination.

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Fast For Word <<http://www.scilearn.com/>>

International Dyslexia Association < <http://www.interdys.org/> >

Dyslexia Teacher < <http://www.dyslexia-teacher.com/index.htm> >

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