

DYSGRAPHIA

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Introduction

Every teacher has probably experienced having a good student whose only problem seems to be that they take too long on writing assignments. When the student finally does turn in their work, it is sloppy, incomplete, and has several spelling errors. The first thought that runs through the minds of many teachers is that the student is just lazy and doesn't care, when in truth they could be struggling to finish the assignment. Such a student could be showing signs of a relatively unknown learning disorder called dysgraphia.

Dysgraphia is defined as "a severe difficulty in producing handwriting that is legible and written at an age-appropriate speed" (Lokerson, 1992, p. 1). It is a Latin word that combines the prefix "dys," which means "difficulty with," and the base word "graphia," which means "writing" (Richards, 1999a). Dysgraphia is a neurological disorder in which children will have letters or words sized incorrectly or frequently misspelled even when given appropriate instruction. (National Institute, 2011). Children with dysgraphia frequently display characteristics that are common to many students with learning disabilities such as hypoactivity, lack of motivation, focusing of attention on one thing to the exclusion of other things, perceptual disorders, or a lack of coordination (Cavey, 1987). These students can struggle with the necessary fine motor skills and higher cognition needed to write a sentence.

Students with the most severe forms of dysgraphia are unable to hold a pencil correctly or draw a straight line. Students that have it to a milder form may be unable to copy letters or may tire easily while writing. Still others may be able to draw something simple or trace it, but will be unable to write letters or words consistently (Richards, 1999a). Children with dysgraphia will have difficulty forming the sequences of letters into words and sentences. Their writing production will often be of poor quality and can be illegible.

Identifying Students

Although the determination of dysgraphia would require the input of a qualified professional, such as an occupational therapist, parents and teachers should be observant for symptoms of this handwriting difficulty. Early warning signs of dysgraphia in school-aged children can include: A mixture of cursive and

print writing, saying words out loud while writing, focusing so hard on writing that comprehension of what's written is missed, or having trouble thinking of words to write (What is Dysgraphia?, 2013). Other characteristics can include: cramped fingers on a writing tool, gripping a writing instrument too tightly, inconsistent letter formations, and an excessive number of erasures

Another important part of the assessment process would be observation of the student in the classroom (Bain, Bailet, & Moats, 1991). Looking at how a student is sitting, holding a pencil or reviewing the impact of previous intervention strategies are just a few of the questions that teachers might seek answers to while observing the student. Identifying students that have dysgraphia can sometimes be a challenge however. Students can have dysgraphia to different degrees or have it combined with other types of learning problems (Cavey, 1987). In addition, dysgraphia is not well known to educators or parents. Teachers don't expect their students to have problems writing and don't consider that the students may be having more than just minor problems.

Interventions for Students

Although word processing and other computer applications are increasingly common in our schools and society, it is still important to be able to hand write well. Spear-Swerling (2006) provides a useful discussion of the importance of teaching handwriting in the schools and provides teaching suggestions for all students. However, for students experiencing dysgraphia it is important that they be identified early and taught compensation strategies to improve their writing skills.

It may be helpful, for example, for students to begin the day with warm-up exercises on their hands. Warm-up exercises can include stretching out rubber bands, pressing their fingers together, open and closing fists rapidly, shaking out their hands and fingers with rapid shakes or molding clay. These simple exercises can be done prior to any writing activity. Other strategies can include: drawing lines within mazes or connecting dots to complete letter forms (Understanding Dysgraphia, 2009).

Some students grip their pencil incorrectly while writing so pencil grips can help them while writing. Teachers may need to try several different kinds of pencil grips to find one that best meets the needs of the student. Teachers may also need to frequently model the correct way to hold a pencil. Teachers need to check to make sure that the student is not gripping the pencil too hard which will lead to hand fatigue while writing. As fatigue is a problem experienced by many students with dysgraphia, students may need to take breaks to stretch out their hands.

Writing spelling words using more than one sense can also help children in their writing. By using color and the sense of touch in the same activity, we increase the odds of a child learning (Vitale, 1982). Allowing students to write in paint, pudding, or shaving cream may also make writing more fun for many students.

Jones (2004) suggests a number of accommodations for students with dysgraphia including changing the rate of writing, the complexity of the writing and the amount of writing that must be completed. It is suggested that teachers allow more time for students to write or allowing students to begin an assignment early. In addition, breaking the written task down into stages, reducing the amount a student has to write by allowing the student to dictate some assignments and using abbreviations in writing can be helpful. Jones (1999) suggests that teachers try to reduce the role that actual physical handwriting has on learning or expressing knowledge, changing the assignments or expectations to meet the student's individual needs for learning, and to provide instruction and practice in handwriting. In addition, students should be allowed to write in cursive or manuscript, whichever is easier and most legible. Other compensatory strategies suggested by Richards (1999b) include: providing students with an outline of lecture material, having a buddy or aide take notes and provide a copy to the student, and have the student proofread their written work after a short time period.

Students with dysgraphia often have a difficulty getting started on a writing assignment. A helpful compensatory strategy would be for teachers to teach and encourage the use of pre-organization strategies (Richards, 1999b). These can include outlining, color coding main ideas, or writing main ideas on flash cards and rearranging them in the desired order. A strategy developed to assist students who have problems organizing their writing into correct paragraph form is the mnemonic, 'POWER' (Richards, 1999b): P - Plan your paper, O - Organize your thoughts and ideas, W - Write your draft, E - Edit your work and R - Revise your work, producing a final draft.

Assistive Technology

There are currently numerous assistive technologies available to assist students who have trouble with handwriting. It would be important to assess a student's strengths and weaknesses to determine which type of assistive technology would be best and to consider the age and cognitive level of the student. Simple word processing can be helpful for many students as well as talking word processing programs such as *Write Outloud* or word prediction software such as *Co-Writer* (Don Johnson, 2013). Software such as *Inspiration* (2013) can help students organize their ideas and develop a paper or project by giving it a graphic structure. Voice recognition software, such as *Dragon Dictation* can also be used in a variety of applications. Computers running *Windows* will also have some speech recognition functions, but they likely are not as accurate as specialized programs. The *Alpha Smart* is a type of portable, battery-powered keyboard which can be a good tool for younger students to begin to practice keyboarding skills and to use for short projects. The *Audio Notetaker*

(Sonocent, 2014) is a product that imports and converts digital recordings into typed print. Other types of assistive technology are available and the specific type used will be dependent on the needs of the student.

Summary

Dysgraphia is a little known disorder that can affect a child's ability to write easily and legibly. Teachers should be observant for students who may be experiencing significant handwriting difficulties and make a referral if simple techniques do not adequately address the problems.

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