

Running head: MOVING FORTH IN THE EDUCATIONAL BATTLE WITH DYSGRAPHIA

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Moving Forth in the Educational Battle with Dysgraphia

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### Abstract

At times disabilities go unrecognized and so go untreated or accepted. It is the duty of educators to recognize the difference between students who are truly putting forth effort, too discouraged, or those troubled over other issues. This paper will explore dysgraphia, a relatively newly recognized disability; reveal insights by experts; suggest instructional techniques and approaches in context with dysgraphia; provide a directory of assistive technology options; offer a preliminary assessment plan to evaluate educational progress; and address why adhering to ADA and IDEA standards are important considerations in the hopes that this information will improve the educational opportunities of students coping with dysgraphia.

### Moving Forth in the Educational Battle with Dysgraphia

Living with disabilities can be a trying existence. At times disabilities go unrecognized and so go untreated or accepted. Those living with those disabilities become thought of as strange, lazy, or mentally challenged. It is the duty of educators to recognize the difference between students who are truly putting forth effort, too discouraged, or those troubled over other issues. Educators are the initial influence on how a person feels about themselves educationally. Teachers greatly influence how a child views education, their own ability, even their own intelligence. Students with learning disabilities must be handled especially carefully because their future success is even more dependent upon encouraging educational experiences. One such disability is the relatively newly recognized disability of dysgraphia. During research on dysgraphia it became evident that it is a newly recognized disorder. Most references worded definitions and explanations very similarly and at times word for word. This paper will explore dysgraphia, reveal insights by experts, suggest instructional techniques and approaches in context with dysgraphia, provide a directory of assistive technology options, offer an preliminary assessment plan to evaluate educational progress, and address why adhering to ADA and IDEA standards are important considerations.

Dysgraphia is now recognized by the National Institute of Neurological Disorders and Stroke (NINDS). According to the NINDS, dysgraphia is considered a neurological disorder specifically characterized by writing disabilities. Particularly, the disorder causes a person's writing to be distorted or incorrect. It can manifest itself as difficulties with spelling, poor handwriting and trouble conveying thoughts on paper. The NINDS reports that "In children, the disorder generally emerges when they are first introduced to writing. They make inappropriately sized and spaced letters, or write wrong or misspelled words, despite thorough instruction. Children with the disorder may have other learning disabilities; however, they usually have no

social or other academic problems. Cases of dysgraphia in adults generally occur after some trauma. In addition to poor handwriting, dysgraphia is characterized by wrong or odd spelling, and production of words that are not correct (i.e., using "boy" for "child"). The cause of the disorder is unknown, but in adults, it is usually associated with damage to the parietal lobe of the brain.” (2009) Despite this evidence, in a report by the University of West Virginia it is stated that problems in education arise because "dysgraphia" has no clearly defined criteria and that because of this it is often not recognized in public schools. (2007)

According to the International Dyslexia Association there are three types of dysgraphia. Here is a list of the types and their characteristics:

*Dyslexic dysgraphia*: spontaneously written text is illegible, especially when the text is complex. Oral spelling is poor, but drawing and copying of written text are relatively normal. Finger-tapping speed (a measure of fine-motor speed) is normal.

*Motor dysgraphia*: both spontaneously written and copied text may be illegible, oral spelling is normal, and drawing is usually problematic. Finger-tapping speed is abnormal.

*Spatial dysgraphia*, people display illegible writing, whether spontaneously produced or copied. Oral spelling is normal. Finger-tapping speed is normal, but drawing is very problematic. (2000)

Listed below are the signs and symptoms recognized by the Learning Disabilities Association of America:

- May have illegible printing and cursive writing (despite appropriate time and attention given the task)

- Shows inconsistencies: mixtures of print and cursive, upper and lower case, or irregular sizes, shapes or slant of letters
  - Has unfinished words or letters, omitted words
  - Inconsistent spacing between words and letters
  - Exhibits strange wrist, body or paper position
  - Has difficulty pre-visualizing letter formation
  - Copying or writing is slow or labored
  - Shows poor spatial planning on paper
  - Has cramped or unusual grip/may complain of sore hand
  - Has great difficulty thinking and writing at the same time (taking notes, creative writing.)
- (2005-2009)

Symptoms are explained further by West Virginia University's (WVU) Department for the Inclusion of Disabled Students. "Students with dysgraphia often have sequencing problems. Studies indicate that what usually appears to be a perceptual problem (reversing letters/numbers, writing words backwards, writing letters out of order, and very sloppy handwriting) usually seems to be directly related to sequential/rational information processing. These students often have difficulty with the sequence of letters and words as they write. As a result, the student either needs to slow down in order to write accurately, or experiences extreme difficulty with the "mechanics" of writing (spelling, punctuation, etc.). They also tend to intermix letters and numbers in formulas. Usually they have difficulty even when they do their work more slowly. And by slowing down or getting "stuck" with the details of writing they often lose the thoughts that they are trying to write about. (2007) The Nation Center for Learning Disabilities makes a very important declaration on dysgraphia on its website. "Since dysgraphia is a processing

disorder, difficulties can change throughout a lifetime. However since writing is a developmental process - children learn the motor skills needed to write, while learning the thinking skills needed to communicate on paper - difficulties can also overlap.” (1999-2009)

The author has currently encountered the many of the symptoms above within her own daughter’s education. Raven is now 11 years old. Next year she will start junior high. Raven started school enthusiastically and did well until second grade. Since then it has been a constant struggle for her to keep up with her peers, especially in the areas of reading and math. She has stated that she hates having to read aloud. It has been suggested that she repeat grades; and was placed in learning disabled study groups. Her writing does seem to improve when she is able to use cursive; however her hand writing is still basically comparable to most third grade children. Raven has been tested for many learning disabilities, such as dyslexia, but the administrators recorded that Raven had no disabilities found worth documenting. With new evidence of the existence of dysgraphia, perhaps strategies can be found to improve her educational experience. Throughout this paper Raven will be used as an example and reference to identify with students coping with dysgraphia.

The first step in offering better education is to gain an understanding of students’ multiple intelligence and learning style strengths. There are many resources to gain this information. Two free online resources were found for the purpose of evaluating Raven’s preferred learning style and multiple intelligence strengths. They can be found at: [www.literacyworks.org/mi/assessment/findyourstrengths](http://www.literacyworks.org/mi/assessment/findyourstrengths) for multiple intelligences and [www.about.com/homeowrk/studytips](http://www.about.com/homeowrk/studytips) for preferred learning styles. In Raven’s case it was discovered that her strongest intelligences are musical, naturalistic, and spatial and her preferred learning styles are visual and auditory. Language and logic/math intelligences were the lowest of her intelligences and this will make the traditional classroom a difficult place for her. The above

sites offered advice such as learning/studying with visual and auditory aids, relating material to music or nature, and/or using charts, graphs and other picture type tools to express information.

Mrs. Brianne Campbell is the advanced Learning Disabled (LD) instructor at Chanute Elementary School (CES) in Chanute, Kansas where Raven attends. Mrs. Campbell has worked with Raven over most of the last school year and seems to have had most successful results so far. The secret to Campbell's success seems to be that she does not focus on a student's specific disability, but rather in methods to overcome them. She offered many valuable suggestions in improving education for challenged students, in specifically those suffering from dysgraphia. Many of the instructional design plan elements were garnered from her approach.

According to Campbell, the first element of helping an LD student is to build their confidence. Most are extremely doubtful about their scholastic ability to succeed. Campbell maintains that until the student believes and trusts in his/her ability to learn, progress will be extremely difficult. Her method is to focus on the student's strengths and slowly and cautiously build up to higher levels. She uses differing strategies and tools according to each student. Campbell upholds that strategy is the most important element to teaching; and that recognizing and utilizing the proper strategy with each particular student is crucial. Campbell states that in her experience with dysgraphia students, and many other LD types as well, the key is to keep the student from feeling pressured. This means that tools such as timed assessments must be avoided. Expressing that an answer is needed quickly is also not going to issue good results. It is her opinion that these students have a tendency to focus on how much time they have left or what the teacher's response will be if they do not answer fast enough, rather than the information needed. She feels that in most cases these students must learn to trust themselves to answer at all, first. The next important element is organization. She maintains that organization is essential for LD students and that they learn to maintain the skill. She color codes their work by subject

matter and teaches them how to organize using subdivisions. She also teaches them how to graph and chart their progress. Campbell stresses that teaching systems, methods, and tools that are high pressure; offer surprise questions; are highly visible by the others; or require quick thinking, snap responses; or long hand written answers are likely to cause more harm than good. (B. Campbell, personal communication, April 10, 2009)

In dealing with cases of dysgraphia it is very important to offer opportunities to exhibit knowledge and comprehension with alternatives to written expression as often as possible. Offering a variety of alternative methods to writing for answering questions or reflecting knowledge greatly improves confidence and participation of dysgraphia students. For less formalized teachers that are comfortable with not confining the students to their seats for most of the day, there are some very energetic and interesting low tech solutions. These include:

Verbal:

- Having verbal quizzes in which a student raises their hand to answer.
- Verbal reports/speeches
- Team answers – allowing the students to submit answers they have discussed in small groups.
- Skits/Allowing students to act out scenes in relation to the subject matter.

Physical Action Oriented:

- Playing charades in relation to subject matter.
- Sign language: allowing students to answer with signs for “yes”, “no” or corresponding letters such as A,B,C,D.
- Allowing students to answer questions with a physical action. For instance, for a true/false question jumping jacks might be the response for true, running in place may represent false.



Artistic:

- Allowing students to present drawings, dioramas, portfolios and other artistic expressions of knowledge.

There are also many wonderful educational technologies that offer great alternatives and help for dysgraphia students. This report will but offer a few, but finding such technology is quite simple and easy using the internet. It is no secret that computers and the internet are becoming a staple in today's education. There are many educational websites and software, either free or low cost, that can be purchased to help students in virtually any subject matter. Computers offer the opportunity to learn and express without having to utilize the physical skill of writing. This wonderful learning experience offers a great opportunity that also prepares students for future employment. In today's market there are few jobs that do not require computer experience. In addition to computers, there are several other technologies that both teachers and students can enjoy. These include Smart Boards, Classroom Response Systems (CRS), and palm pilots. Smart Boards offer so many wonderful options and possibilities that it is impossible to list them all here. However, basically Smart Boards can take over the old chalky blackboards of yesterday's educational system and make learning more visually engaging and interactive, not to mention cleaner and less dusty! Smart boards make use of Power Points or like presentations and interactive technology that even allows the teacher to analyze student entered data later. The students have their own response tool, so the answers are not visible to other students. This ensures that the teacher has the actual knowledge/comprehension of each student. The next technology to be discussed is CRS systems. A CRS works somewhat like an audience participation game show. The students are given "clickers" with which to answer questions posed by the teacher. This system offers benefits to the teacher as well, as it records the answers and data on each student and/or the group as a whole for later study by the teacher or other

concerned parties. The teacher may utilize this information to discover issues such as which students are struggling or whether the whole class has a grasp of the information. One such CRS technology is Eggsbert. Eggsbert is a fun, brightly colored system for young students. The last technology to be discussed is palm pilots. It may be recalled that organization is key for dysgraphia students. Organization truly happens to be imperative in many educational circumstances and does ensure better chances of success for many things in life. A palm pilot is a handy way for students to stay organized, aware, and educated. Today's palm pilot has basically become a mini computer. On top of calendars, memos, to do lists, address books, and other helpful time management info, a person is now able to create word processing documents, play games, connect to the internet, and even make phone calls with certain models. A palm pilot can truly help students who are more comfortable holding a stylus and small console than handling a writing utensil. Palm pilots allow students to work on certain types of assignments anywhere, such as on the bus ride home. Reading assignments can be downloaded to be read at any convenient time. Writing assignments are made less stressful for both the student and the teacher, as the student will gain more confidence that his/her assignment is legible and correctly spelled and the teacher will not have to decipher poorly formed letters or misspelled words. Many models also offer voice recording. A good number of dysgraphia students are more audio oriented than others. Hearing the information is therefore much more beneficial to their success in retaining the subject matter. Students may record themselves or someone else reading the assignment for better retention. There are also many audio lessons and books offered online for downloading.

Below are a few websites where the above technology can be found:

Smart Boards:	<a href="http://smarttech.com">http://smarttech.com</a>
Eggspert:	<a href="http://www.eggspert.com">http://www.eggspert.com</a>

Palm Pilots & Extra Software:	<a href="http://www.palm.com/us/index.html">http://www.palm.com/us/index.html</a>
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Assessment is extremely important in education. Without proper assessment it is impossible to measure achievement or overall performance. This is mandatory to establish progress and/or ascertain in which direction or when to take the next educational step. Because of the problems many dysgraphia students have with the general high pressure of typical assessments, it is important to find alternative assessment tools. Before introducing new techniques, methods, or tools into the educational environment, nonetheless, the tools themselves must be evaluated to ensure that they do not cause more harm than good. Each student is different and one can not foresee all eventualities; however, it is good practice to research and establish that a tool is effective. Below is a possible assessment plan for potential educational tools intended for students with dysgraphia:

<b>Criteria:</b>	<b>1 - Poor</b>	<b>2 - Low</b>	<b>3 - Good</b>	<b>4 - Excellent</b>
Tool exhibits subject matter in ways that appeal to/address several different learning styles/multiple intelligences.	Tool only addresses one learning style/multiple intelligences	Tool only addresses two learning style/multiple intelligences	Tool only addresses three or more learning style/multiple intelligences	Tool only addresses all or most learning style/multiple intelligences
Tool offers confidence building opportunities.	Tool does not build confidence	Tool builds slight confidence	Tool helps build good level of confidence	Tool builds excellent level of confidence
Tool does not include mandatory high pressure performances.	Tool includes high pressure performance methods	Tool includes few high pressure performance methods	Tool includes one or two high pressure performance methods	Tool includes no high pressure performance methods
Tool offers alternatives to written expression	Tool does not offer alternatives to written expression	Tool offers few alternatives to written expression	Tool offers several alternatives to written expression	Tool offers many alternatives to written expression

The student’s experience is fun and stimulating/motivating	Student is not motivated or having fun	Student is motivated or having fun, but not both	Student is somewhat motivated and having some fun	Student is very motivated and having a lot of fun
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One might ask why seeming to cater to students in this matter is important. There are many reasons for this. A conscientious teacher should do his/her best to provide the best education for every student, regardless of race, religion, disability or other distinctive features. One never knows who will eventually shape the future; for good or evil. It is best to provide the most positive, encouraging, caring, beneficial environment for every student. If one must consider selfish reasons, it is highly unlikely that in today’s world many harsh, uncompromising, one-track teachers would keep their positions for very long. Another blatant reason is that it is the law in the U.S. Civil rights laws such as the Americans with Disabilities Act (ADA) and the Interdisciplinary Education and Action Program (IDEA) guarantee that U.S. citizens with disabilities be treated fairly in both the workplace and educational environments. The United States government has recognized the importance of fair treatment of every citizen and seen fit to make it law, therefore teachers as well as others must adhere to them. IDEA in particular addresses the education of the younger generation with disabilities. While they are too detailed to cover here adequately, both law sets extensively cover the treatment and modifications that must be made for those living with disabilities.

People living with disabilities that are unrecognized are often thought of as strange, lazy, or mentally challenged. Living with a disability of any kind can be a trying existence. At times disabilities go untreated and/or unaccepted because they are undetermined. It is the responsibility of educators to distinguish the differentiation between students who are truly putting forth effort, are too discouraged, or troubled over other issues to benefit from typical teaching forms. From

the beginning of elementary learning, educators are the preliminary influence on how one considers oneself regarding education. Instructors greatly influence how a child views education, their own ability, even their own intelligence. The future success of students with learning disabilities is even more dependent upon positive educational experiences and so must be handled especially carefully. The relatively newly recognized disability of dysgraphia is one such disability. This paper has explored the phenomenon of dysgraphia, revealed insights by experts, suggested instructional techniques and approaches in context with dysgraphia, provided a directory of assistive technology options, offered an preliminary assessment plan to evaluate educational progress, and addressed why adhering to ADA and IDEA standards are important considerations in the hopes that this information will improve the educational opportunities of students coping with dysgraphia.

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