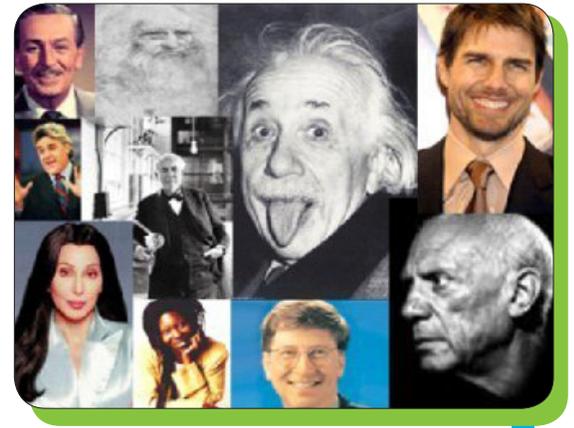


The WONDERful Gifts & Challenges of Dyslexia

By Catherine R. Chase, M.A., LDTC
Psycho-Educational Diagnostician



Benson, 2009

The struggle develops the character. - Mother Teresa

When an imaginative mind hears the term Dyslexia for the first time, the natural instinct is to Wonder.... What is dyslexia? Where does it come from? Who has dyslexia? Speculate, marvel, think, arouse curiosity, and question are behaviors associated with Wonder. Researchers, teachers, clinicians, parents, and most importantly, learners who have been identified as having characteristics consistent with dyslexia are wondering about this learning difference. Catherine Rae Chase, a Learning Consultant and Psycho-Educational Diagnostician, at the Pediatric Wellness Network, uses WONDER as an acronym to describe six variables that will give a comprehensive understanding of the dyslexic profile and interventions that lend to enhancing social and educational success:

- W** WIRING OF THE BRAIN
DEMISTIFICATION
- O** OBSERVE & ASSESS
- N** NATURE OF THE LEARNING
CHARACTERISTICS OF DYSLEXIA
- D** DIVERSIFIED INTERVENTION &
TECHNOLOGY
- E** EMPOWERMENT & STUDENT
TESTIMONIAL
- R** RESEARCH & RESILIENCY

WHAT IS DYSLEXIA?

Let's start at the beginning by answering the first question that has aroused our curiosity. What is Dyslexia? One of the most complete definitions of dyslexia comes from over 25 years of research:

"Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction." - Shaywitz & Shaywitz, 2003

The mission of the article "The Wonderful Gifts and Challenges of Dyslexia," is to demystify "dyslexia," in an effort to avoid myths and painful misunderstandings. The goal is to inform and empower by providing support for parents, teachers and clinicians, and to assist in saving students with dyslexia from feelings of inadequacy and low self-confidence.



WIRING OF THE BRAIN & DEMYSTIFICATION

My teachers say I'm addled . . . my father thought I was stupid, and I almost decided I must be a dunce. -Thomas Edison

I Wonder... Why does a student struggle significantly with learning to read, when so many others seem to be at ease with reading?

Dyslexia is a specific learning difficulty in reading that often affects spelling, and may depress reading comprehension, written language and applied math problem-solving. Reading disability is the most widely known and most carefully studied of the learning differences, affecting 80% of all those designated as learning disabled. Because of this, the term dyslexia and reading disabilities (RD) will be used interchangeably in this article to describe students of interest.

Drs. Sally and Bennett Shaywitz head The Yale Center for Dyslexia & Creativity. They have studied the correlation between reading and IQ in dyslexia and typical students, and have shed new light on what has been termed "the hidden disability." For instance, "functional brain imaging has made the once-hidden disability of dyslexia a visible one. Their research shows how regions and systems of the brain are used for fast, fluent automatic reading; however, the scans also show that dyslexic individuals are neurobiologically wired to read slowly. The results of their studies show that in typical readers, IQ and reading track together, are dynamically linked over time. Sally Shaywitz calls the two components 'kissing cousins' because they are 'intertwined.' In contrast, their research found that in dyslexic readers, IQ and reading diverge; therefore, a highly intelligent dyslexic student can have a low reading score. There is a dynamic link between reading and IQ development in typical readers, and the disconnection between reading and IQ dyslexic readers. In other words, *the paradox of dyslexia is slow reading, fast thinking! Although they are slow readers, dyslexic students have strengths in higher order thinking and reasoning skills. In fact, the 2009 Nobel Laureate in medicine, molecular biologist, Dr. Carol Greider, is dyslexic*" (Patterson, 2011).

The mystery, myths, and sadly in some cases stigma, is that dyslexia may be a flaw in character. Current research reports that "Dyslexia stems from differences in the biology of the brain as demonstrated in the research of Dr. Sally Shaywitz and Dr. Bennett Shaywitz. Their studies reveal evidence demonstrating a neurobiological basis for dyslexia. This does not mean brain damaged. Brain scans show the dyslexic brain's cerebrums are perfectly normal, if not extraordinary.

In fact, dyslexics seem to have a distinct advantage when it comes to thinking outside the box" (Gorman, 2003). Thinking outside the box doesn't mean it is an easy road to success, rather, quite the contrary. In fact, many have reported significant struggles to achieve success.

"When I had dyslexia, they didn't diagnose it as that. It was frustrating and embarrassing. I could tell you a lot of horror stories about what you feel like on the inside." - Nolan Ryan

Demystifying "Dyslexia" will help avoid painful misunderstandings and save students from feelings of inadequacy and low self-confidence. To accomplish the goal of demystification, research findings have been explored and shared: "A growing body of scientific evidence suggests there is a glitch in the neurological wiring of dyslexics that makes reading extremely difficult for them" (Gorman, 2003). Fortunately, the science also points to new strategies for overcoming the glitch. Some of the most successful programs focus on strengthening the brain's aptitude for linking letters to sounds they represent.

We have all heard of following famous people who presented as gifted in different areas of multi-intelligence and contributed to our society in such areas as psychology, athletics, science, education, poetry, philosophy, medicine, art, business, and politics: Thomas Edison, Alexander G. Bell, Albert Einstein, Walt Disney, General George Patton, William James, Nolan Ryan, Eugene O'Neil, Nelson Rockefeller, Leonardo da Vinci, Pablo Picasso, Charles Schwab, John F. Kennedy, Henry Ford, Whoopi Goldberg, Thomas Jefferson, Henry Winkler, Sir Winston Churchill, and George Washington. Did you also know that they have also been found to be dyslexic? They all experienced significant struggles and were able to compensate and override their learning differences. On the other hand, we know that individuals with dyslexia are at risk for low self-esteem and failure. *The essential variables that lend to successful and healthy compensation strategies are the support systems we experience in our life such as assessment, interventions, and understanding from family and significant others. A wonderful ability to think out of the box and a remarkable resiliency to accept life's challenges that most often accompany learning and behavioral differences, are additional variables that maximize the learners success.*

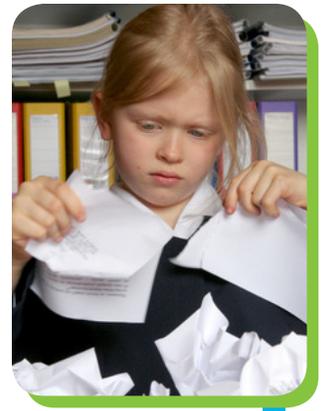


Cover credit of TIME-Illustration by Tim O'Brien for TIME-July 5, 2010



OBSERVE & ASSESS

I, myself, was always recognized . . . as the “slow one” in the family. It was quite true, and I knew it and accepted it. Writing and spelling were always terribly difficult for me. My letters were without originality. I was an extraordinarily bad speller and have remained so until this day. –Agatha Christie



The poem “Testing is Depressing” was written by an adult learner who is dyslexic. It is a reflection of memoirs that describe the poet’s painful social and emotional experiences during elementary school days.

Testing is Depressing

Testing is depressing when you just keep regressing.
I feel I’m unveiling ‘cause my grades are all failing,
Teacher I can’t remember what you said in September.
I’m sorry, I’m trying, but I can’t stop this crying.

I can’t read, I can’t write, what’s wrong with me
I’m not well, I can’t spell, school feels like I’m in hell
Don’t yell at me, I’m in a shell, and this shell is a cell.
This cell is hell, and when you yell, I go deeper into hell.

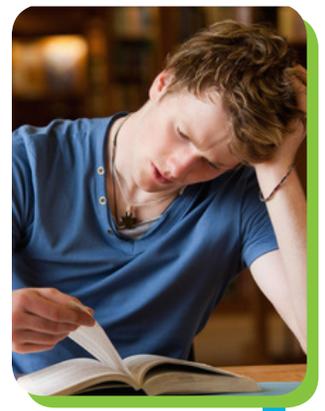
I wanna do such good deeds, but I feel like a bad seed.
I’m not bad, I’m just sad ‘cause I wanna know, but can’t grow.
Teacher please slow down, I don’t want to wear a frown.
I need more time to do my best, I wanna be like all the rest.

Please hear me, please see me, I can’t keep up with all the rest.
But rather than resting, you just keep on testing.
This testing is frightening, like a storm full of lightning,
‘Cause testing is depressing, when you just keep regressing.

Anonymous ‘82

This poem was written in 1982, and although we have certainly come a long way, for some students with learning differences, the social and emotional pain is as real as yesterday (see Empowerment & Student Testimonial section of this article). Key research findings indicate that learners with dyslexia experience teasing and bullying and feelings of exclusion. “Interviews with students reveal evidence that these students suffered from negative experiences as a result of dyslexia. Most alarming was the observations that many students had been humiliated and ‘shown-up’ by their teachers and incidents ranged from work being torn up, put-downs and low teacher expectations. The negative treatments experienced by learners of dyslexia most often lend to feelings of worthlessness, low self-esteem and learned helplessness” (Glazzard, 2012).

And I wonder. . . . how can we ease the pain of those who struggle with learning differences? *Know your students, observe their behavior and listen to their words.* They will let you know their needs, and their behavior will tell you who they are and what they need to be successful, especially when dealing with academic and social challenges. Indeed, through research we know that the essential variables that ultimately contribute to appropriate diagnosis and intervention are authentic observation and assessment, understanding and acceptance of learning differences. We know that there are wonderful special and general education teachers who have been significantly instrumental in helping students meet with academic and social success. Research findings also support an early diagnosis of dyslexia and ownership of that diagnosis is essential for creating a positive self-image (Glazzard, 2012). Through accurate evaluation, we can develop appropriate intervention plans that ultimately contribute to student empowerment and overall enthusiasm towards the learning process.



NATURE OF DYSLEXIC LEARNING CHARACTERISTICS

I am myself, a very poor visualizer and find that I can seldom call to mind even a single letter of the alphabet in purely retinal terms. I must trace the letter by running my mental eye over its contour in order that the image of it shall leave any distinctness at all. - William James (psychologist and philosopher)

The word dyslexia is made up of two different parts: ‘dys’ meaning not or difficult, and ‘lexia’ meaning words, reading, or language. So quite literally, dyslexia means difficulty with words. One of the most common misunderstandings about this condition is that dyslexia is a problem of letter or word reversals or of letters, words, or sentences ‘dancing around’ on the page. Reading letters and writing letters backwards are common in the early stages of learning to read and write and the presence of reversals may or may not indicate reading problems” (Hudson, High & Otaiba, 2007). Thus, we can speculate that there are many learning characteristics that may be associated with Dyslexia

Drs. Sally and Bennett Shaywitz have been studying learning for more than twenty-five years. “They are co-directors of the National Institutes of Child Health and Human Development’s Yale Center for the Study of Learning and Attention. Their research examines what is known scientifically and clinically about dyslexia. They have provided overwhelming evidence that dyslexia represents a difficulty in phonological processing. For instance, they conducted the Connecticut Longitudinal Study, which began in 1983, and tracked the reading performance and ability of more than 400 kindergartners. Children came from a broad range of backgrounds with a wide variation in abilities. The researchers studied everything from prenatal care to educational experiences, in order to see how children learned to read and what factors contributed to reading problems. The study determined that reading problems occurred in 1 out of 5 children, and that the deficit in reading difficulties occurs at the linguistic and phonologic level” (Moorse, 2012).

Drs. Sally and Bennett Shaywitz and many other researchers have discussed the phonologic model. Numerous research studies have shown that reading problems result from children’s inability to recognize and break up phonemes, the tiny sounds that make up language, and further, to connect those sounds to written letters. The English language has 44 phonemes, represented by 26 letters. The doctors explained that phonology (the mapping of sounds to letters) is what takes reading out of the realm of pure memory and allows readers to decode words they don’t yet know (Moore, 2012).

There are many learning characteristics that parents, physicians, clinicians, teachers and others working with

students can look for, which include but is not limited to the following:

Preschool Children

- Delayed speech development in comparison with others of same age
- Speech problems, such as not being able to pronounce words
- Unable to remember the right word to use, incorrect sentence structure
- Little understanding of rhyming words
- Little interest in learning letters of alphabet

Early School Years 5-7 years old

- Delayed speech development (pronunciation, jumbling phrases)
- Verbal expression problems (using spoken language and putting sentences together)
- Difficulty learning alphabet
- Poor phonological awareness and word attack skills

Middle School Years

- Slow reading speed
- Problems with the correct spelling of words
- Problems recognizing and understanding new words
- Problems with reading comprehension- may include math word problems

Teenagers and Adults

- Slow writing speed
- Poorly organized written work- lacks expression
- Problems with reading fluency
- Reading and language comprehension problems
- Poor spelling and avoidance of reading and writing
- Relying on memory and verbal skills, rather than reading and writing
- Difficulty with foreign language course work

There are many other associated characteristics and symptoms of dyslexia that may not be directly related to reading or writing; however, they can affect some people with dyslexia: problems with number skills (counting, carrying out sums), weakness with short-term and active working memory, problems concentrating, time management problems, and physical coordination problems (NHS Choices, *Your Health, Your Choices*, 2012). A deeper understanding of the underlying process and behavioral characteristics of students with dyslexia will help parents, teachers, and others assess the most appropriate instructional interventions to help the learner succeed in the classroom and the community.



DIVERSIFIED INTERVENTIONS & TECHNOLOGY - A HISTORICAL PERSPECTIVE

I was, on the whole, considerably discouraged by my school days. It was not pleasant to feel oneself so completely left behind at the beginning of the race. –Winston Churchill



It is certainly no surprise that the academically challenged population faced daunting experiences in the classroom decades ago. Remarkably, despite the enormous barriers, many have discovered exceptionally creative strategies to help them compensate and override for their difficulties. *Today, educational resources have certainly become richer and more accessible in meeting the needs of All Learners.* To give you a brief historical glimpse of the struggles and triumphs endured by students with learning differences, this writer will start with a discussion on legislated policies that laid the foundation in overcoming injustices.

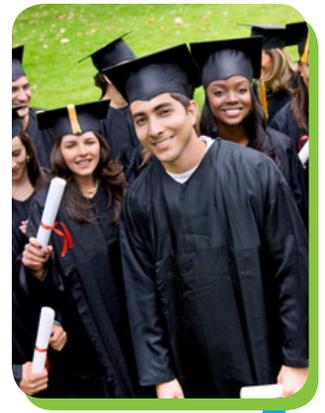
One of the most impressive trail blazing policies was observed in 2004, when the U.S. Congress passed a revision of the Landmark Individuals with Disabilities Education Act (IDEA), which addressed the National Instructional Materials Accessibility Standard (NIMAS). “This essentially led to extraordinary changes in educational publishing and practices that have become the foundation for modern practices. In effect, the NIMAS legislation made it clear that standard textbooks were not an adequate or accessible instructional format for all students (posed barriers and impediments). School districts had to provide accessible versions of textbooks to students free of charge, and students with print disabilities (now recognized as learning differences) needed to be identified and provided alternative formats, which may have included digital talking books, audiobooks, large print books, regular print books and others. *Most remarkable, the NIMAS legislation paved the way for today’s balanced approach to dyslexia. In effect, the conversation about disability and remediation shifted from focusing exclusively on weaknesses inherent in individual students (learning disabled, dyslexia) to focusing on the weaknesses in the medium of instruction (curriculum materials), which was at that time, primary print*” (Rose & Vue, 2010). It is important to note, in contemporary education, print plays a minor role; nevertheless, it was congressional policy that played a remarkable role in changing the views about literacy and disabilities, as well as helping to overcome educational and social barriers.

The Higher Education Opportunity Act of 2008 was crucial in defining Universal Design for Learning, as well as promoting its use in colleges and universities throughout the United States. “Universal Design for Learning (UDL) is an educational framework based on research in the learning sciences, including cognitive neuroscience, which guides the development of flexible learning environments that can accommodate individual learning differences” (Wikipedia, 2012). “The National UDL Task Force spearheaded inclusion of UDL in the higher education bill and succeeded in embedding UDL in the higher education

bill and all the K-12 legislation that followed. *These legislations have been crucial to the success of students with learning differences because they provide the insurances that the curriculum presentation and materials will be fair and accessible to all learners; thereby, giving all individuals equal opportunities to learn*” (Rose & Vue, 2010). It reinforced the idea that no single version of a curriculum works equally well for all students. Indeed, one-size fits all is no longer an acceptable solution, rather, flexible teaching and curriculum materials can be adjusted for individual needs that will accommodate a variety of skills and interests is the thrust of today’s educational platform.

The remarkable explosion of technology in the latter part of the 20th century essentially changed the way we access information and had a profound effect on teaching methods and classroom curriculum. “Digital media allowed for more flexibility to customize, modify and adjust information for our students with more accuracy. For instance, printed textbooks have their limitations with respect to having up-to-date curriculum, as well as being responsive to individual differences. Technology made it possible for the curriculum presentation to be highly differentiated and easily adaptable to individual differences” (Rose & Vue, 2010). Modern technology has the capacity to present information in multiple formats and media, to pace, customize, support and challenge individual students, especially the dyslexic student. *All students, especially students with learning and language differences, benefit from modern technology because it helps them compensate for academic weaknesses, and at the same time, provides the flexibility to compete with their peers on equal terms.*

There are numerous other interventions available that have been most successful in promoting educational and social success, which may include systematic multisensory and meta-cognitive methods and programs involving phonemic awareness, spelling, writing, reading fluency, vocabulary, comprehension and phonics instruction. Breaking down emotional and social barriers by providing counseling and demystification strategies is crucial in decreasing and eliminating feelings of anxiety, frustration and low confidence. Because students with learning differences, such as dyslexia, are high risk for low self-esteem and internalized stress, highly qualified professionals such as teachers, physicians, speech and language pathologists, educational strategists, counselors, and private tutors are essential personnel in assisting parents and the learners with dyslexia to meet with educational, social and emotional success.



E

EMPOWERMENT & STUDENT TESTIMONIAL

Life is full of challenges. How you handle these challenges is what builds character. Never be afraid to be who you are. - Erin Brockovich (activist & dyslexic)

The following college student's testimonial sheds light on the power of "Assessment and Demystification," which ultimately leads to Student Empowerment:

A College Student's Narrative Essay 2012: "I Get Knocked Down but I Get Up Again"

I am dyslexic and I'm not ashamed to say it. I can't tell you when I became dyslexic or even what it all means. But, I certainly remember when I found out about it. More about that a little later though.

When I was born I was tiny. I only weighed three pounds and fifteen ounces. Some people think that could have caused my learning problems but, I don't really think too much about what caused it, I just think a lot about what can I do to overcome it.

I remember when I was in fourth grade we used to read together in class and I would say the words out loud with everyone else but I had no idea what they meant. I never said anything about it. I guess I was embarrassed. I don't think my parents or teachers knew I was having problems because my grades were average. The problems I was having started to really show up more when I reached junior high. I remember getting more and more homework and just spending all day and evening in my room staring at stuff I didn't understand. My mom or dad would sit with me and go over things with me until I had it memorized. But this was only making matters worse because I wasn't "learning" I was "memorizing." Basically, I was tricking myself into believing I understood what I was doing and my self-esteem was zero.

The shit hit the fan once I got to high school. The homework was triple what I was used to and I was struggling just to get by. I played for the tennis team my freshman year and I remember that when I got my final grades that year (which were below average) everyone thought I was spending too much time with tennis and not enough studying. That had to be the reason I wasn't getting ahead in my studies, right? Wrong. In the middle of my sophomore year, after practically failing out, my mom made arrangements for me to meet a person who would turn my life around. Her name is XXXXXXXXXXXX and she is a psycho-educational diagnostician (I don't even know what that means). She was so patient with me and so nice. She had me take this really long test and I remember that afterwards she wanted to have a meeting with me and my parents. I was so nervous the night we drove to her office.

It was February 14th, 2009, Valentine's Day. That's why I'll never forget it. We sat in her office and she explained to us all that my test results showed that I suffer from a dyslexic profile. After she explained what it meant she made me feel comfortable by telling me that Walt Disney, Albert Einstein, and Bruce Jenner were also dyslexic. She also helped me a lot by showing me that even though I have problems with things like comprehension and analysis, I have strengths that others don't- especially with things like visualization and design. Learning that I have dyslexia has not made me weak. It has made me strong and has given me the motivation to go to college and shoot for my dreams. It is what makes me want to get up in the morning and make the best of each day. I don't think I would be where I am today if it weren't for February 14th, 2009. -Anonymous

The resilient young adult's essay of 2012 is a reflection of memoirs that describe the student's painful emotional and social experiences during her elementary and high school days. On the other hand, this testimonial supports the necessity for accurate diagnosis and appropriate intervention resources. Following the assessment, diagnosis, demystification, and strategy intervention, the college student's self-confidence was significantly bolstered. *The student has the good fortune of having wonderful and loving parents who truly provided the support needed that contributed enormously to the student's successful outcome. In addition, this testimonial supports Glazzard's research findings of 2012, which states that "an early diagnosis of dyslexia and the learner's ownership of dyslexia are essential for creating a positive self-image." Most impressive is this young lady's self-discipline and her capacity to persevere with a free spirited resiliency during social and academic challenges, ultimately, leading to an empowered learner who has used her imaginative force to discover her own pathways to success.*

R

RESEARCH & RESILIENCY

I was one of the 'puzzle children' myself — a dyslexic . . . And I still have a hard time reading today. Accept the fact that you have a problem. Refuse to feel sorry for yourself. You have a challenge; never quit! - Nelson Rockefeller



Learning to read for the typical learner can be thought of as a child running laps in gym class; however, for the student with dyslexia and educational differences, learning to read is analogous to the challenges the athlete faces when training for the Olympic Track Team. The athlete's perseverance, physical endurance, and the endless hours of practice to accomplish such a quest are as extraordinary as the challenges that the dyslexic student faces learning to read. Research supports the painful academic, social and emotional journey that is often experienced by students with dyslexia, and this can be compared to the blood, sweat and tears athletes describe when trying out for the Olympic Games. And I wonder . . . What keeps the spirit from giving up and throwing in the towel? *Early diagnosis, resiliency, appropriate interventions, and the support of parents and significant others (teachers, friends, clinicians) are all crucial variables that can make the difference between success and failure.*

Research provides evidence that supports the observation that those learners who have been identified as having dyslexia and other learning differences are high risk for feelings of frustration, rather than feelings of achievement, which often leads to lowered self-esteem. "Students with learning difficulties may experience rejection and unfair treatment from both peers and teachers. Underachieving learners may be perceived as 'lazy' and 'not trying hard enough' and some are viewed as less socially acceptable, and their failure may be viewed in terms of poor behavior and attitude. They also feel less intelligent and less confident, leaving them with significant 'emotional baggage.' Increased impatience with student's failure from some teachers, and at times even parents, intensifies the student's anxiety, frustration and confusion, and feelings of shame, hopelessness and helplessness" (Palti, 2007). *Considering all the risk factors of dyslexia, remarkably, there are countless learners with dyslexia that show enthusiastic attitudes and coping strategies, thereby, achieving academic and social success.*

Learners with dyslexia who have managed to become well-adjusted and who have experienced social

and educational success despite adversity are referred to as "resilient individuals." Resiliency can be viewed as the ability to recover quickly from misfortune. Resilient individuals often demonstrate flexibility, optimism and coping strategies when confronted with life's challenges. Research has shown that resilient individuals exhibit high levels of perseverance on difficult tasks; they accept the responsibility for their own performance and take an active part in dealing with stressful situations. "Factors that facilitate resiliency involve emotional and social surroundings that have a positive effect on the learner with dyslexia. For instance, competent parenting and a loving relationship with at least one primary caregiver (showing non-authoritarian attitude and child-centered parenting with strong compassion for the child's education) has proved to have an enormous role in developing self-esteem, and instrumental for the development of resiliency" (Palti, 2007). Another factor in facilitating resiliency is a positive relationship with a friend, teacher, clinician, diagnostician and educational strategist.

Positive social and emotional experiences with significant others help the learner to master difficult and challenging tasks, as well as assist them in facing challenges confidently and enthusiastically. Other enhancing resiliency influences include early diagnosis, appropriate educational, social and psychological support systems such as diagnosticians, general and special education teachers and reading and speech and language specialists who provide advanced technology and highly specialized multi-sensory programs and methods of instruction. *Consequently, when students are provided necessary resources, they develop flexibility and healthy strategies when confronted with stressful academic and social experiences (as demonstrated in the college's student testimonial), thereby, enhancing resiliency and ultimately maximizing academic success, and a healthy social and emotional status.*

CONCLUSION

I have not failed. I just found 10,000 ways that won't work. Our greatest weakness lies in giving up. The most certain way to succeed is always to try just one more time. - Thomas Edison

In conclusion, the article “The Wonderful Gifts and Challenges of Dyslexia” discusses **WONDER**, an acronym, which serves to describe the essential components that maximize the success of students with learning differences, which includes wiring of the brain, observe and assessment, nature of the learning characteristics of dyslexia, diversified intervention and technology, empowerment and student testimonial, and research and resiliency. The challenges faced by students with dyslexia and other learning differences have been documented for decades. Remarkably, despite the significant risk factors, countless learners have had the good fortune to compensate and override their differences, with extraordinary resiliency. The mission of the article is to demystify dyslexia, support and inform, in an effort to avoid myths and painful misunderstandings; even more importantly, to assist in saving parents stress and confusion, and students with dyslexia from feelings of frustration, anxiety, social rejection and low self-confidence. In essence, *the six variables used in the acronym **WONDER**, provides a comprehensive understanding of the Wonderful Gifts and Challenges of dyslexia, appropriate resources and interventions that lend to enhancing positive social, emotional, and educational development and success in life. Ultimately, this article promotes the idea that individuals with learning differences will come to a realization that All Learners Present with Gifts; subsequently, Welcoming the Exciting Challenges of Life's Journey.*

References

- Benson, L. (2009). Dyslexia from A to Z. Online: www.dyslexia.learninginfo.org/famouspeople2.htm
- Glazzard, J. (2012). Dyslexia and Self-esteem: Stories of Resilience, Dyslexia- A Comprehensive and International Approach, Prof. Taeko Wydell (Ed.), ISBN: 978-953f-0516-6. Publisher on line- *In Tech*. Available from: <http://www.intechopen.com>
- Gorman, C. (2003). The New Science of Dyslexia. *Time Magazine*. New York: Time, Inc.
- Hudson, R., High, L. & Otaiba, S. (2007). Dyslexia and the brain: What does current research tell us? LD Online. www.ldonline.org/article/14907
- Moore, D. (2012). Brain Research, Reading and Dyslexia. San Francisco, CA: Great Schools Inc.
- Palti, G. (2007). Dyslexia and Resilience. Online: www.dyslexia.co.il.com.
- Rose, D. & Vue, G. (2010). 2020's Learning Landscape: A Retrospective on Dyslexia. New York: The International Dyslexia Association.
- Patterson, M. (2011). The Paradox of Dyslexia: Slow Reading, Fast Thinking. Online: www.paradoxofdyslexia.com.
- Shaywitz, S. & Shaywitz, B. (2010). Uncoupling of Reading and IQ over Time: Empirical Evidence for a Definition of Dyslexia. *Psychological Science*, 21 (1) 93-101, 2010.

Recommended Websites

- www.internationaldyslexiaassociation.com
- www.pediatricwellnessnetwork.com
- www.interventioncentral.com
- www.autismexpressed.com
- www.researchILD.org
- www.wikipedia.com



ABOUT THE AUTHOR

Catherine R. Chase, M.A., LDTc, a Psycho-Educational Diagnostician and Learning Consultant/Reading Specialist, is the first

educator to receive a Fellowship in Developmental and Behavior Pediatrics at Harvard Medical School. She currently holds appointments as a Curriculum Director for Autism Expressed, and is an Associate Practitioner & Interventionist at the Pediatric Wellness Network in Cherry Hill, New Jersey.

Catherine is the Owner of Chase Psycho-Educational Services. As a private Learning Specialist and Practitioner, she services Cape May, Atlantic and Cumberland Counties, where she provides assessment and strategy interventions to schools, parents, teachers and student clients in her Cape May County office. She has over 25 years of experience in the field of education, which includes teacher training, Child Study Team consultation, strategic teaching, advocacy, and psycho-educational assessment training at Tufts University. She can be reached directly at 609-390-1149, in Cape May, New Jersey or by email: crchase77@gmail.com.