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EXAMINE the Pathways to School Success

Enticing the imagination is the mission of teaching and it is indeed a science and an art. Observe, wonder, inspect, scrutinize, analyze, and study are all actions that denote the meaning of EXAMINE. Catherine Chase, a Psycho-Educational Diagnostician and Learning Consultant at the Pediatric Wellness Network, uses EXAMINE as an acronym which will serve to describe six variables that lend to academic success:

- **EX** — EXECUTIVE FUNCTION
- **A** — ASSESSMENT & DEMYSTIFICATION
- **M** — MEMORY DIFFERENCES
- **I** — INTERVENTIONS & TECHNOLOGY
- **N** — NURTURING THE IMAGINATIVE SPIRIT
- **E** — EMPOWERMENT

The goal of the article, "Pathways to School Success," is to engage the imagination and to provide a comprehensive understanding of six variables that contribute to social and educational success, which includes but is not limited to the following:

1

EX EXECUTIVE FUNCTION

Executive function is a set of mental processes that help connect past experience with present action. It refers to the brain processes that enable individuals to engage in goal-directed or problem-solving behaviors. People use it to perform activities such as planning, organizing, strategizing, self-monitoring, managing time, flexibility, paying attention to and remembering information. Students who have learning difficulties, autism, ADHD, and conduct disorders, often have difficulties with EF; however, research is now showing that more and more students without disabilities are exhibiting EF problems. EF problems can manifest themselves in academic tasks such as reading, writing essays, math problem-solving, test taking, prioritizing, making connections, drawing inferences, detecting saliency, and the list goes on and on (CEC Today, 2008).

Why are students who have not been identified as having learning and behavior differences struggling with EF? Should students be taught EF strategies and at what grade level? These questions motivate us to take a serious look at the increasingly complex core curriculum demands, as well as advanced technology being implemented in our schools and their connection to EF. For example, "in early elementary grades teachers are requiring students to engage in lengthy reading and writing assignments, long-term projects, and all of these activities require EF (Meltzer, 2010)." Most remarkable is the fact that students must coordinate multiple subskills as early as first and second grade. Another factor is that we live in a highly digital technology-driven society. Youngsters are often reliant on the internet or other forms of technology for information; and according to Meltzer, "they are not taught from information that is pre-organized by experts" which indeed involves EF.

Many researchers believe it is crucial that all learners be taught EF strategies because they impact all aspects of students' work as they move up in grade levels. Considering the above observations, it is no surprise that *evidence based research has made it very clear that all students can benefit from direct explicit instruction in EF, and it is even more critical for students who are experiencing attention, behavioral, language and learning difficulties.*

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A ASSESSMENT & DEMYSTIFICATION

An understanding of the learner's language development, educational, social and psychological processes underlying performance is a necessity in becoming an independent learner. A combination of standardized norm reference, criteria reference, and functional assessments are essential for data collection to gain valuable information about a student's learning strategies, work habits and cognitive and academic achievement levels. The goal of evaluation is not for the purpose of labeling; rather, it can be viewed as an investigation of a student's strengths and weaknesses, learning style and strategies for approaching academic materials. For example, assessment needs to evaluate the processes in which an individual approaches reading decoding, reading comprehension, written language, expressive-receptive language, spelling, mathematics and other subject areas. It needs to identify the variations and deviations of EF such as memory, self-monitoring, attention to detail, organization, planning, flexibility to shift, motivation, frustration tolerance and strategizing. Assessment should not only focus on the student's strengths and weaknesses, but it should also take a serious look at the positive and negative aspects of the core curriculum.

Demystification is a vital component of Assessment. It provides the student, parents, and teachers with an understanding of what has been discovered in the assessment process, with the goal of translating technical terms into comprehensive common language (executive functions and attention dysfunction, autism, language variations and deviations, and learning differences). It also takes an in-depth look at the curriculum presentation, reviewing the appropriateness of the complexity and educational and social match to the student's academic and behavioral achievement levels. For instance, *in some cases it is not the student that is disabled, rather it is the curriculum presentation that may be disabling the student's performance.* In essence, demystification takes away the fear and stressful feelings that often accompany the "unknown." It provides clarification of appropriate strategies that assist in accepting social and academic challenges, as well as reinforcing the many gifts that ALL learners possess, ultimately, lending to another pathway to school success.

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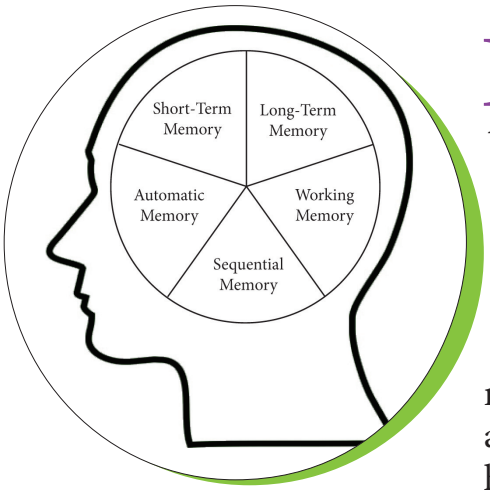
MEMORY DIFFERENCES



It is a well known fact that we use memory for just about everything we do. For instance, we remember faces and sounds, how to brush our teeth, how to dress, and how to read. Indeed, from infancy to the end of life we use our memory. There are numerous kinds of memory being tapped into during the school day such as visual, auditory, sequential, short-term, long-term, retrieval, automatic, motor, procedural and working memory. Some students who have trouble in school may understand the information, but they are having trouble remembering. "To learn, you have to understand and remember (Levine, 1990)." However, this article will focus primarily on memory differences and their impact on learning.

The ability to learn depends on a student's ability to incorporate new information into an existing mental framework in order to create a lasting memory. Human memory is a highly complex system for information processing, storage, and retrieval. Within this system, there are three general types of memory: short-term memory, working memory and long-term memory (Baddeley, 2006; Torgesen, 1996). These memory processes are closely interconnected and they all contribute to learning. However, "it is working memory that enables students to hold auditory, written, and visual information in the mind long enough to understand a sequence of words and ideas, and also allows students to retain facts so they can be formulated into expressive language in the form of verbal statements, written sentences or coherent paragraphs. Working memory also plays a crucial role in listening comprehension, reading comprehension, math problem solving, following directions, and efficient task completion (EF). *Efficient working memory is essential for academic success because educational competence requires the integration and coordination of multiple subskills which rely significantly on working memory* (Kincaid & Trautman, 2010)." *If students are struggling with memory weaknesses, it will be critical to teach strategies that will improve memory for school success.* Strategies are techniques for doing things the best and easiest way. Students need to create and implement useful strategies to do well in school. For instance, actors often rehearse to remember their lines. Students who need to memorize words, to do well on a spelling test, can rehearse them by whispering them under their breath or by writing them, or cutting them into syllables, and by making a visual image in their mind. These are just a few strategies that students can learn during intervention that help with memorization.

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I INTERVENTION & TECHNOLOGY

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The major focus of intervention would be to have students understand and accept their learning and behavior differences. They need to become aware of strategies that will work to maximize their success. What works for one student may not work for the next because one size does not fit all. Understanding our strengths and weaknesses in learning and behavior, provides an insightful pathway that is needed to make appropriate choices about the kinds of strategies that will best fit and work for the individual. A few interventions that have been most successful in motivating and helping to promote efficient and effective learning are meta-cognitive methods and multisensory programs in reading, writing, language and mathematics (the what, why, when, where and how of educational programs), and private interventions such as tutoring, behavioral counseling, occupational therapy, education and strategy therapy, nutrition and speech/language therapy.

On-line technology is inspiring intervention and is being implemented throughout schools. Having efficient and effective technology skills are critical to the success of EVERY learner. Universal Design for Learning (UDL) provides guidelines and evidence-based practices that promotes highly motivating independent learning programs that are found on the internet and other multimedia; however, technology itself is not what provides the educational advantages. "The flexibility and diversity of modern multimedia provide an ideal foundation for education, but the advantages of the foundation can only be realized with proper design. Educational environments must provide materials that adhere to important principles of design—universal design for learning (UDL) offers equal opportunities for success for all students (Rose & Ge, 2010)." One of the most impressive new programs meeting UDL's principles is Autism Expressed, which was founded by Michele McKeone, M.Ed., 2011. Autism Expressed is an online learning system that teaches digital and social media skills. *Teaching marketable digital age skills gives students with Autism a greater advantage when pursuing their independence.* Autism Expressed provides an engaging learning environment where students can work at their own pace. The Autism Expressed student becomes empowered as they learn essential digital age skills such as browsing, emailing, designing, web safety and much more. Autism Expressed's curriculum parallels Bloom's Taxonomy of Cognition and utilizes methods of Applied Behavior Analysis. The results are increased motivation, resiliency, and a greater learning and earning potential. Ultimately, Autism Expressed prepares students with Autism to pursue post-secondary educational goals and their transition to independence (www.autismexpressed.com).

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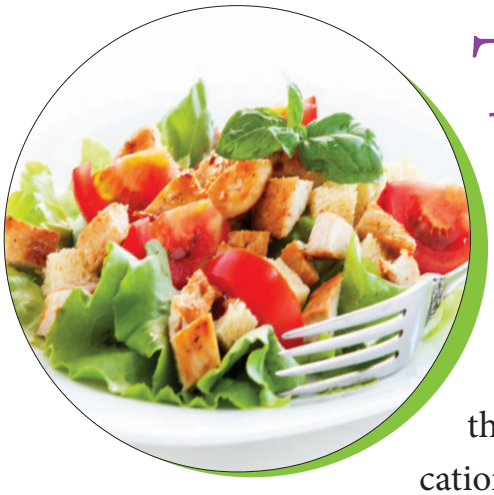
N NURTURING THE IMAGINATIVE SPIRIT



To nurture the imaginative spirit is to provide positive nutritional support that addresses the physical, educational, and emotional needs of the learner, which is essential in keeping the mind and body healthy. For instance, healthy eating plays a crucial role in school success. Research supports the observation that poor diet can contribute to a learner's poor growth and development and may also be the cause of a host of disorders that include the following: reflux, chronic congestion, constipation, and learning and behavior disorders (Lazer & Padron, 2010). *There are wonderful resources that address healthy eating habits that can be used as teaching tools, ultimately, lending to maximizing a healthy physical status and improved cognitive development in the educational setting.* (www.pediatricwellnessnetwork.com).

When the physical needs are being nourished, the learner's social, emotional and educational status can be further enhanced by providing an innovative and appropriate curriculum presentation. The teaching platform for education can no longer be primarily print media; rather, highly differentiated multi-media and easily adapted teaching programs are now being implemented to match individual differences. When we put into practice diversified curriculum material in creative ways, we nurture the imaginative spirit of the students. Compassionate and progressive teaching, along with inspiring technology, make it possible to present information in multiple formats. *This allows for the flexibility to pace, support, and adjust the educational and social curriculum presentation on a daily basis, ultimately challenging and meeting the needs of ALL types of learners.*

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E EMPOWERMENT

Language, learning, behavior, and attention difficulties have a powerful effect upon family relationships. Students who are experiencing academic frustrations, anxiety and inordinate failure are likely to precipitate a recurring family crisis. Both student and parents are likely to become disappointed, confused, embarrassed and angry over the recurring failure. These students are often misunderstood because their performance is so very inconsistent. They are often blamed for not being able to do today what they did yesterday. Because of considerable criticism these students encounter, they tend to develop negative self-images. Students and parents must understand it is not their fault. Students must realize that they are not stupid, lazy or crazy. Empowerment provides information and support so students and their parents can avoid painful misunderstandings and gain realistic insight into personal strengths and weaknesses. At the same time, students must be held accountable for their performance. Gradual improvement in performance is expected as the students gain confidence and become empowered independent learners.

The mission of Empowerment is to have students and their parents come to the realization that attention, behavior and learning difficulties do not automatically lead to low achievement in life. *Evidence based research clearly shows that serious weakness in one area seems to spur some people on to develop exceptional strengths in other areas. The extra energy of active individuals can come in handy once it is directed to a specific focus* (Gorman, 2003). Many accomplished politicians, lawyers, entertainers, athletes, scholars and other professionals had to struggle with learning and behavior difficulties; a few examples include, Thomas Edison, Jay Leno, President Woodrow Wilson, Bruce Jenner and Albert Einstein. During their adventures in life they became empowered and the rest is history.

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In conclusion, the article "EXAMINE the Pathways to School Success" highlights ways to engage the imagination. The goal is to provide a comprehensive understanding of six variables that contribute to academic and social success. EXAMINE is used as an acronym that serves to describe the six variables, which includes executive function, assessment and demystification, memory differences, intervention and technology, nurturing the imaginative spirit, and empowerment. *The art of teaching is reinforced with an emphasis on promoting a student's resiliency, self-discipline, confidence and learning, ultimately, teaching with the mission to inspire and nurture the intellect and spirit. This indeed, motivates learners to use their imaginative forces to discover their own pathways to success.*

Suggested References

Baddeley, A. (2006). Working memory: an overview. In S. Pickering (Ed)., Working memory and education (pp. 3-26). Boston: Academic Press.

CEC Today (2008). Brides 4 kids. Improving executive functions skills. USA

Denckla, M.B., (2007). Executive function: Binding together the definitions of attention/hyperactivity disorder and learning disabilities. In L. Meltzer (Ed.), Executive function in education: From theory to practice. New York: Guilford Press.

Gorman, C. (2003). The new science of dyslexia. Time magazine. New York: Time, Inc.

Kincaid, D. & Trautman, N. (2010). Promoting executive function in the classroom. New York: Guilford Press.

Lazer, D., Padron, C., & Payne, R. (2010). Ryan fights the green monsters, Roneet and the fairy princess that helped her fight the green monsters, What's the scoop on poop, Michael and the birthday party. Cherry Hill, NJ: T'zuna Bria Publishing Company.

Levine, M. (1990). Keeping a head in school. Cambridge, Massachusetts: Educators Publishing, Inc.

Meltzer, L, (2010) Promoting executive function in the classroom. New York: Guilford Press.

Rose, D. & Ge V. (2010). 2020's Learning landscape: A retrospective on dyslexia. New York: The International Dyslexia Association.

Torgesen, J.K. (1996). A model of memory from an information processing perspective. In C.R. Lyon &N.A. Krasnegor (Ed). Attention, memory, and executive function (pp. 157-184). Baltimore:Brookes.

Recommended Websites

www.autismexpressed.com
www.amazon.com
www.pediatricwellnessnetwork.com
www.researchILD.org
www.interventioncentral.com
www.CEC Today.com

About the Author

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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.