



# Neuroscience Meets Education: Success for Struggling Students

## LATA CONFERENCE October 23rd 2015

For learning assistance teachers, resource teachers, classroom teachers, consultants, counsellors, literacy coordinators, and educational assistants. Non BCTF members also invited.



Vancouver

October 23, 2015 [9:00 – 3:30]

Sir Winston Churchill Secondary School



### KEYNOTE SPEAKER

## The Woman Who Changed Her Brain



**Barbara Arrowsmith-Young** is recognized as the creator of the Arrowsmith Program, one of the first practical applications of the principles of neuroplasticity to the treatment of learning disorders. She continues to develop programs for students with learning disabilities and her program of cognitive exercises is implemented in 55 schools in Canada, the U.S., Australia and New Zealand. She is the author of the international bestseller, *The Woman Who Changed Her Brain*.

Barbara Arrowsmith-Young is recognized as a pioneer, as the creator of one of the first practical treatment applications utilizing the principles of neuroplasticity. As the founder of the Arrowsmith Program, she began using these principles in 1978 to develop cognitive programs to address learning disorders, first starting with her own debilitating set of brain deficits. In her presentation she will talk about her journey of discovery, the lines of research she combined and the outcomes achieved over her 35 years as an educator and researcher. She will describe a number of learning disorders, from those that impact the learner in school to those that affect us in life. She will discuss 'cognitive glitches' - those areas of weakness that we are all familiar with and often explain away by saying, "I am just not good at navigating, recognizing faces, [fill in the blank]." She will discuss 'cognitive mismatches' – situations we find ourselves in where the demand of the task is incompatible with our cognitive functioning and the challenges this presents. The nature of the transformation that occurs as the function of deficit areas are stimulated through cognitive exercises will be presented.

# SESSIONAL SPEAKERS



**Dan Duncan's** coach training was with ADD Coach Academy located in Albany, NY, USA. He holds membership with the International Coaching Federation and runs a private coaching practice. Dan is affiliated with the adult BC Interior ADHD Clinic and acts as the Academic Strategist for diagnosed ADHD students at the University of British Columbia Okanagan *campus*. Dan himself is diagnosed ADHD as is one of his sons. For Dan's bio please go to <https://www.bcinterioradhdclinic.com/coach/adhdinsideout/about-dan.html>

Am and PM Session: **ADHD: Misdiagnosed, Misunderstood, and Misdemeanors** This presentation begins by providing a working knowledge of how the ADHD brain works differently than most non-ADHD brains. From that framework, some of the most common ADHD strategies will be explained and applied to an educational setting. (please bring real life examples to discuss.)



**Dr. Justin Davis** is committed to helping individuals to find the information and products needed to get the most out of their amazing brains. Dr. Davis received his PhD from the University of British Columbia where he studied the neurophysiology of human movement, his MSc in neuroscience studying the cellular mechanisms of memory and development, and his HBSc in cell biology from the University of Western Ontario.

Pm Session: **Optimizing our Brain for Learning** (Pm Session only): The last 10-15 years have produced some amazing discoveries in the field of human neuroscience research. Every day we are learning more and more about how the human brain develops, learns and grows. Join Dr. Justin Davis for a fascinating seminar on the

topic of neuroplasticity. You will learn all about how the human brain is shaped by our experiences and lifestyle and what we can do to optimize our brain for learning.



**Dr. Georgina Robinson** is the Principal of the Provincial Outreach Programme for Autism and Related Disorders (POPARD) in British Columbia, Canada. POPARD is a Ministry of Education service, providing educational, behavioral, and psychological support services to schools in BC. Georgina provides leadership and clinical supervision to a diverse staff that includes teachers, psychologists, behavior analysts, and speech and language pathologists. Georgina has worked in the field as a school psychologist, an educational/behavioral consultant, a district counselor, and as a special education teacher. Her research interests include: supporting families of children with special needs; stress, coping and empowerment; executive function, and assessment of students with ASD. Courses taught at UBC include: Inclusion of Children with Special Needs, Consultation

Theory and Practice, Interventions, and Practicum in School of Psychology

**2-Part Session: Executive Function Deficits: Applications and Interventions Part I (Am Session):** Executive are utilized in successful engagement with academic tasks such as reading, writing, and mathematics; or social/emotional/behavioral tasks such as negotiating, social problem-solving, or shifting perspective. Part one of this session, will provide an overview of executive functions, their association with various childhood disorders, and the connection between EF deficits and academic and social function in school. Functions are psychological processes necessary for purposeful, goal-directed behavior and problem-solving. In school, executive functions

**Executive Function Deficits: Applications and Interventions Part II (Pm Session):** A model of intervention will be introduced beginning by identifying the executive function deficit and its role in the referral problem (e.g., reading or social interaction). Then, interventions which provide specific external (or antecedent) supports as well as student specific (teaching) supports (e.g., Dawson & Guare, 2010; McCloskey, 2014) will be introduced. Specific difficulties and interventions will be demonstrated with case examples. Participants will receive a handout package that includes a summary of key EFs and recommended interventions, and an intervention planning protocol they can use in their schools.



**Dr. Serge Lacroix** is a Professor in School Psychology at UBC. He completed a Master's degree in Clinical Psychology at Laval University and a PH.D. at UBC. He has worked in three provinces as a School Psychologist and on test revision/development, having revised or translated measures of intelligence, achievement, depression/anxiety and attention/hyperactivity, and is the author of the Échelle francophone d'appréciation du rendement-EFAR.

**AM session 10:30 am-12:00 pm: Assessment and Intervention in a French Immersion Context:** A look at the key questions to address when going through an assessment and intervention process in French immersion. How to address the difference between second language acquisition issues and learning

difficulties/disorders? We will also consider the very often posed problem of when should a child be moved out of French immersion. **PM Session 1:00-2:30 pm: Academic Achievement Testing in French:** Discussion around academic achievement testing in French and in French immersion programmes, looking at what test to use, in what language should we test, how we should interpret results. What are the implications of testing and not testing and where does standardized testing fit in a response to intervention model.



**Kim McKeown** has been a teacher for 8 years with the majority of her experience teaching junior level math and science. Ms McKeown recently completed her Master of Education with a focus on ADHD and Inclusive Education. Having been a paramedic for 16 years, she has a keen interest in the science of how humans best function. This interest was a prevalent theme throughout her recent studies.

Am or Pm Session: **Neuroscience + Differentiated Mathematics Instruction = Learning** : Today's classrooms are characterized by an increase in diversity of student population. Therefore, an approach to instruction that meets this demand and promotes the values of inclusive education is paramount. Differentiated instruction has been identified as an approach to teaching that has the flexibility necessary

to engage all learners, including those with exceptionalities. Furthermore, differentiated instruction is supported by current advancements in neuroscience. Specifically, the role of executive functions and the neurotransmitters noradrenaline and dopamine will be discussed in the context of middle school mathematics instruction. (also suitable for secondary and elementary)



**Heather Baptie** (top) and **Terry Dobson** have taught students from kindergarten through graduate school and frequently share their knowledge at regional and international conferences. As teachers in Kelowna BC, they created a successful remedial reading clinic for students with severe learning disabilities. They're passionate about using technology to differentiate and personalize learning for their struggling readers. Most recently, Heather and Terry founded Links 2 Learning Online, an educational consulting company that provides educators and parents with the knowledge and tools that can change the lives of struggling readers.

AM session 10:30 am-12:00 pm:

**The Power of Words:** Vocabulary knowledge has been identified as one of the strongest predictors of reading achievement and we know that a richer vocabulary empowers learners to think and communicate more effectively. In this session, we will highlight effective strategies and resources for developing the word knowledge of today's learners





**Kristin Wiens** is a Curriculum Coordinator for the Sooke School District (#62). She supports Integration Support and classroom teachers from Kindergarten to grade 12. She facilitates workshops on a variety of topics including diversity, self-regulation, transitions and PATHs (Planning Alternative Tomorrows with Hope). Kristin has worked as a Child and Family Counsellor, Life Skills teacher, Integration Support teacher and Curriculum Coordinator. She is currently researching mindfulness in the classroom.

**AM session (10:30 am-12:00 pm): Building Bridges:** Kristin has worked with district team members to generate a list of possibilities for teachers. All strategies aim to increase self-regulation and reduce anxiety. Participants will leave with practical classroom strategies to implement right away, recommendations for resources to introduce to their classrooms and a new understanding of how to meet the many different needs of students in their classroom.

**PM Session (1:00-2:30 pm) Introducing Children to Mindfulness:** Learn about recent research on mindfulness that is demonstrating exciting benefits for students (and teachers) regarding self-regulation. Learn simple activities to introduce children to the concept of mindfulness. Mindfulness techniques can help all students increase their ability to stay calm, focused and ready to learn. Leave with ideas to implement right away and suggestions of resources for further exploration.



**Stephanie Royan** hasn't been on Oprah or published 80 books, but she's the "go-to" person for student regulation. Having worked over 10 years in pediatric Occupational Therapy, Stephanie has earned post-graduate certification in Sensory Integration and Therapeutic Listening, along with training in Neurodevelopmental Theory. Stephanie enjoys spending time with her great husband, two lively children and rambunctious dog!

**Am or Pm Session: Understanding and Using Strategies for Successful Sensory Processing:** Do your students constantly move, are unable to hold a pencil, or are unable to print legibly? Do they struggle with copying from the board or tying their shoes? Is telling your students to "sit still" not working? Walk away with a better understanding and strategies to help your students with their sensory processing and to engage more successfully in learning.



**Brenda Whittam-Neary** has worked as an in-class Tier One self-regulation interventionist throughout BC, AB, NB, SK and the NT. While in SK, she was seconded for five years by the ministry of education to design and implement a provincial self-regulation demonstration classroom to serve as a provincial resource for the implementation of self-regulation strategies within an RTI model. She is now a private self-regulation consultant, working in school districts throughout BC, SK and the NT.

**Am or Pm Session: The Five Pillars of Self-Regulation:** Brenda Whittam-Neary will discuss the five pillars of self-regulation (physical, emotional, behavioral, social and academic) both within the school environment

within a *response to intervention* model. Practical Tier One universal assessment and intervention strategies will be discussed. In addition to identifying the Tier One components, emphasis will be placed on the process of implementation through a trans-disciplinary model.



**Ashima M. Rastogi** (@AshimaRastogi) is an Assessment Consultant with Pearson Clinical Assessment. She has a passion for neuroplasticity and education, and is an innate technology enthusiast. With her background in psychology, she is engaged in integrating evidence based psycho-educational programs in the classroom. In her role at Pearson Clinical Assessment, she works closely with school districts to train and support educators and clinicians to improve students' cognitive

**Am or pm session: Improving executive functions through technology**

The impact of executive functions on learning is widely accepted. There has been growing interest in new technologies to help students plan, organize, strategize, pay attention and remember details. The development of new technologies and apps has often focused on compensating for diverse executive functions abilities.

Based on neuroplasticity, it is known that our brain is malleable. Thus in addition to strategies, students can develop connections to improve these functions by actively training executive functions.

This workshop will focus on a technology that brings executive function exercises to the student's device. Supported by decades of gold-standard research and work of a well-renowned neuroscientist, it will be shown how students can develop cognitive skills through the integration of neuroplasticity in education - to become better planners, organizers, initiators, attentive and detail-oriented.

capacities.



**Dr. Lara Boyd** is the Canada Research Chair in Neurobiology of Motor Learning, a Michael Smith Foundation for Health Career Investigator, a Peter Wall Scholar, and an Associate Professor in the Department of Physical Therapy, at the University of British Columbia. She is a Neuroscientist and Physical Therapist. Dr. Boyd directs the Brain Behaviour Lab at the University of British Columbia, which performs research designed to advance theoretical conceptualizations of how brain function relates to behaviour during learning. She is an expert in neuroimaging and neurophysiology, and uses a variety of cutting edge technology in her

research.

am session: **Plasticity and the Learning Disabled Brain** This session will review recent finding surrounding neuroplasticity in children with learning disabilities. It will include data illustrating functional and structural change in the brain associated with learning and highlight preliminary results from ongoing studies of the Arrowsmith Program.



**Nadine Korven**, a dedicated teacher and mother to two children, lives in Kimberly and serves the south eastern region (Districts 5, 6, 8, 10 and 20) as well as her own school district as a SetBC consultant. She has been working in the field of education for more than 20 years. Nadine is passionate about supporting all learners, and has a passion for Assistive Technology and Autism. She enjoys what she learns from every student and participant encounter.

**Am or pm presentation: Supporting Readers and Writers with Technology.**

How can you support struggling readers and Writers? In this workshop, we will explore the accessibility features of iPads, Smartphones, and Windows. Explore key apps and websites to support technology learners, and explore SET BC's resources available on their website. You will leave this workshop with tools and ideas to use the next day.



The Canadian Red Cross has promoted healthier relationships, safer organizations and stronger communities through Respect Education programs and partnerships for more than 25 years. This award-winning program, built on decades of Canadian Red Cross experience in prevention education and community-based programs, has four main areas of focus:

- Implementing Violence Prevention
  - Preventing Bullying and Harassment
  - Promoting Healthy Youth Relationships
- Preventing Violence Against Children and Youth.
- Respect Education Trainers are from a diverse range of backgrounds in education, counselling and social work and bring a vast amount of experience and knowledge around supporting healthy relationship development and violence prevention

**Pm session: Beyond the Hurt:** Beyond the Hurt is a dynamic educational program designed to help create and maintain positive, inclusive environments. It provides the resources and techniques to understand and respond to bullying, harassment and discrimination. This interactive program gives adults who work with children and youth the tools they need to:

- Learn the dynamics and effects of bullying
- Determine safe and effective responses to bullying and harassment
- Find and use resources to respond to bullying



**Dr. Linda Siegel** is Professor Emeritus in the Department of Educational and Counselling Psychology, and Special Education at the University of British Columbia, Vancouver, Canada, where she holds the Dorothy C. Lam Chair in Special Education.

She has conducted research on the development of reading and of mathematical concepts, language development, dyslexia, mathematical learning disabilities, early identification and intervention to prevent reading difficulties, and the development of reading and language skills in children learning English as a second language.

She has consulted on the development of reading skills in elementary school age children in Hong Kong, China, Barbados, Brazil, Argentina, and many places in the US and Canada. In 2010, she was awarded the Gold Medal for Distinguished Contributions to Canadian Psychology from the Canadian Psychological Association. In 2012, she received the inaugural Eminent Researcher Award from the organization Learning Difficulties Australia. She has been awarded an honorary doctorate from the University of Gothenburg (Sweden).

**Am session: Understanding Dyslexia and Other Learning Disabilities:** This presentation will review the major types of learning disabilities. The challenges and strengths of each learning disability will be discussed. Interventions and accommodations will be presented.

**Pm session: Early Identification to Prevent Reading Problems:** This presentation will describe a classroom based intervention that can be used for all children, including those with English as a Second Language. This intervention is appropriate for kindergarten and grade 1 and has been proven to significantly reduce the incidence of reading problems



**Paul Pantaleo** (BEd, MA and Post Masters Diploma) is currently a Learning Support Teacher. Also as a sectional instructor at the University of Victoria he has taught numerous courses focusing on assisting students at the elementary level experiencing difficulties with reading and writing. He has also been an elementary vice-principal, Reading Recovery Trainer, Teacher Leader and teacher.

Am session: **Acceleration The Progress of Readers Experiencing Difficulties**

This research based interactive in-service is designed for Elementary/Middle School learning support and classroom teachers. Participants will develop an understanding of how restructuring and rethinking programming and teaching practices for struggling readers and writers can lead to accelerated reading gains for at-risk-students. Drawing on leading educational research, some schools are reconsidering their delivery modes for pull-out and in-class intervention models for at-risk readers. In an interactive manner the presenter will model and describe how a daily short term strategically -based reading intervention can make a positive difference with vulnerable students The ideas presented will be applicable to both learning support and regular classroom teachers. This presentation will answer the question, "What is possible for students experiencing difficulties in reading?" as from September 27, 2011 to March 8, 2015 71 students who were below grade level in reading reached the average band of instruction.

# REGISTRATION

## Registration details

BCTF educators:	\$140
Non-BCTF educators:	\$165
Retired educators/ teacher candidates/TTOC	\$90

Coffee and tea service during the break

Lunch provided

Session capacity 40 participants per session except for the session *5 Pillars of Self-Regulation and Executive Functioning Deficits*.

\* While LATA endeavors to give our members opportunities to explore current research and educational discussion on a wide array of practices in order to support BC students in an inclusive public education setting, LATA does not endorse specific products or viewpoints.

For learning assistance teachers, resource teachers, classroom teachers, consultants, counsellors, literacy coordinators, and educational assistants. Non BCTF members also invited.

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