



# The ONTABA Analyst

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**May the 4th be with you in  
Ottawa this spring**

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*Two invited speakers  
for the ONTABA conference are  
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melting! See pg. 5 for details*

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# From the President's Desk

## On the utility of response chains...

**G**reetings Members! As we ring in the New Year, your Board of Directors is setting sights on an ambitious sequence of organizational responses and reinforcers that will bring us within closer reach of our vision. Following the success of our 2016 Annual Conference we immediately took steps to build and maintain relationships with key policy makers, to establish regulation of our profession, to improve financial viability and sustainability, to increase board and organizational capacity, and to protect the science of behaviour in Ontario. Within each of these areas we have already experienced successes that that have cued our next responses.

The last three months have been busy! Since the conference we have completed our 3-year strategic plan, conducted a preliminary review of our bylaws, and oriented 8 new board members with a full day of governance training. We evaluated and restructured our board committees for optimal performance creating the Professional Development, Professional Practice, and Membership, Awards, and Recruitment Committees. We formed the ONTABA Education Task Force, completed a briefing for the Minister of Education, visited the Office of Ontario's Ombudsman to advocate for safe and equitable behaviour analytic services across sectors, participated in a round table discussion on the complex housing needs of homeless adults with intellectual disabilities, and engaged in meetings with the Ministry of Children and Youth Services, the Ministry of Community and Social Services, and the Ministry of Health and Long-Term Care. In late January, we were invited to attend a pre-budget consultation meeting with the Ministry of Finance; an opportunity we seized to extol the benefits of an investment in behaviour analytic services in the health, education, and social service systems.

In addition to the important work of our board and committee volunteers, our four ad-hoc committees, the Adult Services Task Force, the Education Task Force, the

Autism Task Force, and the Ontario Scientific Expert Task Force for the Treatment of Autism Spectrum Disorders have been hard at work to ensure behaviour analysts are effectively represented across sectors.



During the next several months we will build a detailed plan to implement our strategic objectives for 2017, approve committee action plans and budgets, and provide direction to key funders and policy makers on a number of critical issues.

Each of our successes serve as discriminative stimuli for yet another opportunity to advance the science of behaviour analysis in Ontario.

Once again, I am heartened by the response of the membership in volunteering their time to support this important work. Following our call for volunteers last month, we had an inpouring of applications. It is these commitments that will drive the organization and our mandate forward, so thank you for your dedication!

Within this issue of The ONTABA Analyst you will find stimulating content from our membership, updates from our advocacy and expert task forces as well as an update from our representative on the Ontario Autism Program Advisory Committee.

Each of our successes serve as discriminative stimuli for yet another opportunity to advance the science of behaviour analysis in Ontario. I am looking forward to what we will accomplish together in 2017 and to working with each of you in the pursuit of a culture of excellence, integrity, and expertise in behaviour analysis.

Sincerely,



Louis Busch, President  
Ontario Association for Behaviour Analysis



# Announcements

## Suggestions or feedback?

### Got something for an upcoming issue?

Could we really call ourselves behaviour analysts if we didn't want feedback?

[contact@ontaba.org](mailto:contact@ontaba.org) or [newsletter@ontaba.org](mailto:newsletter@ontaba.org)

The ONTABA Analyst is released quarterly, the subsequent issue months for 2017 are: **April, July** and **October**. Interested? Send it to us! [newsletter@ontaba.org](mailto:newsletter@ontaba.org)

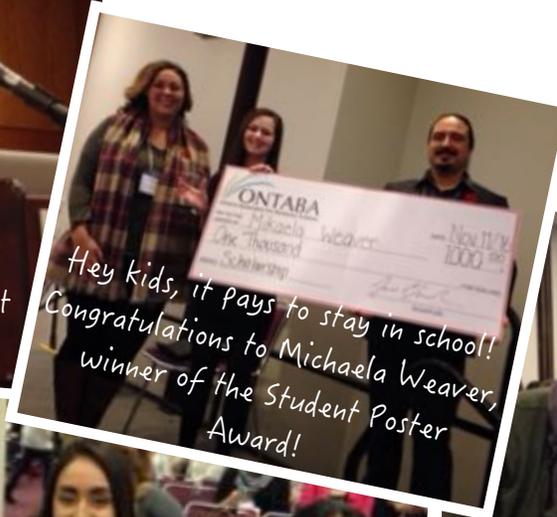
## Pics from the 2016 ONTABA Conference



Dr. Ruth-Anne Rehfeldt



Dr. Tricia Vause



Hey kids, it pays to stay in school!  
Congratulations to Michaela Weaver,  
winner of the Student Poster  
Award!



Oh you know, just hangin'  
with Dorothea Lerman



Smile for the newsletter!  
Chaza, Loveleen, and Divya



The Lifetime Achievement Award Winner  
Gary Bernfeld! (and Lesley and Drew)



The Ethics Panel!

Photo credits: Lesley Barreira

**Dr. Jeannie Golden,  
Ph.D. BCBA-D**

Dr. Golden is a Licensed Psychologist who received her Ph.D. in School Psychology from Florida State University. She has worked as a teacher and school psychologist and held a private practice where she helped children and adolescents with behaviour problems and their families for over 15 years. Dr. Golden is an associate professor in the Psychology Department at East Carolina University where she teaches undergraduate and graduate courses in Applied Behaviour Analysis.



**May 4th, 2017**

## Challenging Behaviour Conference

### **Treating Children With Behavioural and Emotional Disorders: Integrating Emotional and Moral Behaviours to Promote Generalization**

This workshop will provide a behaviourally-based explanation of why some children lack a repertoire for appropriate emotional and moral behaviours. She will also discuss what environmental factors can encourage appropriate emotional and moral behaviours and ways to develop effective behavioural treatments that are relationship-based, focus on emotional and moral skills, and promote generalization.

### **Diagnosis and Treatment of Children with Psychiatric Disorders: Functional Assessments and Motivating Operations**

This workshop will focus on the process of conducting FBAs and developing function-based treatments for several different symptoms of psychiatric diagnoses including anxiety, disturbed attachment, and oppositional/defiant behaviours.

**Costs**  
\$250 includes lunch  
**Early bird**  
\$225 before March 3  
**Student** (proof required)  
\$75 student card at conference



**Conference Site  
& Times**  
RA Centre: 2451  
Riverside Dr.  
Ottawa  
9am to 4pm

**6 CEU's**



Ottawa Children's Treatment Centre  
Centre de traitement pour enfants d'Ottawa  
Founded in 1951 Fondé en 1951



Register Now: <http://www.octc.ca/events.php>

Intended Audience: Professionals serving individuals with special needs, BCBA's, BcaBA's

Advanced level

ACE Coordinator: Pamela Shea [pshea@octc.ca](mailto:pshea@octc.ca)

*Présentation en anglais seulement.*

# Committee Updates

## Conference



The 2017 Annual Conference is 11 months away! Your ONTABA Conference Committee is hard at work keeping the ball rolling. The conference will take place at the **Metro Toronto Convention Centre in Toronto on Thursday November 9th and Friday November 10th, 2017**. We are thrilled to announce that two rock star invited speakers have confirmed so far: **Dr. Patrick Friman** and **Dr. Larry Williams**! Keep an eye out for updates regarding speakers, the call for papers, and pricing.

A big thank you to all of those who filled out the 2016 conference feedback survey. We are reviewing the results and will incorporate your thoughts and suggestions to make improvements in 2017. See you in November!

Sincerely,

Your Conference Committee

## A Message from ONTABA's Representative on the Ontario Autism Program Advisory Committee

*In May 2016, ONTABA was invited to nominate a representative to the Ontario Autism Program (OAP) Advisory Committee. The role of the committee is to provide the ministry with advice on program design, service delivery and implementation of the new OAP.*

To date, the committee has met four times and has focused on the following tasks:

- Providing input into a draft outcomes and principles document. This document will form the basis of the desired end state for the new OAP and will provide a framework for evaluating its success.
- Identification of the needs of children, youth, and their families in the new OAP.
- Providing feedback to MCYS staff on the government

- commitments for the new OAP changes in June 2017.
- Providing feedback on the work that the Clinical Expert Committee (CEC) is undertaking to inform the development of a framework for intervention planning in the new Ontario Autism Program.

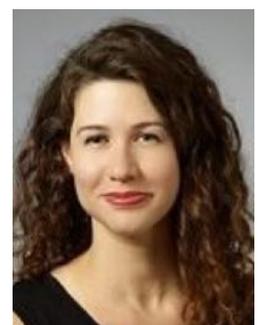
Our recommendations to the advisory committee are consistent with ONTABA's mission and vision, and include the following:

- The design, delivery, and supervision of ABA services are consistent with the best available scientific evidence, including but not limited to recent comprehensive literature reviews (National Autism Center, 2015 and Wong et al., 2014) and practice guidelines (Behavior Analyst Certification Board, California Association for Behavior Analysis, Minnesota practice guidelines).
- ABA services are individualized, flexible, and take into consideration the specific strengths and needs of the child and his/her family.
- The BCBA/BCBA-D credential combined with sufficient experience and competency in the area is an appropriate qualification for the supervision of ABA programming in the treatment of autism.
- Behaviour analysts are autonomous practitioners and should not be required to be supervised by members of other professions.
- The practice of behaviour analysis is most appropriately protected through regulation that is tailored to the unique needs of behaviour analysts and consumers of behaviour analytic services in Ontario.

We look forward to providing ongoing updates to the membership. Summaries from the committee meetings are available on the MCYS Autism webpage: <http://www.children.gov.on.ca/htdocs/English/specialneeds/autism/index.aspx>

Sincerely,

Carobeth Zorzos, M.A., C.Psych.,  
BCBA  
ONTABA Representative  
Ontario Autism Program Advisory  
Committee



## New Committees

To maximize organizational performance, the Board of Directors restructured its operational committees during the year's first board meeting. The result was the dissolution of the Awards, CEU, Membership & Recruitment, and Satellite Conference committees and the creation of the **Professional Practice, Professional Development, and Membership, Awards, and Recruitment** committees. We are confident that this new structure will streamline our work plans, reduce redundancy, and more effectively utilize board resources.

The **Professional Practice Committee** will develop, improve, and disseminate best practices in the application of behaviour analysis in Ontario.

The **Professional Development Committee** will engage the ONTABA membership by providing opportunities for professional development and knowledge enhancement within their communities.

The **Membership, Awards, and Recruitment Committee** will support and expand ONTABA's membership through affinity programs, advertising, recruitment initiatives, and through recognition of the excellence of members with annual awards.

## ONTABA Autism Task Force

In early April of 2016, the Board of Directors formed the ONTABA Autism Task Force to support policy makers in developing autism services that reflect the values of behaviour analysts and contribute to the best possible outcomes for consumers of behaviour analytic services. During the last several months, the task force has continued to meet with senior policy advisors and the Specialized Services and Supports team at the Ministry of Children and Youth Services and with members of the Clinical Expert Committee for Autism Spectrum Disorder to provide direction on evidence-based practice and to advocate for an investment in high quality behaviour analytic services. The task force has prioritized quality assurance, accessibility of services,

and consumer protection during all activities. The ONTABA Autism Task Force is comprised of Julie Koudys, Ph.D., C. Psych, BCBA-D; Kim Trudeau-Craig, MSc. (ABA); Kimberley Zonneveld, Ph.D., BCBA-D and Carobeth Zorzos, M.A., C.Psych., BCBA.

## ONTABA Education Task Force

In December of 2016, the Board of Directors formed the ONTABA Education Task Force to advocate for effective and ethical behaviour analytic services within Ontario's education system. Following a preliminary meeting with the Senior Policy Advisor at the Ministry of Education the committee set to work on a briefing note that will outline the organization's desired relationship with the Ministry and key areas for collaboration. We anticipate that a meeting with the Minister of Education will follow within the coming months. The ONTABA Education Task Force is comprised of Joan Broto, Ph.D., BCBA-D; Lynn Douglin, M.Ed, BCBA; Milena Kako, B.Sc., M.ADS, BCBA; Katie Mann, M.Sc., BCBA; Tricia-Lee Keller, M.ADS., BCBA and Angeline Savard, B.Sc, B.Ed, OCT.

## Ontario Scientific Expert Task Force for the Treatment of Autism Spectrum Disorder (OSETT-ASD)

In August of 2016, ONTABA formed the Ontario Scientific Expert Task Force for the Treatment of Autism Spectrum Disorder (OSETT-ASD) to conduct a review of evidence-based practice for individuals with ASD. The results of this review and the pending report will inform consumers, practitioners, and policy makers of evidence-based practices for persons with autism. The document is also intended to address misconceptions about the use of applied behaviour analysis in this population. Finally, given the pivotal role that applied behaviour analysis has played in the treatment of ASD in Ontario, we wanted to communicate the position of

ONTABA on key issues that affect the use of ABA with persons with ASD. OSETT-ASD representatives have met with the Ministry of Children and Youth Services and the Clinical Expert Committee for Autism Spectrum Disorders to share preliminary findings and to describe the purpose, method, and deliverables. In addition to the committee members below, several external reviewers have agreed to provide support including Maurice Feldman, C. Psych, BCBA-D, Gina Green, Ph.D., BCBA-D, Louis Hagopian Ph.D., BCBA-D, Eric Larsson, Ph.D., BCBA-D, and William Ahearn Ph.D., BCBA-D.

**Julie Koudys, Ph.D., C. Psych., BCBA-D (Chair)**

Dr. Koudys is an Assistant Professor, and Clinical Coordinator, at Brock University in the Centre for Applied Disability Studies. She has worked with individuals with ASD, intellectual disabilities, and communication and behavioural disorders for over 15 years. Dr. Koudys teaches graduate level coursework in ABA. Her research interests include treatment fidelity and child outcomes following participation in IBI and Augmentative Alternative Communication (AAC) training. Her clinical experience includes work within government programs, such as IBI/ABA services, educational and residential services, children's mental health, and hospital settings, including McMaster Children's Hospital and the Children's Hospital of Eastern Ontario. As the former Director of Pyramid Educational Consultants of Canada, she provided consultation and training in ABA and AAC in diverse service sectors across Canada.



**Joel Hundert, Ph.D., C. Psych., BCBA-D**

Dr. Joel Hundert is the Director of Behaviour Innovations, Associate Clinical Professor in the Department of Psychiatry and Behavioural Neurosciences, McMaster University. He was President of the Ontario Association For Behaviour Analysis, served as a Director on the Behavior Analyst Certification Board for six years, and continues to serve as chair of the BACB disciplinary committee. Dr. Hundert is a clinical psychologist and Board Certified Behavior Analyst – Doctoral level. From 1999 to 2003, Dr. Hundert developed and directed the training of Instructor Therapists in the Ontario Autism Initiative.



**Nancy Marchese, M.A., C. Psych. Assoc., BCBA**

Nancy is the Executive Director and Founder of Breakthrough Autism. She has been working in the field of behaviour analysis for over 18 years. A Board Certified Behavior Analyst and Psychological Associate, Nancy clinically supervises focused and comprehensive ABA treatment programs for children and adolescents with Autism Spectrum Disorder. She also works closely with their families offering customized ABA caregiver coaching. Throughout her career, Nancy has conducted ABA training for hundreds of Instructor Therapists and Supervisors across Ontario.



**Adrienne Perry, Ph.D., C. Psych., BCBA-D**

Dr. Perry is currently a full Professor and Director of the Graduate Program in the Department of Psychology at York University. She has 32 years experience in the autism and behaviour analysis field, beginning at the TRE-ADD program at Thistletown Regional Centre in 1984. Dr. Perry worked as Consulting Psychologist to the Ministry in the initial design of the Ontario IBI program in 1998 and chaired the Clinical Directors' Network during the first few years of program implementation. She has also served as Expert Witness in court cases and human rights cases and served on the Expert Clinical Panel and Benchmarks Development Panel. Together with her students and colleagues, she has undertaken a program of research on the effectiveness of the Ontario EIBI program and developed quality assurance measures for evaluating the quality of service.



**Stasia Rossinsky, M.ADS., BCBA**

Stasia Rossinsky is a Board Certified Behavior Analyst with over 12 years of experience in the provision of behavioural intervention for children and adolescents diagnosed with Autism Spectrum Disorder. Stasia is currently a Clinical Supervisor in the Autism Intervention Program at Surrey Place Centre. In addition to providing clinical supervision and oversight of the implementation of intensive



behavioural intervention in a centre-based program for children with autism, Stasia is responsible for the design and delivery of training on the intensive implementation of ABA to new therapists hired into the program. Stasia's clinical experience includes the use of ABA in the treatment of severe problem behaviour in adolescents in a school-based setting in the TRE-ADD program at Surrey Place Centre, as well as research on feeding and toileting interventions for young children with autism.

#### **Tricia Vause, Ph.D., C. Psych., BCBA-D**

Tricia has a Ph.D. in Clinical Psychology and is a Board Certified Behavior Analyst-Doctoral. She is interested in behavioural assessment and treatment for children and youth with Autism Spectrum Disorders (ASD), as well as dual diagnosis of ASD and other challenges such as Anxiety and Obsessive Compulsive Behaviour. She has worked at Medical/Counselling Centers, Residential Training Facilities, and School-Based Programs in both Canada and the United States conducting research and clinical work with the above populations. She recently completed a Randomized Controlled Trial exploring a manualized Functional Behaviour-based Cognitive-Behavior Therapy as a treatment for Obsessive Compulsive Behaviour in children and youth with High Functioning Autism. This trial was funded by the Ontario Mental Health Foundation and the Ministry for Long-Term Care. She is currently attempting to extend this work to children of preschool age.



#### **Kimberley Zonneveld, Ph.D., BCBA-D**

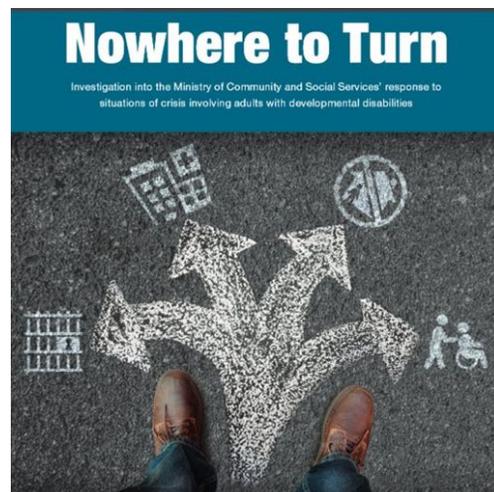
Dr. Zonneveld is currently an assistant professor in the Centre for Applied Disability Studies at Brock University. She has worked with individuals with intellectual and developmental disabilities, including autism spectrum disorders, in the field of behaviour analysis for over 15 years. Dr. Zonneveld received her Ph.D. from the University of Kansas in Behavioral Psychology (with an emphasis in Behavior Analysis). Prior to earning her Ph.D., she completed doctoral coursework at the University of Nevada Reno and earned her master of science degree (with an emphasis in applied behavior analysis) at Florida Institute of Technology. Her clinical and research interests include autism and other intellectual and developmental disabilities, early



intensive behavioural intervention, parent and teacher training, and assessment and treatment of problem behaviour (e.g., aggression, self-injury, paediatric feeding disorders).

## ONTABA Adult Services Task Force

In June of 2016, the Board of Directors formed the ONTABA Adult Services Task Force, a working group tasked with advocating for effective and ethical behaviour analytic services for adults with complex needs within Ontario's social service and health systems. The task force has been extremely productive since its inception. After completing a review of the Ombudsman's report on crisis services for adults with developmental disabilities "Nowhere to Turn", the group sent formal responses to the Ombudsman, the Minister of Community and Social Services and the Minister of Health and Long-Term Care. A public media release was also produced.



In the fall, members met with the Assistant Deputy Minister and senior policy advisors within both ministries to advocate for an investment in behaviour analytic services for adults with developmental disabilities and to outline the importance of quality assurance and regulation in existing behaviour analytic services. The meeting with the Ministry of Health and Long-Term Care has led to several meetings with administrators from Behaviour Supports Ontario and an invitation to present to the BSO/LHIN Operations Committee meeting to discuss opportunities for collaboration. Several exciting possibilities for partnership, including a joint event on behavioural gerontology are being considered. The meeting with the Ministry of Community and Social Services led to an invitation to join a roundtable discussion on housing and

developmental disabilities, where ONTABA representatives outlined the importance of behaviour analytic clinical services, comprehensive training programs for direct care professionals, and a rigorous system for quality assurance. ONTABA has joined an advisory committee of more than 20 organizations known as the Collaborative of the Willing, which will work with the Ministry of Community and Social Services, the Ministry of Housing, and the Ministry of Health and Long-Term Care to address the growing homelessness crisis of adults with developmental disabilities.



Photo credit: Rosemary Condillac

ONTABA would like to thank **Dr. Sylvain Roy and the Ontario Psychological Association** for their leadership and collaborative approach to this important initiative. The ONTABA Adult Services Task Force is comprised of Lesley Barreira, M.ADS., BCBA; Rosemary Condillac, C.Psych., BCBA-D; Alison Cox, Ph.D., BCBA-D; Carmen Hall, MC, CCC, BCBA, PhD Student; Bethany Kopel, M.ADS., BCBA; Jennifer Porter, M.ADS., BCBA; Kim Trudeau-Craig, MSc. (ABA); Andrew McNamara, Ph.D., BCBA-D and Thomas Vogan, BST.



# WHAT

## Would You Do?

### Professional and Ethical Issues



**By: Dr. Rosemary Condillac, C.Psych., BCBA-D**  
Associate Professor, Centre for Applied Disability Studies  
Brock University

Welcome to the first “What Would You Do?” column on ethical and professional dilemmas in ABA. For future columns, please submit your questions, issues, dilemmas or tricky situations to [newsletter@ontaba.org](mailto:newsletter@ontaba.org). My responses are my own, and are not intended to represent the Behavior Analysis Certification Board (BACB), ONTABA, or any other organization with whom I am affiliated. Responses should not be taken as specific legal or professional advice as it is not possible to have or provide enough information in a column of this nature.

For this first column, I am posting an issue that I get asked about frequently:

*I work as a manager in an ABA-based clinical service. While interviewing applicants for Behaviour Consultant positions, I have noticed that some applicants have presented themselves as a “BCBA Candidate” or “BCBA Pending” on their resumés because they are in the process of taking an approved masters degree, waiting to write their exam, or waiting for results. I have also heard consultants on our team describe themselves similarly. For example, “I am almost a BCBA because I have 2 months left to finish my degree, and will have my hours completed next month.” Am I right to be concerned about this?*

Yes, this is a serious problem! Identifying oneself as a

“BCBA Candidate” or “almost BCBA” is a very concerning situation because those less familiar with the credential, like parents, human resources departments, and even some organizations that are expanding their services might not distinguish those statements from having the actual certification. Also being in the process of achieving something doesn’t guarantee that it will ever be achieved, so it can be misleading.

*“Individuals who have not been certified (regardless of whether they have applied or been deemed eligible) are not permitted to represent affiliation with the BACB or the BACB’s credentials in any manner. Doing so could be grounds for denial, suspension, or revocation of examination eligibility.”* (BACB, 2013, p. 6). Further, BACB prohibits the use of any modifier to the BCBA credential other than “inactive” (which can be voluntary or involuntary). So “candidate”, “pending”, “applicant”, “almost” etc... are not permitted. BCBA can only be used after a someone has passed the BCBA exam and been issued a certificant number. Using the credential BCBA before it is earned is a violation of the *Professional and Ethical Compliance Code for Behavior Analysts*, specifically 10.07 (Discouraging Misrepresentation by Non-Certified Individuals). Behaviour analysts are expected to report anyone misrepresenting BACB

certification status, so if a person is claiming to be BCBA certified who is not certified or who is inactive, that should be reported to the BACB in a timely fashion.

Before you discuss this or other ethical issues with colleagues, make sure that you are familiar with section 7.02 (Ethical Violations by Others and Risk of Harm). When speaking to a colleague or an applicant about using “BCBA-Candidate” or other modifier you might direct them to the [code](#) and to the [newsletter](#), which are referred to above. If you are teaching and/or supervising those working towards certification, it is a good idea to discuss the issue of describing their training situation up front during your orientation sessions and/or include in your supervision contracts. Many individuals make this error innocently, and correct the problem as soon as they receive feedback. A good alternate suggestion might be for them to describe themselves as working towards international certification at the graduate/undergraduate level (BACB, [2008](#)).

**The bottom line is that those working towards certification should refrain from mentioning the BACB, BCBA, BCaBA until a credential has been earned.**



## References

Behavior Analyst Certification Board (2014). Professional and Ethical Compliance Code for Behavior Analysts. Littleton, CO: Author. <http://bacb.com/wp-content/uploads/2016/03/160321-compliance-code-english.pdf>

BACB (2013). Are You “BCBA Eligible,” a “BCBA Candidate,” or “BCaBA Pending?“. BACB On-line Newsletter, 2013(Oct), 6. [http://bacb.com/wp-content/uploads/2015/07/BACB\\_Newsletter\\_10-13.pdf](http://bacb.com/wp-content/uploads/2015/07/BACB_Newsletter_10-13.pdf)

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Have a question or a topic for

**WHAT** Would You Do?

Let us know, we love suggestions!  
[newsletter@ontaba.org](mailto:newsletter@ontaba.org)



# From the Membership

## The Use of Cumulative Number of Steps Mastered Per Block of Trials To Track Learning of Children with ASD

Joel Hundert, Ph.D., C.Psych., BCBA-D<sup>1</sup>

*Behaviour Innovations & McMaster University*

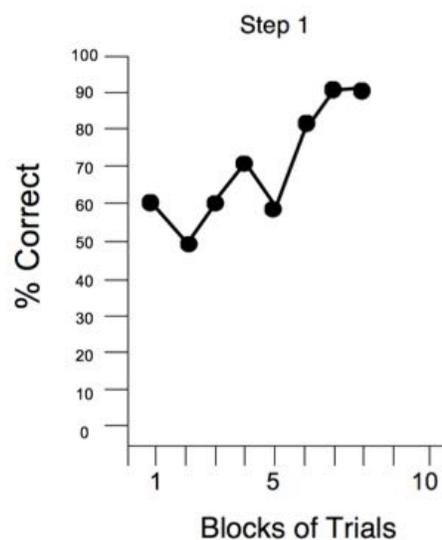


One of the core characteristics of applied behaviour analysis is its reliance on empirical information to base decisions about the effectiveness of an intervention (Baer, Wolf, & Risley, 1968). The occurrence of an operationally-defined behaviour is quantified and this quantification of behaviour is repeated over time to identify possible trends and if a change in conditions was associated with a change in a behaviour of interest. For example, did the occurrence a child's screaming decline with the introduction of planned ignoring (extinction)? To assist in making a decision whether changes in conditions are associated with changes in behaviour occurrence, the typical practice in the field is to plot obtained data on a graph that depicts the occurrence of behaviour (e.g., mean number of screams per minute) on the ordinate (vertical or y-axis) and time on the abscissa (horizontal or x-axis). A visual analysis is typically used to determine if change in behaviour occurred over time.

A similar method is used to determine if learning is occurring when teaching a particular skill set to a child with an Autism Spectrum Disorder. For example, a child may be taught to match objects by colour. The following is an over-simplified

description of this type of instruction where a child may be presented with three identical crayons that differ only in colour (e.g., red, blue, green). The child then is given a different object (e.g., ball) that has the same colour as one of the three crayons. The child is instructed to "match" and is expected to place the ball with the corresponding coloured crayon. If so, the child's response on the trial is considered correct. If the child places the ball with a crayon that is not the target crayon, or did not respond within a specified period of time, the child's response would be considered an error.

Additional trials would be presented in a distributed or massed fashion with each of the child's responses



**Figure 1:** Hypothetical data depicted the percent correct for each block of 10 trials.

scored in the same way. To increase the ease of calculation, trials may be presented in blocks of 10 and graphed as the number correct of 10 trials or as a percent correct (number correct divided by 10, multiply by 100).

The following table depicts a child's hypothetical responses over 10 trials where + represents a correct response and E represents an error.

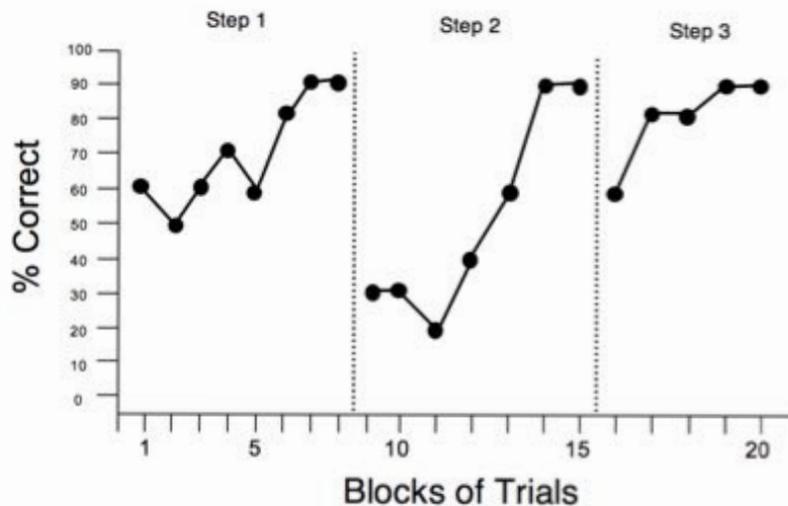
1	2	3	4	5	6	7	8	9	10
+	+	E	E	+	E	+	+	E	+

The child correctly responded on six of the ten trials or was correct 60% of trials. Continuing with this same example, were the mastery criterion for the skill to be set at two consecutive blocks of 90% correct, the child would continue to receive blocks of 10 trials until the mastery criterion was met, as depicted in Figure 1.

In Figure 1, a child demonstrated two consecutive blocks of trials at 90% correct on the eighth block and therefore would be expected progress to the next step in the learning sequence.

Suppose the child progressed in the same fashion from step 1 to step 3 in the matching-to-sample task with results as depicted in Figure 2.

The child met the mastery criterion of step 2 of the program after seven



**Figure 2:** Hypothetical results for a child's progression through three steps of a program.

additional sessions and, step 3 after an additional five blocks of trials. These data are quite clear and show how the child is progressing through the first three steps of this program.

However, there are at least three limitations to this method of visually representing the child's data. First, although the child's progression can be easily seen against the mastery criterion of two consecutive results of at least 90% correct, the child's progress would be far more difficult to discern visually when employing

mastery criteria not based on percent accuracy. For example, if the mastery criterion for this program consisted of the child achieving three consecutive correct responses to progress from one step to the next, the breaks in the data to show when a new step was introduced would not necessarily occur when the data was at 90%.

To illustrate this point, Figure 3 shows actual data of Samuel (not real name) learning to match numerals 1 to 5 to corresponding

**Figure 3:** Trial by trial results for Samuel mastering six steps of a program (+ = correct response, E = error).

Client: Samuel  
 Program: Match numerals to arrays (1 - 5)  
 Mastery Criterion: 4 consecutive correct responses

Facilitator	SS	JK	AC	AS	AS	AC	SS	AH	SS
Step	1	2	3	3	4	5	5	6	6
Date	1/13	1/14	1/14	1/15	1/15	1/15	1/18	1/19	1/20
1	+	+	+	+	+	E	E	E	+
2	+	+	+	+	E	+	+	+	+
3	E	+	E	E	+	E	+	+	+
4	+	+	+	+	+	+	E	E	+
5	+		+	+	+	+	+	+	+
6	+		+	+	+	E	+	+	
7	+		E	+		E	+	+	
8			+			+	+	E	
9			+			E		+	
10			+			+		+	
% Correct	86	100	80	86	83	50	75	70	100

arrays. The mastery criterion for each step of the program was four consecutive correct responses. On January 13, Samuel was presented with step 1 of the program, which is mastered on block seven. Samuel progressed through steps of the programs and on January 20, mastered step 6. A graph of the data shown as percent correct per block of trials is shown in Figure 4.

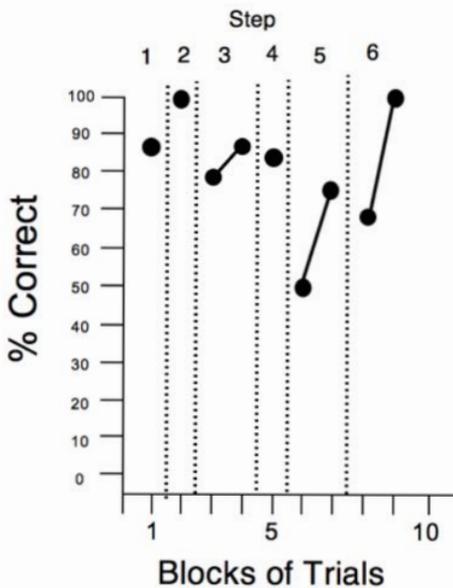
From the visual appearance of the data in Figure 4, it would be difficult to discern if the child is progressing.

Second, when the data are summarized for each block of trials as the number of correct responses divided by the number of trials multiplied by 100, the percent score may represent results for blocks of trials that may vary in their lengths. For example, a score of 80% may have a different interpretation when it is based on 50 trials than based on five trials.

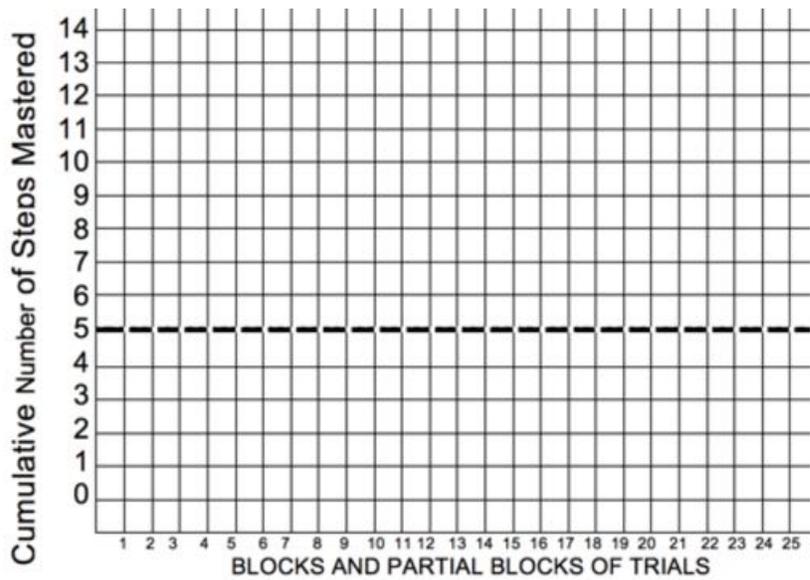
Third and more profound is that the data of percent correct by session does not easily depict if the child's rate of progressing through the steps in a program is as expected. The rate of learning in many ways may be the key variable determining if a learner is progressing adequately through a program or if program revisions are necessary.

For these reasons, at Behaviour Innovations, we have shifted our method of graphing learning data from showing the percent correct in a program over sessions to graphing the cumulative number of blocks of trials or partial blocks of trials for a child to master each step in a program. As shown in Figure 5, the y-axis corresponds with the number of steps in a program and the x-axis the number of blocks or partial

**Figure 4:** A graph of the data shown in Figure 3.



**Figure 5:** A blank graph of the cumulative number of blocks or partial blocks to mastery of each step of a five-step program.



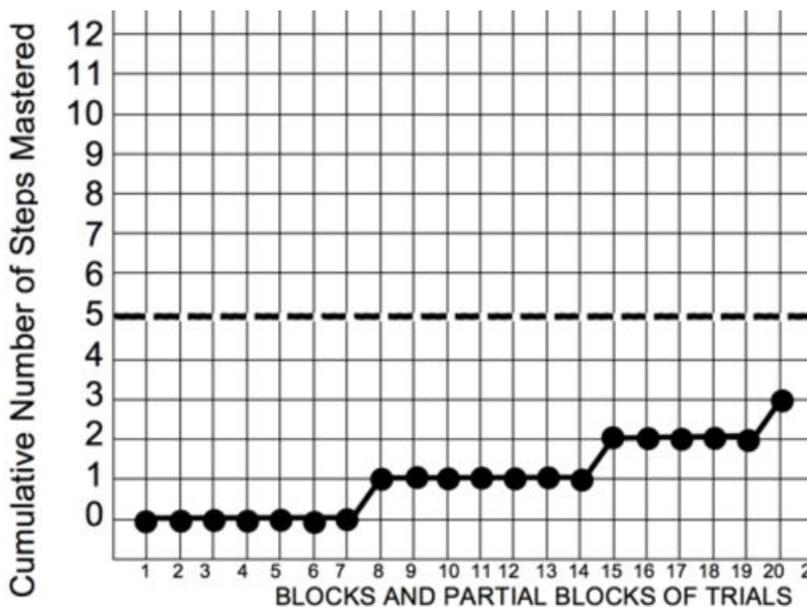
blocks of trials. Each block has ten trials and a partial block may occur when a session is interrupted or the child has demonstrated mastery before all ten trials in a block were presented. The broken line at the fifth step is to represent visually the number of steps in a program - in this case the program has five steps in total.

that is shown in Figure 2 can be depicted as the cumulative number of steps by blocks of trials. In Figure 6, after the first block of trials no steps were mastered and a data point would be entered in at zero cumulative steps for block one. There were 20 blocks or partial blocks of trials delivered in Figure 2 and when plotted on the cumulative number of steps mastered per block of trials would be as shown in Figure

6. From block 1 to block 7 no new steps were mastered. At block 8, the child progressed to step 1. The child then required six additional blocks of trials (from block 9 to 15) to master step 2 and then from block 16 to 20 to master step 3.

Figure 6 shows how the same data

In Figure 6, the mastery was set at two consecutive blocks of 10 trials of 90% correct or more. However, the graphing procedure would be the same if the mastery criterion was set at three consecutive correct responses or some other criterion.



**Figure 6:** Results from Figure 2 shown as cumulative number of steps mastered per block of trials.

In Figure 7, we added a diagonal broken line to depict the expected mean number of blocks of trials for a child to master each step in a program, We typically make this expected rate of learning as a mean of four blocks or partial blocks of trials to mastery of a step as shown in Figure 7.

We individualize the design of programs for each child to the expectation that that child would master each step of a program within four blocks or partial blocks of trials. The expected mastery rate does not

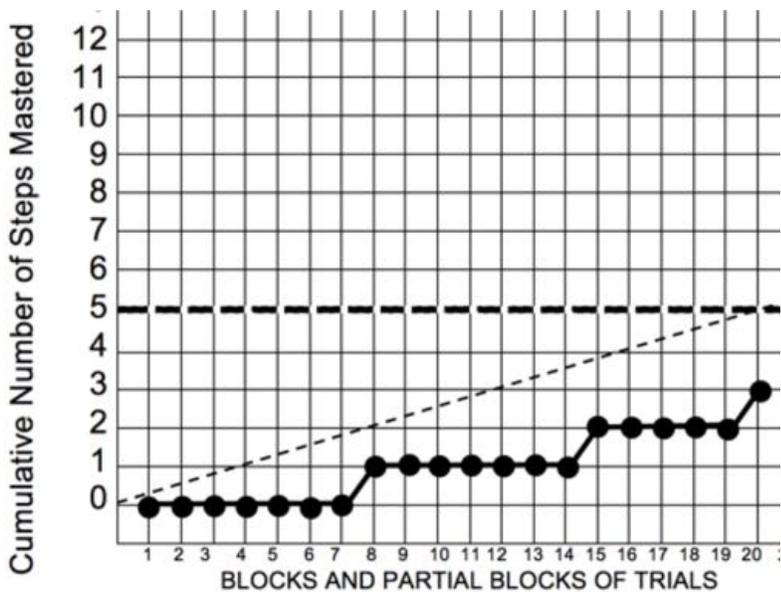


Figure 7: Results with criterion of expected learning rate.

have to be a mean of four blocks of trials. It can change based on the child and the particular program. Although the mastery rate may change, expectations about the rate at which a child will progress through a program need to be set in advance to allow for decision to compare the child's actual performance against the expected rate of learning.

This way of depicting the data can also be used to project the total number of blocks of trials a child will need to master all steps in a program. In Figure 8, the numeral 1 marks the projection of when the child should master the five steps of the program if the child was progressing at a mean rate of four blocks of trials to master each step of the program. In this example, the

child would be projected to master the program by block 2. This is the intercept of the slope of the expected rate with the fifth step of the program.

However, in this example, the child was progressing less than expected. If one projected when the child would complete the five steps of the program at the *actual* rate of the child's learning, it would be at the intercept of the slope of the child's actual learning and the fifth step of the program. This is marked by numeral 2 in Figure 8. At the actual rate of learning, the child would be expected to complete the program in a total of 35 blocks or trials.

One can even project a date for when the child should complete the program. As shown in Figure 6, the child has mastered three steps of the program in a total of 20 blocks of trials. The projection would suggest that the child would need 15 more blocks of trials (35 total blocks minus 20 blocks used so far) to master all five steps of the program.

Suppose a child is receiving 21 hours of ABA therapy a week in seven, 3-hour shifts. During each shift, the child received three blocks of trials in this program. It will take the child an additional five sessions (15 more blocks projected divided by three blocks per session).

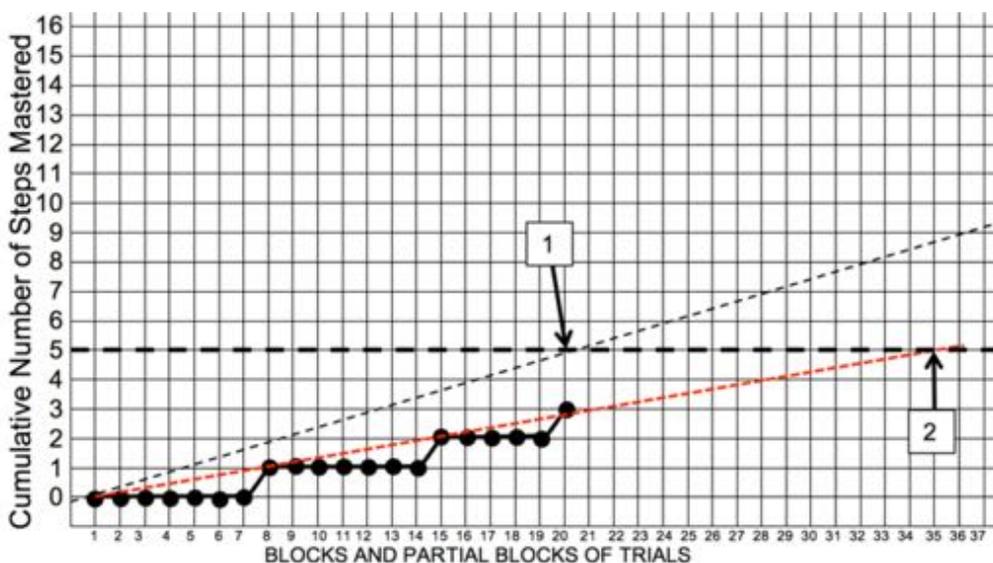
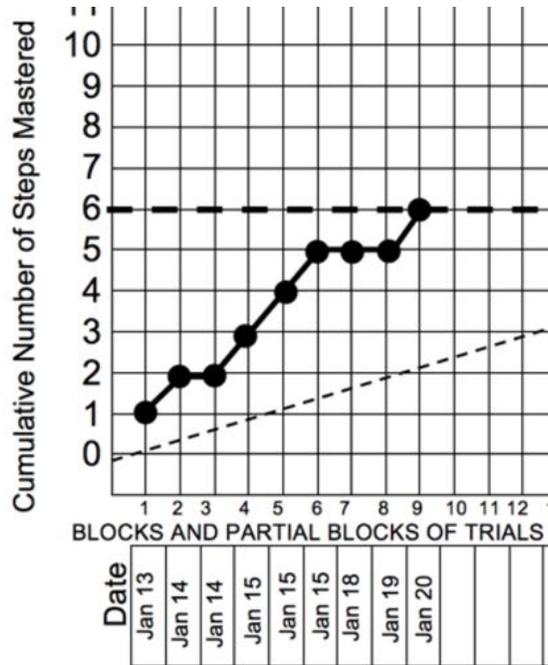


Figure 8: Results with criterion of expected learning rate and actual learning rate.

As previously mentioned, graphing the cumulative number of steps mastered by blocks of trials does not change if the mastery criterion is not based on percent correct. The data that were presented in Figure 3 and graphed as percent correct in Figure 4 are depicted as by the cumulative number of steps mastered in Figure 9. The results shown in Figure 9 indicate that Samuel is progressing

through the first six steps of the program at a rate faster than expected. A comparison of the same actual data presented in Figure 9 and Figure 4 illustrate the advantage of graphing by cumulative steps mastered.

The relative benefits of this method of visual representation of data for ABA learning programs compared to graphing percent correct needs to be evaluated in research. For example, is data presented as cumulative number of blocks of trials to mastery lead to more accurate decisions about a child learning than the same data presented as percent correct? Does the cumulative graph have a higher satisfaction rating by users than the percent correct graph? The use of the cumulative graph should be based on these and other similar empirical questions<sup>2</sup>.



**Figure 9:** Cumulative number of steps mastered graph of data shown in Figure 3.

**Reference**

Baer, D.M., Wolf, M.M., & Risley, T.R. (1968). Some current dimension of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1, 1-91.

<sup>1</sup>I would like to thank Nicole Walton-Allen and Jane Lee for their helpful suggestions on an earlier draft of this manuscript.

<sup>2</sup>Blank copies of the cumulative graph can be obtained at [www.behaviourinnovations.com/cumulativegraph](http://www.behaviourinnovations.com/cumulativegraph)



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**Behavioural cusp** · *n.* **1** | be.hav'ioʊr.al cusp | /bɪ'hɛv.jər(ə)l kʌsp/

"any behaviour change that brings the organism's behaviour into contact with new contingencies that have even more far-reaching consequences...a cusp is a special instance of behaviour change, a change crucial to what can come next." (Rosales-Ruiz & Baer, 1997, p.533)

# The Cusp

## Behaviour Analysis in Ontario: The people behind the work

**Note from the Editor-in-Chief:** Well, Willie, the new Newsletter Chair and the Board took pity on me and my apparent imminent loss of big reinforcers and they graciously agreed for me to do a victory lap (a whole bunch actually!). So I'm staying on with The Cusp and the newsletter in general...and they even gave me a special title (hehe!). ☺ Feeling grateful + another inspiring interview for The Cusp = one observable smile. Enjoy! *Lesley*

### Rea Vuksan, BCBA

Rea is a Board Certified Behavior Analyst who has worked in the field of applied behaviour analysis for 19 years. She moved to Canada from Croatia in 1997 to pursue her education, but never dreamed of finding a career nearly as rewarding as this one. Rea completed an undergraduate degree in Psychology at University of Toronto and a Master's Degree in Applied Disability Studies at Brock University. Throughout her professional career, she has worked with a variety of populations with developmental disabilities. Rea currently works at the Toronto District School Board on the ASD Team.



studying with a friend at Robarts Library at some point in the day she had mentioned an advertisement she saw for a volunteer position to work with children with autism. She chatted about it but I didn't really give it much thought—I told her that what I actually wanted was to find was a volunteer opportunity with older adults as I had volunteer experience with the elderly in Croatia. After we finished studying she told me that she needed to make a phone call, and of course back in those days, if you wanted to make a call in public, you had to use a pay phone. So I was just waiting for her, as she was on the phone she turned to me, handed me the phone, and said "Here, this is about the volunteer position I told you about". Admittedly, I was initially confused and angry (laughs) but I took the phone and spoke to the person on the other line who happened to be a coordinator who connected volunteers to parents of children with autism. She offered me an interview and I agreed to go to find out more. At the interview, I was told that I'd be working with a young boy with autism and I decided to accept it. When I entered the child's house I also entered the world of ABA. It was like nothing I had ever seen before, there was a work station with a little desk and chair and about 10 binders scattered on the floor open with graphs and data sheets. I had the

opportunity to observe sessions with the child and his instructors, they were using all this terminology and doing all kinds of programs—it was just so strange to me but I was intrigued and impressed. After watching a few sessions, I started my training and I was hired onto the team. I was coached and supervised by none other than Dr. Anne Cummings. It was such an amazing learning experience and if it wasn't for Anne, I know I wouldn't be where I am today.

**Tell us about what you do.** I am an ABA Facilitator on the ASD Team at the Toronto District School Board. Our team is multi-disciplinary in nature with just over 15 talented members. The team includes professionals from disciplines such as Psychology, Speech and Language Pathology, Occupational Therapy, Social Work, and Education. We receive referrals from teachers who support students with ASD and the service we provide is primarily ABA-based and consultative in nature. In my role as an ABA Facilitator, I focus on behaviour assessments which can involve collecting data, encouraging educators to set up data collection systems, and/or analyzing data that has already been collected and developing behaviour support plans. The behavioural strategies and programs are then implemented by the classroom staff and are

**How did you become interested in ABA?** Well this is kind of an odd story (laughs). I emigrated from Croatia to Canada in 1997 and entered high school. After high school, I went to U of T for an undergrad in Psychology. I was still pretty new to the country and figuring out what I wanted to do and psychology at the time was what interested me the most. I was

incorporated into the students' individualized education plans (IEP) or safety plans.

Even though my role is mostly consultative, the work I do is often very hands-on; I'm in classrooms modeling how to collect data and implement strategies. I also get the chance to carry out professional development workshops for educators on topics like skill development from a behaviour analytic perspective and functional behaviour assessment. These kinds of training events usually occur on PA days.

**There aren't too many BCBA's employed directly by the school board, at least in the Toronto region, how do you stay current and connected to the ABA world?** I try to read as much as I can, including applications outside of student populations. I am aware that working in the school board may mean that I may not always get opportunities to practice a wide range of clinical skills, so I supervise students pursuing their BCBA credential and I have a private client. Although these activities are outside of my full-time job, they help me stay current. Obviously keeping my memberships active with international professional bodies like ABAI and attending conferences help as well. I feel like there have been so many excellent learning opportunities right here in Ontario that offer CEUs especially in the last few years so staying connected to the field is not difficult at all.

**How has working in the education system shaped your behaviour as a behaviour analyst?** Coming from a treatment centre where you are on a team of like-minded people who understand behaviour in the same

way and have the same goals was great, I always felt confident that anything could be done. Once I was outside of that bubble and realized that not everyone has the same lens as me I quickly found that part of my job was to figure out where behaviour analysis fits into the bigger picture. There are times when I have to be more of a salesperson and market my strategies in such a way that they will be "purchased" and used effectively. So I think the biggest thing is that I've had to learn was to be flexible and patient. I cannot walk into a classroom and simply push my ABA priorities onto the classroom staff. There is a context that needs to be considered before moving forward. I believe that a successful consultant is a flexible one – school environments are fluid and always changing, so being sensitive to that is key.

**What's your advice for someone interested in going on placement or taking a position within the schools?** Always evaluate what you are teaching and how it is going to impact the student not just in that moment, but also in the long run—school life and beyond. We know that some skills taught in discrete trials environments may not always generalize to "real life". When these skills are not reinforced we already know what will happen; they will just get extinguished and that is not time well used. So teach skills that can be practiced and reinforced in "real life" for that student. Always think about the big picture of why you are teaching what you are teaching.

More importantly, if that's the school environment you want to stay in and work, look at how you fit into the team. In schools, most of what you will do is about teamwork. The

behaviour analytic perspective is not limited to analyzing student behaviour in isolation. Your success as a practitioner, consultant or educator will greatly depend on how well you work with your team. I try to remain humble, open and diplomatic in my professional pursuits.

**Are there other applications of behaviour analysis that you would like to explore?** I have now spent most of my career working with school age populations. This has been very rewarding and I continue to advance my skills everyday. However, if I were to turn my focus elsewhere, I would love to find a way to work with adults and older adults. Earlier in my career, I had the opportunity to work with adults with acquired brain injury, the timing was not quite right then, but I have not lost the interest. I have always been interested in the field of geriatrics and even as a child I was drawn to just spending time with older adults—my mother thought I was weird! (Laughs). Also, I would love the opportunity to work in developing countries as the needs far outweigh what is available so far as behaviour analytic services. In my native country, Croatia, ABA services are just emerging. At this time, many children are being diagnosed with ASD and so many parents are struggling to find help. I know there are a few behaviour analysts from Ontario already finding ways to connect to various developing countries which is amazing and I would love to get involved and contribute.



Have someone in  
mind for the Cusp?

Let us know, we love suggestions!  
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