

Info-QcABA

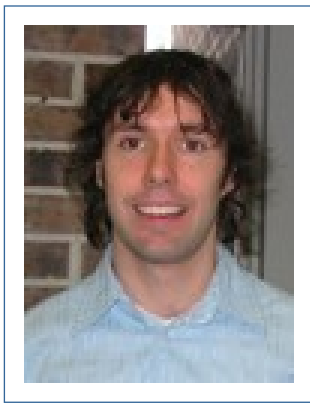
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newsletter@qcaba.org

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IBI in Quebec

By Marc Lanovaz, Ph.D., BCBA-D



Marc Lanovaz

Each article in Info-QcABA's second issue involves in some way the implementation of intensive behavioural intervention (IBI) in Quebec. Myra-Jade Lui's article attempts to clarify the confusion that remains between applied behaviour analysis (ABA) and IBI. In her interview with Mr. John Rapp, Kelly Kerr discusses the challenges of offering training that leads to certification in behaviour analysis in Canada. Similarly, Sylvie Donais presents the advantages of certification in ABA as well as guidelines to protect consumers of our services. Finally, the research article by Gisela Regli and Mélima Rivard presents a variation in the way language is taught that is increasingly used in IBI in Quebec and elsewhere.

These articles underscore one serious concern more specific to Quebec, which is the growing use of the term IBI to refer to treatments or interventions that are not based on ABA. Some private and public service providers are increasingly using the term IBI to refer to any intensive services delivered to young children with autism spectrum disorders regardless of whether these services meet the defining features of ABA as put forth by Baer, Wolf, and Risley (1968). This issue is troublesome because many parents believe that their child is receiving some type of service based on the science of ABA when in fact, the intensive service offered by the centre or professional is not behaviour analytic and may not even be scientifically validated.

To avoid confusion and to protect consumers, the term "early intensive intervention" or "intensive intervention" (i.e., dropping the behavioural) is recommended when labeling comprehensive services for children with autism that are not exclusively behavioural. In this way, professionals avoid misleading parents on the type of services that the child is really receiving. Furthermore, it is the behaviour analyst's duty to clarify the differences between the two types of intervention in order to assist parents in making informed decisions.

We hope you enjoy this issue!

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Myra-Jade Lui

ABA vs. IBI: Clarifying the Confusion

By Myra-Jade Lui, BCaBA

“Applied behaviour analysis is the science in which procedures derived from the principles of behaviour are systematically applied to improve socially significant behaviour to a meaningful degree and to demonstrate experimentally that the procedures employed were responsible for this improvement in behaviour” (Cooper, Heron, & Heward, 2007, p.20)

Parents, professionals, and even the media often misuse the acronym ABA (applied behaviour analysis) as a synonym for autism treatment. Although the only validated comprehensive early intervention approach is indeed based on ABA (see Eikeseth, 2009 for review), referring to autism treatment as ABA is misleading because interventions based on ABA can mean many different things. Further adding to the confusion, ABA is often erroneously used interchangeably with the acronym IBI (intensive behavioural intervention) and/or the application of discrete trial training.

To clarify the confusion, we can first examine what ABA is and is not. ABA was first defined by Baer, Wolf, and Risley in 1968 and, as noted in the definition provided by Cooper, Heron and Heward (2007), it is a science, not a particular teaching method or methods specifically designed for children with autism. This science uses the empirically validated principles of behaviour to generate procedures that are applied to behaviour to produce socially significant changes. Furthermore, ABA relies on methods (e.g., data collection, single-case experimental designs) to demonstrate the relationship between the procedures applied and the resulting behaviour change(s).

Whereas ABA can be applied to any individual to change any socially significant behaviour (such as smoking, overeating, or hoarding), IBI is only ever used with children on the autism spectrum or with other developmental delays. In general, the goal of IBI programs is to have these children catch up to their peers in all areas of development. An overriding goal of these intervention programs is that the children ‘learn how to learn’ in their natural environment, as typically developing children do. The intervention is also intensive by nature (as illustrated by its name), and so is done anywhere from 20 or more hours per week. IBI is therefore the application of ABA methods, in very particular ways, to a specific population of individuals (see Leaf & McEachin, 2006, and Lovaas, 2003, for complete description).

Another major confusion on this topic is illustrated by a definition of ABA often cited on websites (such as <http://www.bbbautism.com/aba.htm>, and http://www.bctsdurham.com/aba_ibi.html) that appears to be directly taken from a chapter written by Catherine Maurice

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Sustaining Members 2011

QcABA thanks you for your support!

Sylvie Bernard

Sylvie Donais

Jacques Forget

Nathalie Garcin

Marc Lanovaz

Marie-Pierre Leblanc

Nathalie Poirier

Gisela Regli

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(1996) in her seminal book on home-based IBI programs, which reads “Applied behavior analysis involves the breakdown of all skills into small, discrete tasks, taught in a highly structured and hierarchical manner” (p.8). Catherine Maurice herself admits that she defined ABA in her terms as a mother who applied the approach with her children, which may explain why it significantly departs from Baer, Wolf, and Risley’s (1968) definition of the field. In fact, Catherine Maurice appears to be defining discrete trial teaching, which is a specific method that Lovaas utilized in his 1987 study. Discrete trials are small units of instruction that contain 5 parts: discriminative stimulus, prompt, response, reinforcing stimulus, and inter-trial interval. Although this method is a teaching procedure derived from behaviour analytic theory, it is not rational to equate it to ABA, in the same way that Aspirin® is never used when talking about medicine as a field. The former is a product of a field whereas the latter refers to the field itself.

One last confusion can be illustrated by a statement that has likely been heard by most practitioners in the field, “We don’t believe in ABA - we tried it and it didn’t work for our child.” In fact, if we are talking about the application of the broad science, it is impossible that ABA ‘didn’t work’ in so much as it is unlikely that a particular individual’s behaviours did not adhere to the principles of behaviour that are tried, tested, and true. What this person might be expressing is that their child went through an IBI program (or even an ABA-based program), where that particular combination of methods and procedures used were not successful in bringing about meaningful behaviour changes, or the levels of behaviour changes one had expected or hoped for.

Whichever confusion we may come across with clients, it is clear that consumers of ABA services require help understanding our field as a whole, as well as the intervention methods or approaches that have evolved over the years. Our role as responsible practitioners should be, in part, to make sure that clients are educated in these basics so that they can make informed decisions about their services.

Please see page 10 for complete references

Interview with John T. Rapp, Ph.D., BCBA-D

By Kelly Kerr

John Rapp, Ph.D., BCBA-D, will be the keynote speaker for the 2nd annual QcABA conference on March 8th, 2012. As an American researcher, clinician, and professor in the field of behaviour analysis with a broad range of experiences, Mr. Rapp’s presentation will surely be one that you will not want to miss.

Originally from Fargo, North Dakota, Mr. Rapp’s first true passion was athletics. But as a self-proclaimed “failed athlete”, he found himself completing a B.A. in Psychology at St. Mary’s University in Minnesota. Following graduation, he worked for a neuropsychologist for a time, but became disheartened with having to give out grim news. Thus, he began to look for something more enriching and he found just that when he started working at a group home for individuals with severe problem behaviours.



John T. Rapp, Ph.D., BCBA-D

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This sparked his interest in behaviour analysis, and in 1997 he completed a M.Sc. in Clinical Psychology at North Dakota State University with an emphasis on behaviour analysis, under the mentorship of Raymond Miltenberger. In 2003, under the supervision of Timothy Vollmer, he received a Ph.D. from the University of Florida, which has one of the best behaviour analysis doctoral programs in the world.

Currently, Mr. Rapp is a full professor at St. Cloud State University's graduate program in applied behaviour analysis (ABA) in Minnesota, as well as an adjunct professor at the University of Houston, Clear Lake. Between heavy teaching schedules, he manages to conduct research on his key interests, which are automatically reinforced behaviour, behavioural measurement and assessment, single-case experimental designs, and the treatment of problem behaviours displayed by individuals with developmental disabilities.

Mr. Rapp is on the editorial boards of the European Journal of Behaviour Analysis, Education and Training of Children, and Behavioral Interventions, and has served on the boards of other journals, including the Journal of Applied Behavior Analysis and Behavior Analysis in Practice.

Having worked quite extensively in the field of behaviour analysis in the U.S. and having experience in the field in Canada via your long distance students, have you found any prominent differences between our countries in terms of services offered to the public or training of professionals?

“From what I have gathered from my Canadian distance students, the types of services offered and funding provided for behaviour analysis varies from province to province in much the same way that it varies here from state to state. In some states, community groups have made excellent progress in affecting legislative changes in order to get ABA services covered by the state. In other states, there is still a lot of work to be done.

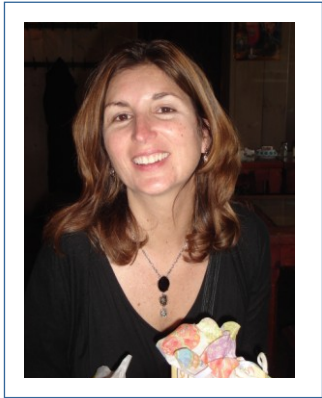
American universities have been pretty good about responding to these community needs and legislative changes by creating professional programs to appropriately educate and train people in the field of behaviour analysis. Certainly, most Canadian Board Certified Behavior Analysts (BCBAs) have been trained and certified in the U.S. The same will have to happen in Canada; it has to begin at the community level followed by legislative changes in order for the schools and universities to follow suit.”

What do you see as current critical issues in the field of behaviour analysis?

“There are a lot of good behavioural journals out there and a lot of good research being done. As such, there are many things that we as professionals can do to change behaviour. What we are not so good at is training others to do what we can do. Often, treatments are too complicated for anyone other than those with a master's level training to properly employ. This is simply not the way to affect change at the grand level. So either we need to find more effective ways of training others to elicit or evoke behaviour change, or we need to change our procedures in a way that others can easily follow them and still see significant changes.”

As a professor and mentor, what advice can you give to students and new professionals in the field of behaviour analysis?

“I've been well informed by the students I've witnessed coming out of our graduate program from various places around Canada and the U.S. The students who are the most effective are those who immerse themselves in the field. They get involved as much as they can through work and research and align themselves with professionals who are skilled in both clinical work and research. They begin to take what they are learning and look at the world differently.”



Sylvie Donais

BACB Certification in Behaviour Analysis

By Dr. Sylvie Donais, psychologist

In recent years, Quebec has seen a dramatic increase in the use of applied behaviour analytic (ABA) interventions. This is following the introduction of a mandate that all government rehabilitation centers who are responsible for individuals with either an intellectual disability or/and an autism spectrum disorder (CRDITEDs), offer intensive behavioural intervention (IBI) to children under the age of 5 who are diagnosed with autism (Ministry of Health and Social Sciences, MSSS, 2003). In Quebec, professionals practicing ABA are

primarily working with individuals with autism, and therefore this text presents the necessary qualifications for behaviour analysts working in this field. However, it is important to note that ABA interventions are used to improve the lives of children and adults with a diverse range of problems which may include depression, phobias, eating disorders, and many other behavioural issues, and so are not restricted to individuals with autism.

In Quebec, behaviour analysis is not yet governed by a professional order. Practitioners use many different titles such as behaviour analyst, behaviourist, behaviour therapist, behaviour modification agent, psychologist, or psychoeducator. Moreover, anyone can claim to be an expert in applied behaviour analysis, irrespective of their qualifications. Fortunately, in the United States there is now a board that oversees the regulation and certification of professional behaviour analysts internationally, called the Behavior Analysts Certification Board (BACB).

This certification process was initially created to respond to the rights of clients to receive the most effective services in accordance with the current scientific research (Autism SIG, 2007). Given that ABA is neither well-understood, nor regulated as a profession in Quebec, one of the primary objectives of QcABA is to inform the public about our field, as well as the necessary qualifications that a professional should possess to ensure that clients are receiving a service that is both ethically sound and effective.

The behaviour analyst's role is to observe clients' behaviours and then, following a scientific analysis, identify the controlling antecedents and consequences. Using principles of learning theory, procedures are developed and then used to improve the behavioural problem. The BACB (2010) has also developed guidelines for the ethical and professional responsibilities of the behaviour analyst (see <http://www.bacb.com/index.php?page=57>).

Currently, neither the Ministry of Health and Social Services (MSSS) nor the CRDITEDs require BACB certification to provide intensive behavioural intervention in Quebec. As a result, many establishments do not use interventions that meet the standard definitions of ABA, and therefore cannot be said to be empirically-based. Parents of children who are users of these services have no way of knowing if they are actually receiving behaviour analytic intervention. Furthermore, there are no universities in Quebec that offer a training program exclusively in ABA and consequently students are forced to either study by distance online, or to go to Ontario to receive the necessary education and training. For these reasons, there are currently only a handful of professionals working in Quebec who are certified by the BACB.

How do you know if your service provider is qualified to offer an effective ABA service?

The BACB offers 2 levels of certification: Board Certified Behaviour Analyst (BCBA) and Board Certified Assistant Behaviour Analyst (BCaBA). Within the context of IBI, a behaviour analyst may

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also be called a 'Clinical Supervisor'. Their role is to develop the intervention plan of a child, to ensure the correct implementation of this program by staff, and to train parents and staff to perform data collection in order to measure the effectiveness of interventions.

The BACB outlines the current criteria necessary to become certified as a behaviour analyst (i.e., BCBA). These requirements are as follows:

1. Hold a Master's degree in ABA or a related field.
2. Complete 225 hours of graduate level coursework in ABA.
3. Complete 1500 hours of independent fieldwork supervised by a BCBA, or an individual approved by the BACB for such supervision.
4. Pass the BCBA exam.

The second level of certification is that of the assistant behaviour analyst (i.e., BCaBA). This level is for individuals who do not possess graduate level degrees, and permits these practitioners to offer services under the supervision of a BCBA. The requirements for this level of certification are as follows:

1. Hold a Bachelor's degree in ABA or a related field.
2. Complete 135 hours of coursework in ABA.
3. Complete 1000 hours of independent fieldwork supervised by a BCBA, or an individual approved by the BACB.
4. Pass the BCaBA exam.

While these certifications are ideal, the special interest group for Autism within the Association for Behavior Analysis International (ABAI; Autism SIG, 2007) recognizes that at present it is possible for consumers to be provided with services by professionals without them. In consideration of this, the Autism SIG (2007) offers a description of what the qualifications of uncertified practitioners who provide ABA to children with autism ought to be (see <http://www.qcaba.org/QCABA/Ressources.html>).

Does this certification process ensure that the professional is offering quality, effective behavioural intervention?

It is critical to note that being trained as a behaviour analyst does not imply that the professional is necessarily trained as an expert in autism. As ABA is a scientific field whose principles can be applied to a wide variety of behavioural issues, behaviour analysts must gain supervised experience with the specific population(s) with which they wish to practice. Just as with doctors or lawyers, this additional training ensures that the behaviour analyst is qualified to provide services for these specific populations that adhere to best practices. ABAI currently has 33 special interest groups on topics such as behavioural medicine, animal behaviour, health and sports, eating disorders, and gerontology.

To practice within the domain of autism, the Autism SIG (2007) recommends that the supervisor of behavioural intervention for these individuals should have completed at least 1000 hours of supervision by a certified behaviour analyst who has at least 5 years of experience themselves. They also emphasize that a few days training is not sufficient to develop all of the necessary skills required to practice as a behaviour analyst. As with any profession, the BACB requires that professionals receive ongoing training in their areas of expertise throughout their careers.

Increasingly, professionals and organizations have shown an interest not only in ABA as a field, but also in meeting the standards and qualifications outlined by the BACB. Hopefully, this will allow the families of individuals with autism to become better informed about the field, thus improving the quality of services available in our province.

Please see page 10 for complete references

Verbal Behaviour in Children with ASDs

By Gisela Regli, DESS-TED, UQAM and
Mélina Rivard, Ph.D./Psy.D., UQAM and UQTR

Verbal Behaviour

Different procedures, strategies, and intervention programs based on applied behaviour analysis (ABA) are currently recognized by the scientific community as being effective in stimulating the development of several skills in children with autism spectrum disorders (ASD; Makrygianni & Reed, 2010; Myers & Johnson, 2007; National Autism Center, 2009). Among these are some intensive behavioural intervention (IBI) programs that focus on discrete trial teaching. Several meta-analyses have demonstrated the effectiveness of IBI, in particular with regard to gains in intellectual and adaptive functioning and reduced symptoms of autism (Eldevik, Jahr, Eikeseth Hastings, & Hughes, 2010; Makrygianni & Reed, 2010; Peters-Scheffer, Didden, Korzilius, & Sturmey, 2011; Virués-Ortega, 2010). However, gains in terms of language, social initiations, and generalization of learning to natural, everyday settings appear more limited. The analysis of verbal behaviour proposed by Skinner (1957) is also a model that is rooted in ABA, which can be combined with IBI. Verbal behaviour (VB) focuses on communication and language, particularly on learning different language functions in a natural context. VB has become increasingly predominant in ABA and in the field of ASD because it optimizes the generalization of language gains made in teaching situations to the natural environment. This short article describes the main components of VB and its empirical validation.

“VB has become increasingly predominant in ABA and in the field of ASD because it optimizes the generalization of language gains made in teaching situations to the natural environment.”

The Analysis of Verbal Behaviour

Burrhus F. Skinner founded the experimental analysis of behaviour in the 1930s in order to empirically observe the nature of relations between the behaviour of human and non-human organisms and the environment (Skinner, 1938). In 1957, he published the book "Verbal Behavior" in which he extended the concept of operant conditioning to verbal behaviour. He suggested that language is governed by the same principles as non-verbal behaviour and therefore is established by its antecedents and its consequences. In more specific terms, the verbal behaviour of a speaker (the person emitting the verbal behaviour) is shaped by the consequences arising from the responses of listeners (the persons observing and responding to the verbal behaviour of the speaker). In his analysis of language, Skinner theorized that words have different functions (i.e., meanings) even if they sound or look the same. The same word can have several effects on the listener and can be used to serve different functions for the speaker, based on the context of its use. Thus, it is the function of the word emitted which is analyzed, rather than the form or structure of a word. For example, the word "water" can be used by a child to say water when he sees a lake, but the same word could be used in another context when the child is thirsty and asks for water to quench his thirst. These two situations demonstrate that the use of the same word can serve as two different functions or two different objectives for the speaker.

In his analysis, Skinner (1957) proposed a classification of language functions into different verbal operants. These functions differ depending on the consequences they generate, that is, the responses of the listener following the speaker's verbal behaviour, and the variables that control the appearance of the verbal behaviour, such as discriminative stimuli [SD], setting, events, and motivating operations. Put simply, the verbal operants include behaviours that serve

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a communicative function and the conditions under which they appear. Skinner identified six elementary primary operants: echoic, mand, tact, intraverbal, textual, and transcription (see the glossary at the end of this article for a complete definition of these terms). Skinner proposed the autoclitic as a secondary elementary verbal operant, to explain the manipulation of primary verbal behaviour.

VB has sometimes been incorrectly identified as a "new" application of ABA, but no new principle is required to teach language in this model. The difference between programs and strategies arising from VB compared to many other programs based on ABA lies in the assessment and programming being based on the functional analysis of language, while many other models are based on traditional linguistic classification of receptive and expressive language. Thus, principles, intervention strategies, and procedures arising from behaviour analysis are used in the same way, meaning that teaching is based on the same strategies as those of other ABA models (Cooper, Heron, & Heward, 2007). In recent years, many practitioners in the field of ABA have introduced the conceptual and experimental referential of VB to guide the teaching of language, including programs such as McGreevy (2009), Greer and Ross (2008), and Sundberg and Partington (1998). In addition to the emphasis on the analysis of language functions, these programs focus on motivating operations and incidental teaching compared to other programs focusing on discrete trial teaching.

Empirical Validation of the Analysis of Verbal Behaviour

Empirical studies on Skinner's analysis of verbal behaviour experienced growth in the 1980s with the work of Michael (Michael, 1984). Sundberg (2001) suggested that the combined use of VB with other ABA models could make a major contribution and help mitigate certain gaps in spontaneous language acquisition seen in programs focusing on discrete trial teaching. In 2008, Greer and Ross published a list of over 120 empirical studies on VB, demonstrating its effectiveness in teaching language to persons with language delays and developmental and intellectual disabilities such as ASD.

Recently, two studies were carried out in Quebec on the analysis of verbal behaviour in children with ASD (Rivard & Forget, in press; Rivard, Forget, Kerr, Regli, & Giroux, 2011). The results of these studies provide new information on the progress of verbal behaviour in a context of discrete trial teaching. Rivard and Forget (in press) showed that some appropriate verbal behaviours, such as mands, were deficient in all participants while the frequencies of other verbal behaviours differed between them, testifying to the heterogeneity of ASD symptoms. The frequencies of several behaviours were related to the participants' levels of intellectual functioning and severity of autistic symptoms. The results distinguished three subgroups of verbal behaviour patterns among the children. The first group of participants presented higher levels of verbal and intellectual functioning and fewer problem behaviours (e.g. self-stimulatory behaviour, self-injurious behaviour). The second group emitted less verbal initiations and less verbal behaviour in general, whether appropriate or inappropriate. The participants in the third group had more inappropriate verbal behaviours and problem behaviours, lower levels of intellectual functioning, and displayed the highest number of autistic symptoms. Rivard and Forget (in press) also addressed the consequences emitted by the listeners (the interventionists) following the verbal behaviour of the participants in IBI sessions, with the aim of making recommendations for the development of contingencies to optimize IBI effects as well as to encourage the acquisition of different language functions. Rivard and colleagues (2011) showed that these groups differed in the progression of appropriate versus inappropriate verbal behaviour after 8 months of behavioural intervention favouring discrete trial teaching.

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Conclusion

Communication and language are pivotal behaviours for the development, social integration, and educational life of children, particularly for children with ASD. A frequent criticism concerning intervention programs based on ABA favouring discrete trial teaching is the difficulty in promoting the development of spontaneous language. The teaching of language through programs that consider verbal operants promote the acquisition of language functions by allowing the speaker to use language spontaneously, socially, and in contextually appropriate ways. The combined use of programs that choose discrete trial teaching and the analysis of verbal behaviour is increasingly desired, and the effect of their combined use is of growing evidence (see the recent study by Fava & Strauss, 2011).

Glossary

Primary elementary verbal operants

Echoic: Consists of repeating the words of others, copying a text and motor imitation in order to account for the learning of sign language.

Intraverbal: Consists of responding to the words of others, such as in answering a question. The intraverbal constitutes the basis for social interactions, conversations, as well as for many academic and intellectual skills.

Mand: The term is derived from command. This operant plays an important role in the acquisition of language, because it specifies the behaviour which is expected on the part of the listener ("I would like to have some water") and produces a specific reinforcer (the listener brings water).

Tact: The term is derived from "contact with the physical world". The denomination applies on all physical dimensions (vision, hearing, touch, etc.). The behaviour is evoked by an object or an event from the environment. For example, one sees a river and says "Look at the water".

Textual: This operant consists of reading printed words, which implies decoding of words. The reinforcement is non-specific, such as the public's attention in a speech.

Transcription: The answer is written (or typed, or signed) following a verbal stimulus. Writing a dictation is an example of transcription.

Secondary elementary verbal operant

Autoclitic: A speaker functions as his own listener to qualify change or manipulate primary verbal behaviours. The speaker uses verbal behaviour on his own verbal behaviour. The operant includes the most complex aspect of language (such as syntax, grammar, etc.).

Listener behaviour

Receptive - Non-verbal response as listener: Michael (1982) included Skinner's concept of "listener behaviour", the behaviour of the listener in response to an instruction. It is the non-verbal response to the verbal behaviour of others. The SD is verbal; the response involves a physical movement of the listener.

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SAVE THE DATE!

Thursday, March 8th, 2012
QcABA's Second Annual Conference
at the Université de Montréal

Keynote address by: John T. Rapp, Ph.D., BCBA-D
St. Cloud State University, MN

Morning presentations will be held or translated in English.
The title of the keynote address and other events will be announced shortly.
Visit our website regularly for updates and registration.

Newsletter Team

Editor: Marc Lanovaz

Contributors: Sylvie Donais, Kelly Kerr, Myra-Jade Lui, Gisela Regli, Méline Rivard

Translators: Sylvie Donais, Myra-Jade Lui, Nathalie Poirier, Gisela Regli

Proof-readers: Malena Argumedes, Kelly Kerr



Courriel :
info@qcaba.org

Site Web :
www.qcaba.org