

Becoming Brad

We were inspired to present at Closing the Gap 2015 in order to tell the story of an amazing individual that we have had the privilege of working with as a team. We wanted to share his journey through rehab, elementary and high school, and through technology, and we wanted him to help share the journey, too. Here is our story ...

Brad Heaven began attending the MAB-Mackay Rehabilitation Centre (MMRC) in Montreal, Quebec, Canada at the age of 18 months. The MMRC is an establishment in Montreal serving clients with motor, speech and language, visual and/or hearing impairments. Most programs serve a pediatric population for children ages 0-18, or 21 if attending a specialized school. Within the same walls lies the

Mackay Centre School, a social affairs school whose mandate is to provide educational services to students with physical disabilities, communication and language disorders and students who are deaf or hard of hearing. The school offers many programs to benefit students: small class sizes, smart boards in every class, a computer lab and a physical education and swim program adapted to the needs of the students. The Augmentative Communication or Aug Com Class is a specialized classroom at the Mackay Centre School. Established in September 1998, the primary focus of the classroom is communication and serves students with complex communication needs. The students in the Aug Com class use alternative



or augmentative forms of communication, i.e. picture symbols, low-tech displays, switches and voice output devices. The Aug Com class runs for the morning only as it has an intensive focus on communication. In the

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LESLIE LEVINSON started as a beneficiary attendant at the Mackay Center School. For the last 27 years she has been a teacher at the school and helped to create the Augmentative and Alternative Communication class in 1998, which she still runs in the morning. She supports AAC students in other classes in the afternoon. llevinson@msb.qc.ca

MARC MOREAU is a technology assistant who has worked at the MAB-Mackay Rehabilitation Centre for 30 years. For the first 20 years, he worked as a beneficiary attendant, looking after the physical needs of the clients, and for the last 10 years has supported AAC clients in learning to use communication devices and switches, as well as providing training in powered mobility. Mmoreau.mackay@ssss.gouv.qc.ca

BRAD HEAVEN is 19 years old and has athetoid cerebral palsy. He is the youngest of five kids in his very supportive family and just completed his first year at CEGEP, similar to junior college. He is currently driving a power wheelchair with an ASL head array, which he also uses for two-switch step scanning on his Dynavox Vmax+ with Scanning Wordpower, his Macbook and his iPad Pro with Touch Chat HD. He loves hockey, spending time with his family and hanging out with his friends. bradleyheaven96@live.ca

afternoon, the students are integrated into age-appropriate classes within the specialized setting of the Mackay Centre School in order to promote socialization with their peers.

Before Brad started school, he received rehab services (PT, OT, SLP and seating) as an outpatient. In those early years, he participated in a communication and play group in which parents were key participants in discovering how to adapt play and communication with a child with a physical and communication impairment. Brad began developing the ability to communicate yes and no, which he was able to do by nodding and shaking his head, and was introduced to Picture Communication Symbols on an 8-location Macaw voice output device. He was able to access the Macaw using his fist. He was given a customized positioning insert and adapted stroller, allowing him to be well seated and supported. Brad was also introduced to music therapy and was exposed to adapted musical instruments. Recalling these early years Brad says, "I vaguely remember driving the Cooper Car and doing activities with my therapist and my mom. My mom remembers seeing a kid pedaling a bike with their hands, which made her see the possibilities for me."

When Brad first started in the Aug Com Class, he used a low-tech communication book that he accessed with his fist. While Brad was very efficient, we quickly realized his communication needs were not being met.

To further his communication and educational abilities, we used various communication devices that Brad accessed using his head and two-switch step-scanning. When we would sing, Brad would add the dependent lines to songs using his switches and a Cheap Talk. We used



Leslie, Brad and Marc in the Aug Com class 2001.

the AbleNet PowerLink for cooking (making smoothies) or other fun activities, such as using a drill to fix things or shredding paper using an industrial paper shredder.

On the computer, Brad loved using Intellikeys displays to access Bailey's Bookhouse for creating stories, rhyming words and alphabet activities.

Another important computer program was the original Kidpix program, which Brad accessed with his head switches and the Discover switch interface. He was able to scan the tool bar menu. This allowed us to create many math computer activities to work on number skills and counting.

We created low-tech displays for all our reading books for various voice output devices that allowed us to model language while reading, allowed Brad to answer questions about books he had just read and allowed his family to read with him.

It was in the Aug Com class that Brad received his first communication device (the Dynavox 3100) and the focus of our work with Brad was

helping him learn how to navigate Scanning Picture Word Power.

Once Brad was proficient using the 3100 as a means of communication, it was time for him to leave the specialized setting of the Aug Com class and transition full time into a Mackay Centre School classroom.

BRAD: "Starting school was hard for me because I used to miss my mom and she used to miss me too. I remember my first day of school, everyone on my street came out to see me get on the bus. I had trouble adapting to new people feeding me. I liked Leslie's class because we went on many field trips and her and Marc used to teach me how I could benefit from using my Dynavox. I was overwhelmed when I started using my Dynavox but I eventually got better using it with their help."

Once Brad left the Aug Com class, Leslie's role in helping Brad became more of a support teacher. She worked with his classroom teachers, offering suggestions on how to include an AAC

user in their class, including discussions about how to pose questions, giving him time to answer, cueing Brad to navigate to the correct page to anticipate answers and programming his Dynavox with new vocabulary.

She supported Brad in this capacity until he graduated from Mackay Centre School.

Brad continued to receive a variety of rehab services during this time frame. He was able to use Discover: Kenx on the computer and started spelling and using word prediction with Co:Writer. His language skills also continued to develop and he continued to learn to use more advanced morphology and word prediction features on the Dynavox 3100. It was also during this time that he received his own power wheelchair and practiced changing modes between driving and communicating.

We saw that while Brad had the skills to use a communication device and a computer, he was not able to do so independently with the Dynavox 3100. He had to be set up at a computer and have his head switches unplugged from the device and plugged into the switch interface at the computer. Living in a bilingual environment, we also recognized the need for Brad to be able to speak French. These are some of the factors that prompted us to explore an integrated communication system, which led us to the Dynavox Vmax. With this integrated system, Brad could use the Dynavox Series V software to communicate in English and French and also access Windows XP to use computer software and the Internet.

We also enlisted the services of the Dynavox sales rep, Laura Stazio at the time, to explore more advanced features of the Vmax, such as using email and text messaging. All of these steps were taken with the ultimate goal of integrating Brad into a regular school, and we wanted to be sure he



Brad and his family at graduation from Mackay Center School

was well equipped and very proficient at using his technology before heading into a less specialized and less protective environment. One of Trish's favorite experiences in working with Brad during this phase was the realization that he had taught himself how to program his own buttons – such a skilled AAC user!

As of Grade 4, Brad had begun participating in his Individual Intervention Plan (IIP). He was able to recognize what he was good at, and some of the things he wanted to explore or improve were shaped into our intervention goals. Brad wanted to explore video games, try using a headpointer for art and control the TV at home through his Dynavox. We also enabled him to use the camera through the Vmax and explored eye gaze with the eyeMax system, which Brad found more difficult than using his head switches. Brad was able to participate in a photography group using a webcam on the Vmax. In the group, students took pictures of things they found challenging and things they were good at, and wrote about how



Brad in his first pony walker (approximately 2 years old).

each of these made them feel. They then shared these photos and experiences with other members of the group and with a larger audience at a vernissage.

Brad was also able to experience the ISAAC conference in Montreal in 2008, and help his fellow students celebrate AAC awareness month by

trying to use a Dynavox with two head switches, following Brad's demonstration.

BRAD: *“Leslie’s class was different because I basically learned how to use my Dynavox and basic counting skills, where as in the regular classes at Mackay, I learned about Geography, Math etc. I loved the reverse integration program because I got to meet kids who were my age, and some that are still my best friends today. When I started using my power chair, I didn’t like to use it because I preferred being pushed in my manual chair. But I quickly realized that I needed my power chair to be independent.”*

When the time came for Brad to be integrated into high school, he was already proficient at two-switch scanning using Series 5 Dynavox software. He had mastered driving his Invacare power chair with an ASL head array and his mobility and communication were all integrated. He was familiar with the mp3 features and emailing and, with the use of the cross scanning feature, Brad also had access to Microsoft Word and the Web.

The John Rennie High School team was very open-minded and flexible, which really facilitated Brad’s transition. Our role at this time was to describe Brad’s present tech needs – Dynavox, power chair, wifi – as well as to explore new technology.

During Brad’s first high school year, his power chair was programmed to drive slowly. He was becoming accustomed to a new environment in more ways than one. The first year of high school is daunting as it is, and on top of it, Brad was driving a power chair using a head array with a communication device attached! This may seem like an overwhelming task to us, but Bradley accepted this challenge. He was persistent and head strong and this resulted in success!



Left to right: Leslie Levinson, Brad Heaven, Marc Moreau, Trish Coffin

In class, he could access the Dynavox with head switches to complete class work, assignments and homework. It was an excellent tool for presentations, as well as for surfing the Net. We supported Brad by making regular visits to the school in order to troubleshoot power wheelchair and Vmax issues, as well as to “coach” Bradley’s aide, Danny, so that he could troubleshoot as well.

By Brad’s second year of high school, he had mastered navigating his new environment, so the power wheelchair got a speed boost. This allowed Brad access to a selection of three speeds. At this time, Brad started to realize his Vmax was running out of memory, the battery was barely holding its charge and it was very slow. Brad and Marc communicated regularly through text messages. As Brad described the issues he was having with his device, we encouraged him to advocate for himself by writing emails to people at the school board, as well as to the Dynavox sales rep.

Because of Bradley’s perseverance and the high school team, a Vmax + was ordered for him. This new equipment allowed Brad to communicate and complete work more efficiently. However, even with this brand new device, with the advancement of technology and a world of apps to discover, there continued to be some limitations.

The following year, Brad was also allotted an iPad. We worked with the high school team to find the right switch interface and an appropriate mounting system. We decided on a Bluetooth switch interface – the Tecla Shield. The Bluetooth feature was very user-friendly, and Brad didn’t have wires running from the back of his chair to the iPad. Anyone who has experience working with someone who has limited control of their limbs knows how challenging wires can be! Bradley now had easy access to books, games, music and, of course, social media. We were amazed at how quickly Bradley became proficient using this set-up.

In the final years of high school, our role became more of a consult service. Brad was working closely with the high school team who, by then, really understood his needs and recognized his incredible potential. The team was persistent in making sure Bradley had all the adaptations necessary to write the provincial exams in order for him to graduate high school. And he did!

Brad's determination is infectious. All of the people that worked with him were committed to his success because of his perseverance.

Brad is also fortunate to have had the same aide, Danny, for over six years. This consistency has been pivotal to Bradley's success. Danny continues to support Bradley in college today.

BRAD: "I was sad, nervous and a bit overwhelmed leaving Mackay, but excited to start at John Rennie. Every year, I went to Leadership camp and presented a speech about myself to improve my experience at camp. I had the honor of dropping the puck at two of Rennie's hockey games, which was an amazing experience! In grade nine, I found out that I could use an iPad with my head switches since Apple released Switch Control. It opened up a whole new world for me. I can use a lot of apps on the App Store. It was also good that I still had my Dynavox, because one afternoon I had a substitute bus driver. He left me alone on the bus at a McDonald's to go to the bathroom. Right away when I got home, I told my mom and she reported the driver. Many people think that just because I can't talk, I can't comprehend things."

With Brad graduating from high school and heading off to CEGEP (junior college), he needed an upgrade in technology. He had already become very familiar with using an iPad at John

Rennie, so we looked at several apps and decided on Touch Chat HD. This was another first for Trish – being able to present different options and have Brad's input on the best choice for him. Despite the fact that his usual and preferred method of communication is text-to-speech, we felt it was important that he still have access to whole words to allow him the opportunity to increase his efficiency and rate of communication. We agreed on Touch Chat HD with the My Core vocabulary set-up, as it has a keyboard with word prediction, as well as many whole words, and allows Brad to choose his method, depending on the context in which he is communicating. He is also able to use the built-in features on the iPad to type and speak, but it is more laborious than a communication app that incorporates those features. At this stage, Brad is transitioning to the Constance Lethbridge adult rehab centre, so we worked with the OT there to look at his writing and educational needs.

BRAD: "I'm attending Dawson College and it's great! I'm loving this new experience! I now have a MacBook to help me in my studies in Web Design, which I'm really excited about! It's awesome that I can use an iPad Pro and a MacBook with the help of Apple's Switch Control!"

The real key to this story is Brad's ability, but what worked very well in his favor were some important factors:

1. The team approach allowed us to look at all different aspects of Brad's needs and abilities and work together with Brad to find appropriate solutions, and the fact that many team members remained consistent throughout the journey allowed for important continuity.
2. The timing of his development closely matched the evolution of the technology, which enabled us

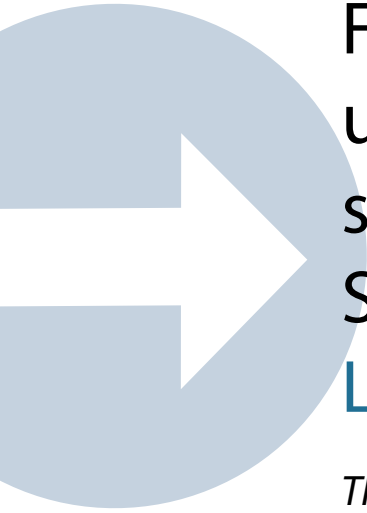
to equip him well with devices that could meet his needs.

3. His desire to communicate and his realization of the importance of technology to enable him to do so, in conjunction with our encouragement and input into teaching him some of these skills early on, resulted in his willingness to explore various options and, ultimately, be a full participant in the process.

EPILOGUE: Brad has now completed his first year at Dawson College and here's what he had to say about it:

"My first year at Dawson was great, I love the environment of the college! The staff in the Student Accessibility Centre have been very helpful in my first year. The staff and students have been very welcoming."

We feel fortunate to have known and worked with Brad and to have had the opportunity to learn so much from him. We wish him ongoing success as his journey continues. ■



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