Lester B. Pearson School Board
Commission Scolaire Lester-B.-Pearson

Autism Spectrum Disorder: Network News

Autism Spectrum Disorder
Centre of Excellence
Lester B. Pearson School Board

October 2017

Issue 40

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ASD Team Members:

- Patricia Assouad
  ASD Consultant-Coordinator
- Dr. Andrew Bennett
  Psychologist-Coordinator
- Jovette Francoeur
  Special Needs Consultant
- Sabrina Gabriele
  ASD Consultant
- Katie Cohene
  ASD Consultant
- Jade Lawsane
  ASD Consultant
- Cheryl Scaife
  ASD Consultant
- Helene Packman
  Speech & Language Pathologist
- Dr. Amira Rahman
  Psychologist

Feature Article

Advantages and Challenges of Technology

Typing autism into a search engine on any mobile device generates over 6000 different applications targeting academic skills, communication, social skills, executive functions and organization. In addition, numerous documentaries and media reports have touted the use of technology for contributing to major breakthroughs for certain individuals with ASD. It is said that through assistive technology these individuals *became unlocked* and were able to share their intellect and their feelings with the world. This article identifies some key considerations related to the use of technology.

School observations indicate that the most common use of technology for students with autism in elementary and high school students is as a means of positive reinforcement. Students who are attracted to technology (i.e. *screen time*) are highly motivated to accomplish work in order to get some free access to a particular device. If this strategy is effective in increasing productivity and on-task behaviour in the classroom, then its use should continue to be promoted, however it is important to exercise caution, however, to ensure that the disadvantages of this system do not outweigh the benefits.

First, if students are consistently exposed to technology as reinforcement and as a source of entertainment, these students may be less open to accepting technology as a tool to facilitate learning. When the device is introduced to assist with academic learning or a form of assistive and augmentative communication, the students may refuse to engage because they have been accustomed to being able to navigate to apps and games of their choosing. In order to prevent this potential outcome, it is essential from the beginning, that students are exposed to a balance of both; devices as a means of reinforcement, and devices for learning purposes. It is also important for students to accept adult intervention and control over the device from time to time. In other words, students may access favorite videos, but only if the adult is the person pressing *play* or students may get more access to a device if they select a game or app that involves joint play with a peer or adult.

In addition, even though students may demonstrate very desirable behaviour in order to obtain time on a technological device, the activity that they are then participating in may cause challenges later on. For some students, the choice of highly stimulating content may lead to difficulty with self-regulation later in the day. Overstimulation may lead to decreased ability to concentrate, an increase in repetitive behaviour, inappropriate vocalizations, and perseveration on certain topics. Careful observation of the student and consultation with an occupational therapist can help to determine if screen time may be contributing to difficulties later in the day.

It is also essential to be cognizant of the use of screens at home. The Canadian Paediatric Society recommends limiting screen time for children aged 5 – 11 to less than 2 hours per day. More screen time increases a sedentary lifestyle and decreases social interaction. Research studies examining children and the use of screen time has yielded data showing that children's executive functioning (ability to plan, analyze, strategize, and exert self-control) suffers with exposure to fast-paced visuals.

Feature article continued

Studies also show a link between amount of time on screens and attention deficits. We need to be aware of how many hours per day students are on screens at home and make attempts at school to avoid contributing to over-usage of screens.

Experts have also found that children with autism and ADHD are more likely to become obsessive and show patterns of addiction when it comes to video games. One of the reasons video games are so attractive to all children is that they promote the release of dopamine in the brain each time a child achieves a level. This dopamine, also known as the *feel good* neurotransmitter, can become addictive, causing children to have difficulty ending these games or *melting down*. It is difficult to compete with this dopamine surge during traditional teaching times in the classroom as most learning tasks are far less stimulating.

There is no doubt that technological devices are very much a part of our everyday lives and that, as such, children with autism should be have equal access. It is important, however, to adopt caution to avoid difficulties. When analyzing the use of technology for students with autism, Liz Maher, M.Ed, BCBA states, "Just because there is technology available does not mean it has to be used or that it is the best solution to the problem". To optimize the positive benefits of technological devices, educators and support workers are encouraged to regulate the usage of these devices in schools, observe the students closely during and after screen time, and be mindful of when and how these tools are being used.

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Teacher Tip

Increasing predictability in the classroom

What we know from research findings and experience in schools is that best practices for students with autism are really best practices for all students. The strategies that a teacher incorporates into a class to support students with deficits or weaknesses will inevitably support those more capable and often in ways that teachers do not even anticipate. Visuals are, of course, the easiest to implement and often result in the most gains. In the simplest terms Roa and Gagie (2006) explain that visual supports: (1) are part of everyone's communication system, (2) can attract and hold a student's attention, (3) enable students to focus on a specific message and reduce anxiety, (4) make abstract concepts more concrete, and (5) can help students express thoughts. Visual tools make all students more independent in terms of their learning and make accessing the curriculum and easier for all students. Please visit http://coeasd.lbpsb.qc.ca to download class sized or personal visual schedules and other useful, easily implemented tools for your classroom!

Rao, S. M., & Gagie, B. (2006). Learning through seeing and doing: Visual supports for children with autism. *TEACHING Exceptional Children*.

Thank you to Andrea Bertalan, (Lester B. Pearson work skills consultant) and students from Lindsay Place High School's work skills training program for preparing this newsletter for distribution!

Behavior Tip

Technology as a Reward; To Use or Not to Use?

From iPads to cell phones, etc., it is no secret that students are quite consumed with technology in this day and age. It is often the case that *screens* are the most preferred reward for our students with ASD. The questions that we often find ourselves asking include: (a) Can we use this as positive reinforcement?, (b) Is there anything else that we can use that is as strong a reward?, (c) Will the student have a difficult time when the scheduled time on the device is up? There is no easy answer to these questions. In some cases devices can be helpful, while in others, they are not feasible. If there is nothing as rewarding as your student's device, please proceed with caution and follow these tips:

1. Make sure that the content on the device is appropriate (i.e. no violence, profanity, inappropriate sexual content, etc.)

2. Make sure it is pre-determined WHEN the student can have access (i.e. First work, then device), and for HOW LONG (i.e. 10 minutes with a Time-Timer, 30 minutes with a digital timer, the completion of two video game levels…whatever *concretely* delineates when this activity will end)

3. Make sure the student DOES NOT have access to the same preferred activity on their device *for free* at home. If they are only allowed access to this activity on their device contingent on completing a seat task at school but they are given the same activity at home *without* having to meet any expectation first, it can lose its power as a reward at school.

4. If you think that using this device may lead the student to mishandling it or becoming aggressive in any way or if they are unable to tolerate the transition away from it, you should either: (a) reduce the demands they must meet before having access to it so that they don't have to wait too long or, (b) reconsider using it and try to experiment with new items in order to find something that approximates the power of the device as a reward.

Communication Corner

Technology, particularly iPads, has opened up a multitude of possibilities to provide a "voice" to our students with ASD who are unable to speak. Through consultation with a Speech-Language Pathologist, many students now have access to an Augmentative and Alternative Communication App on an iPad.

It is unrealistic, however, to expect our students to be able to communicate using an App without proper instruction. Just like we wouldn't expect our students to become fluent in French the moment they walk into a French classroom, our students need time to learn the *new language* they are presented with on the iPad. It is up to the adults as well as other students who interact with our students on a daily basis to provide the best language model using their device. There are several resources available on line to help us sort out the DO's and DONT'S of AAC. These resources are a good place to start if your student is just beginning to use a communication App:

http://download.assistiveware.com/assistiveware/files/dos-and-donts-aac-by-assistiveware-jane-farrall.pdf

http://www.inclusionoutreach.ca/content/cs/Communication/AACBootCamp.pdf

https://www.aacandautism.com/assets/uploads/Using-a-Device-in-the-Home.pdf

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Lester B. Pearson School Board
1925 Brookdale Avenue
Dorval, Quebec
Phone: 514-422-3000
Fax: 514-422-3014

Our team is composed of professionals with a variety of specializations. Designated as a Centre of Excellence within the province, our mandate is to assist LBPSB schools in the implementation of best practices for the inclusion of students with ASD and to serve as a resource to the other English school boards in Quebec. Our team provides assistance to students and families and works to support educational personnel in augmenting their capacity to meet a wide range of needs in the classroom. We do this through direct intervention, coaching, consulting, professional development, and the sharing of materials.

We're on the web! http://coeasd.lbpsb.qc.ca

Try This!

At the beginning of the school year, one of the first things we try to do is get to know our students with ASD a bit better. As educators, it is important that we build a meaningful relationship with our student, as this is a critical step for the student in learning to trust us. However, given the nature of Autism and the social difficulties that come with it, we often wonder where to even start in building this relationship.

Sometimes, it can be as simple as sitting down with the student a few times a week and doing a favorite activity with them. Since technology and computers are often an area of strong interest for ASD individuals, try building into the schedule a *computer project time* with your student where they are allowed to pick an appropriate topic or theme to research on the internet. You can create a scrapbook of your work or just enjoy the time spent together discovering different elements of a topic. It can serve as a way into your student's heart!

Read All About It

Many teachers are busy trying to assimilate and apply the new CASP curriculum designed for students with moderate to severe intellectual impairment. **A Functional Assessment and Curriculum for Teaching Students with Disabilities** (2008) is an excellent resource for identifying learning targets, as well as teaching strategies. This 4-volume set addresses all 5 competencies of the CASP Program. Volume 1 focuses on *Self-Care, Motor Skills, Household Management, and Living Skills*, Volume 2 is about *Nonverbal Communication, Oral Communication and Literacy Preparation,* Volume 3 relates to *Functional Academics* and Volume 4 addresses *Interpersonal, Competitive and Leisure Time Skills*. To borrow any of these items, please contact the Consultant for Autism of your school.