Identifying Trends and Supports for Students with Autism Spectrum Disorder Transitioning into Postsecondary

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for the Higher Education Quality Council of Ontario

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Executive Summary

The goals of this project were twofold: (1) to identify the numbers of students with autism spectrum disorder (ASD) who will be graduating with an Ontario Secondary School Diploma (OSSD) and entering postsecondary studies in 2009, 2010 and 2011 and (2) to perform a gap analysis comparing the services provided in secondary schools with those currently provided in postsecondary education (PSE). This data may assist postsecondary institutions in planning for the services and supports that are required to promote success for these learners.

Numbers

Based on reports from 72 of the province's 93 school boards and school board authorities in Ontario, at least 5,800 students identified as having autism spectrum disorder (ASD) are currently in the secondary system. About 1,400 of these students will be graduating with a diploma, and an estimated 1,100 will be seeking to enter college or university between 2009 and 2011. Based on reports from all 24 Colleges of Applied Arts and Technology (CAATS) and 15 of Ontario's 19 universities, 400 students identified as having ASD are already in Ontario's colleges and universities. Given that these students often take a reduced course load as part of their accommodations, a considerable number of students with ASD could be in the postsecondary system by 2011.

By all accounts, the 1,100 cumulative total is a very conservative number and doesn't take into consideration students who graduated prior to this year, those who were not included in this summary due to board difficulties with providing information from the data base at that time, or those who were "unidentified" because they did not require services their particular secondary school. In addition, this cumulative total doesn't include the numbers of adults with ASD who are in our community and who might wish to attend PSE if they were aware that services and supports would be available. Agencies were unable to give exact numbers but indicated that there were "a number of adults who would like to attend PSE or who had tried previously without success."

Supports

In addition to reporting on the numbers of students with ASD receiving services in secondary schools, institutions were asked to describe the "services and supports that students with ASD were finding helpful." An analysis of the services suggested possible gaps in service in PSE that could be problematic for these students. The necessary services include a requirement for staff specifically trained in ASD, a dedicated "safe" space for these students and academic studies supported by staff trained as ASD coaches. As these services are not currently available in most of Ontario's postsecondary institutions, they constitute gaps in service. Secondary school specialists reported that the students with ASD who intended to go on to PSE were capable of meeting the requirements (such as an OSSD and other prerequisites) but that they required extensive social and academic supports. These specialists felt that the number who were not

bound for PSE would be unable to manage either the academic demands of PSE or the social expectations.

Recommendations for Future Directions

Human Resources

All information from disability service providers indicated that there is a need for institutions to consider a focus on professional development activities for staff in the area of autism spectrum disorder, especially front-end staff providing direct service, security staff, faculty and staff with the responsibility for emergency preparedness. If there is a concentration of students with ASD in an institution, consideration should be given to additional staff in the disability service area, who would be responsible for developing and implementing services and supports for students with ASD (including transition activities).

Institutional Space

Secondary special educators indicated the critical importance of a dedicated space for students with ASD. In many cases, the availability of such a space prevented other, more socially unacceptable and critical incidents. Institutions with a concentration of students with ASD should consider creating a dedicated space as a safe de-stressor for persons with ASD.

Research

There is a dearth of research into the supports and services required by adult postsecondary students with ASD. Every effort should be made to create awareness among funding agencies of the importance of any applied research into this population. Continued examination of the growth and needs of this population would be important to colleges and universities, as well as to the development of pilot activities (such as transition programs, dedicated programs, transition activities and other supports) specific to students with ASD. These pilots, seeded in areas where there is a high concentration of students with ASD could inform the system of best practices and promising supports.

Background

In the past few years, colleges and universities in Ontario have noticed an increase in the numbers of students with ASD who are accessing postsecondary programs. Although there are still relatively few of these students, they are presenting to disability offices with a wide range of supports and services requirements. Educators have also expressed concern about the lack of transition supports available in postsecondary environments for these students, whose main deficit is a lack of social skills and extreme difficulties with new environments.

The human rights legislation makes it clear that colleges and universities have a duty to accommodate these students, since all persons with disabilities who are qualified for a program must be accommodated.[1] Students with ASD who are academically qualified to enter postsecondary programs are theoretically eligible for accommodations. However, the extra supports they may require to succeed may be difficult to provide in the postsecondary campus setting because of the required physical space and human supports necessary for success.

An examination of the literature relating to postsecondary students with ASD found very few articles that addressed the needs of these students either during the transition to postsecondary education or in terms of the support they require in postsecondary settings. A review of current literature relating to the transition to adulthood for individuals with ASD cited 137 articles on this topic, but only two related to postsecondary education. One of these articles noted: "An alternative to employment after high school might be postsecondary education. Involvement, however, is extremely limited for those with ASD and research on this topic is nearly nonexistent" (Hendricks & Wehman, 2009).

Furthermore, the literature to date has focused on children with autism and usually those with the more severe types of the disorder rather than those with less severe forms, who may be eligible for postsecondary studies. The articles on ASD that were located were all published in this decade, indicating how new this field of study is. It should be noted, too, that the overwhelming majority of the relevant research focused on the transition and services required for these students; there was very little discussion about workplace transition for postsecondary graduates with ASD, again demonstrating the recency of this emerging topic.

The relevant articles focused on the following topics: the identification and incidence of ASD; challenges these students face; transition issues; strategies, services and accommodations required; and several recommendations for providing extensive but required supports

Definition of Autism Spectrum Disorder

Autism is a complex developmental disorder that typically affects a person's ability to communicate, form relationships and respond appropriately to his or her environment. The disability results from a neurological disorder that impedes normal brain development in the

[1] *Ontario Human Rights Code 17(1).* This is clarified further in *Disability and the Duty to Accommodate: Your Rights and Responsibilities,* http://www.ohrc.on.ca/en/issues/disability.

areas that govern social interaction and communication skills. People affected by autism spectrum disorders have difficulty communicating, particularly in the areas of pragmatic language, and they have encountered problems with learning and social skills.

Referred to as a "spectrum disorder," autism is characterized by symptoms and characteristics that can present themselves in a variety of combinations and to varying degrees of severity, from mild to severe. The phrase “autism spectrum disorders” (ASD) is based on a broad definition of autism, including pervasive developmental disorder (PDD), Rett's Disorder and Asperger’s Disorder.[2] Persons with high-functioning autism have IQ scores in the normal or above-normal ranges, and in many cases, those planning to attend college or university have superior IQs and additional talents (Camarena & Sarigiani, 2009). However, no studies or statistics are currently available to indicate how many people with ASD are now participating in postsecondary level programs in the U.S.A., Great Britain or Canada.

In the past few years, there has been a notable increase in the incidence of ASD on college and university campuses, likely due in part to changes in the diagnostic specifications and in part to an increase in awareness and identification (Adreon & Durocher, 2007; Camarena & Sarigiani, 2009; VanBergeijk, Klin, & Volkmar, 2008). The Center for Disease Control and Prevention in the United States estimates that 1 of every 150 children in the U.S. has an ASD (CDCP, 2007), though numbers vary across states.

Challenges: Social Interactions

Overwhelmingly, researchers noted difficulties that persons with ASD faced relating to social interactions. These are magnified in postsecondary environments because such environments are highly social. Most courses require group work, group assignments and classroom engagement. Outside the classroom, there are social expectations related to collaborative research, workshops and interactions in crowded places such as the cafeteria, the student lounge, the library, the gymnasium and other student areas. Some of the following characteristics of students with ASD can cause difficulties in these areas.

> Body Movements: The repetitive and restricted activities noted in those with more severe ASD include rocking and arm flapping. However, even high-functioning persons with ASD may engage in some level of this behaviour – such as shuffling feet, moving hands, blinking eyes or making other, less noticeable movements. These movements can cause social problems, as peers are most often not accepting of behaviours that deviate from what is expected.
>
> Social Challenges: All articles presented evidence that difficulty with social interaction was the main challenge for adults with ASD. Notable was the inability to interpret body language effectively, the inability to read social cues and the loneliness that many adults with ASD face (Luckett & Powell, 2003; Prince-Hughes, 2003; Smith, 2007; Sperry &

[2] Definition from Autism Ontario, http://www.autismontario.ca/client/aso/ao.nsf/web/ASD+2?OpenDocument.

Mesibov, 2009). Many people with ASD also experience challenges in developing personal relationships. Dating and intimacy are often problematic and can lead to misunderstandings and other social conflicts (Sperry & Mesibov, 2009).

In-depth Interests: People with ASD may also have unusual depth of interest in some aspect of the world, such as World War Two, trains, stars, numbers, sports figures' birthdays and statistics, computers or science. The depth of their interest and absorption in these activities is what sets them apart, and they may not be able to discern when it would be appropriate to share their knowledge with others and when they should remain quiet on these subjects When interacting with others, they may have difficulty becoming interested in any activity those people may be enjoying if it is not related to their area of fixation (Adreon & Durocher, 2007; Prince-Hughes, 2003). Some will talk inappropriately in conversation or in class, while others may speak rarely (Taylor, 2005; VanBergeijk, Klin, & Volkmar, 2008). Assessments typically find deficits in nonverbal skills.

Inflexible Behaviour: People with ASD tend to want a fixed schedule with no changes. They may take a particular route between places regardless of barriers, become upset at any schedule change, have no tolerance for anything but the literal interpretation of rules (following them to the letter) and have great difficulty with any change in any routine (Adreon & Durocher, 2007 VanBergeijk, Klin, & Volkmar, 2008).

Co-morbidity: Persons with ASD are at greater risk for developing co-morbid conditions, and adolescents and adults with ASD commonly suffer from anxiety and depression. This may a result of their inability to cope with the fast-paced society in which they live and of constant misunderstandings about what is expected of them socially, academically and personally (Luckett & Powell, 2003; VanBergeijk, Klin, & Volkmar, 2008).

Understanding of Language: One of the most notable behaviours of some people with ASD is a literal understanding of non-literal language – especially metaphor, irony or humour. Because they tend to adopt an overly literal interpretation of language, they can fail to acquire any meaning or they can remain fixed on the perceived meaning (Luckett & Powell, 2003). They have difficulty understanding the pragmatics of language and may therefore develop specific behaviour patterns that are not readily understood by their peers (Gilchrist, Cox, Rutter, Green, Burton, & Le Couteur, 2001; Prince-Hughes, 2003; VanBergeijk, Klin, & Volkmar, 2008).

Challenges: Postsecondary Academics

The above challenges may have implications for the following postsecondary activities, depending on the profile of the individual and the institutional ability to address needs.

Transition

All studies reviewed noted that students had major difficulties during transition periods. Any change in schedule, location or interaction with people can pose varying degrees of problems for students with ASD (Adreon & Durocher, 2007; Camarena & Sarigiani, 2009; VanBergeijk,

Klin, & Volkmar, 2008). While no statistics are available to prove how successful transition may be, anecdotally, disability staff feel that a number of these students drop out within their first semester or even during the first few weeks of PSE. A main focus for transition preparation is the development of self-advocacy skills, since students with ASD will have to disclose their needs and also inform instructors and classmates (Eckes & Ochoa, 2005). The important role of the parent is also highlighted throughout the literature.

Academics

Many people with ASD find it difficult to be interested in classes that are not specifically in their preferred area of interest. Many postsecondary programs have an eclectic mix of courses, including General Education courses in which the student with ASD is not able to sustain enough interest to complete the course. The breadth of diploma and degree requirements often requires a student to be a "generalist" in some aspect of the program while also focusing on the prime area of interest. For some students with ASD, these courses can cause a barrier to their overall academic success and attainment of the degree. Use of language, organization, routine study skills, writing skills and presentation skills may all be problematic (Adreon & Durocher, 2007; Camarena & Sarigiani, 2009; VanBergeijk, Klin, & Volkmar, 2008). Working in groups is noted as being especially problematic for students with ASD. This can be a serious barrier in many classes in today's postsecondary environment.

The actual buildings in postsecondary institutions provide many challenges for students with ASD. Way finding in a confusing and noisy environment can be fearful for many students but paralyzing for students with ASD, especially without extensive transition preparation. Other students with ASD complain of the effects of fluorescent lights. Their flickering illumination can cause attention difficulties (Powell & Stuart, 2003).

Disability Services Supports

Disability supports have been developed over the past 20 years in Ontario's postsecondary system and include a wide range of services and supports intended to level the playing field so that learners with disabilities can demonstrate what they know despite the impact of the disabling condition. These learners are "otherwise qualified" and have the entry requirements to perform the essential components of the program. For the most part, they move through postsecondary life, utilizing services for academics with disabilities. However, the disabling condition of learners with ASD has a greater impact than other such conditions on their social interactions, including residence, group work, dating, routine activities and general relations with peers. For a number of these students, the established disability service structure may not be sufficient. Consideration needs to be made of establishing services relating to the entire time a student with ASD spends on campus – to various extents, depending on the needs of the learner.

At this time, disability staff in postsecondary note that small numbers of students with ASD are graduating with an OSSD from integrated settings in secondary schools and that they expect to attend college or university. Although many colleges and universities are currently reporting single-digit numbers of students with ASD among their applicants, this number is reported to be increasing – and by 2011, a larger number of students with ASD will be graduating from

secondary schools. These students may have received extensive supports in secondary school, such as a 1:1 educational assistant, a portion of the day spent in a specific room, immediate access to special education or counselling staff, a lunch or study area provided in a specific 'safe' room, specialized interventions and other accommodations and modifications to the learning environment and evaluation expectations.

Secondary special education staff informed the researchers of this study that the numbers reported here "are only the tip of the iceberg." They have been informed that more students with ASD will be attending Grades 7 and 8 in the near future, and this will mean that greater numbers will be sent to secondary school than in the past. Investigation into this expected increase was outside the scope of this project, but a number of boards informed us of this expectation.

Role of Parents

Parents of students with ASD play a major role in negotiating services for their sons and daughters, and increasingly, they are requesting postsecondary options for their children who are qualified academically for college and university programs. Parents also often intend to stay involved in their son's or daughter's postsecondary experience in a way that is not the norm in postsecondary institutions (Adreon & Durocher, 2007; Eckes & Ochoa, 2005). Disability staff anecdotally report that parental involvement is a reality in PSE as well as at the secondary level. This does present some challenges, as learners in PSE are "adults" and postsecondary institutions are bound by the Freedom of Information Act, which prevents the transference of information to individuals other than a learner without the express written permission of that learner.

A Positive Side to ASD

One characteristic of people with ASD is a "heightened attention to detail that contrasts somewhat with the usual focusing on the gist or 'wider picture'" (Luckett & Powell, 2003). Their restricted focus, coupled with a good rote memory, may result in their having a thorough, detailed knowledge base related to their main interest. When this interest is linked with a viable career choice, such as information technology, engineering and sciences (among others), students with ASD can excel in academics and careers in related fields.

Methodology

School Boards

In December 2009, surveys were distributed to the directors of each of the 93 school boards and school board authorities in Ontario, and they were returned until June 2009 (see Appendix A). The surveys were provided in either English or French, depending on which was the predominant language used at each board or board authority. The goal of this exercise was to collect the numbers of students with ASD in the secondary system and, of those, the numbers who were on track to graduate with an OSSD.

In cases where boards indicated an interest in follow-up, researchers visited in person or made contact by phone, in order to discuss some of their comments further.

This survey also asked personnel who had responsibility for students with ASD to describe strategies that promoted success for these students in their boards. In addition, research staff met with the ASD team for the Ministry of Education to further discuss results and to receive additional suggestions.

Colleges and Universities

Surveys were distributed to each disability office within the 43 publically funded colleges and universities in Ontario, with the goal of establishing the number of students identified with ASD and the supports the institution was currently providing for them (see Appendix B). Each college and university was contacted directly by researchers to further clarify comments concerning successful supports.

Other

In addition, research staff met with the executive director of Autism Ontario.

Results

All but 13 school boards/school board authorities completed the survey (86 per cent were returned), and they indicated that 5,805 students were identified with ASD in 72 of the 93 school boards and school board authorities in the secondary panel during the 2008/09 year in Grades 9 to 12. Special educators estimated that, of that number, about 450 would graduate with the Ontario Secondary School Diploma required for admission into postsecondary programs in 2009, 420 would graduate in 2010 and 534 would graduate in 2011. They estimated that most would be intending to access postsecondary institutions in Ontario: 375 in 2009, 344 in 2010 and 429 in 2011.

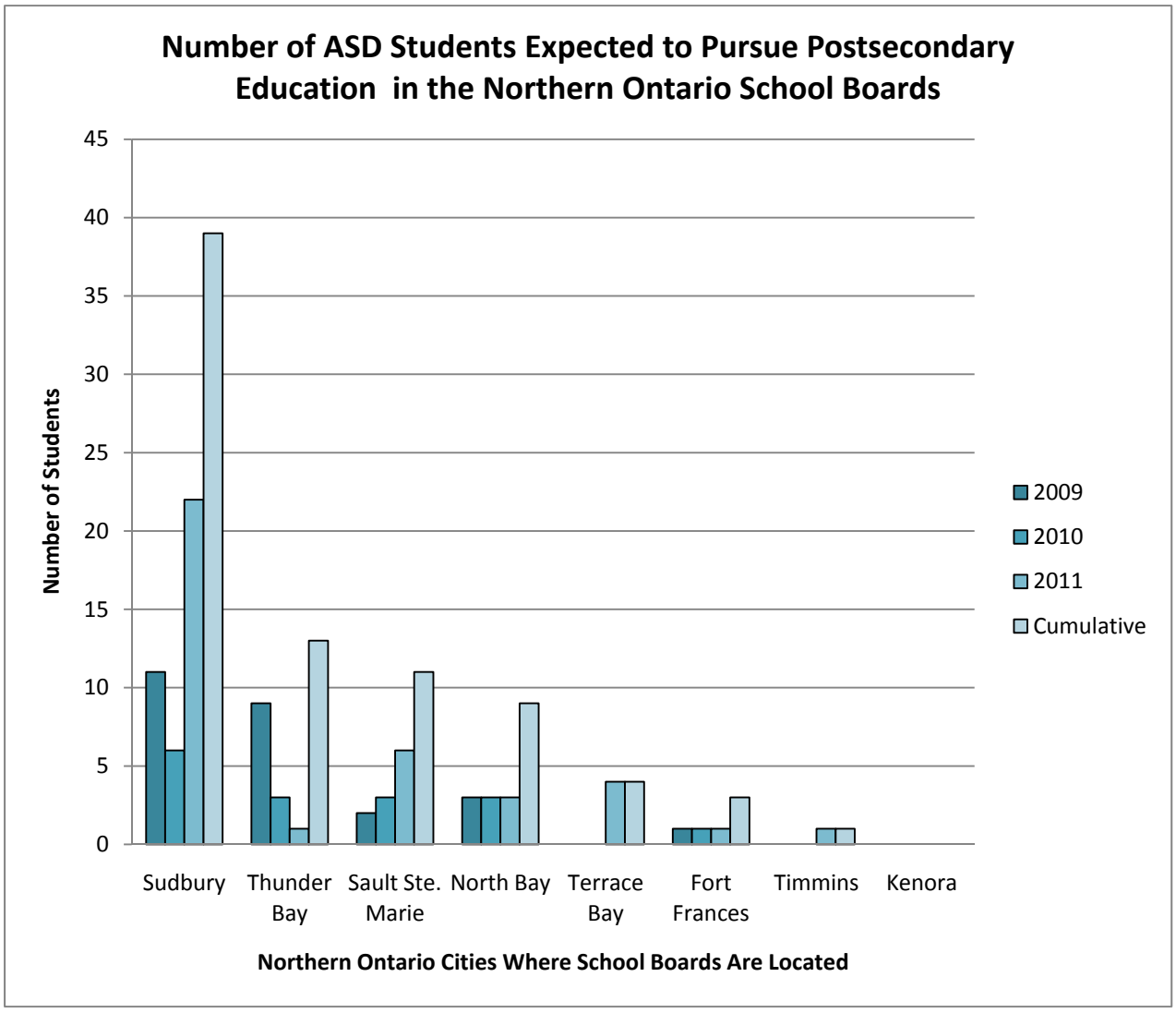
Not all school boards and authorities participated in this survey, although all were provided with a survey and all were contacted directly. Some reported that they were unable to participate this year due to collection/ database issues within their board. Some did not respond at all. Of this number, 10 are larger school boards, whose numbers would likely increase the total by several hundred students.

Report by Region

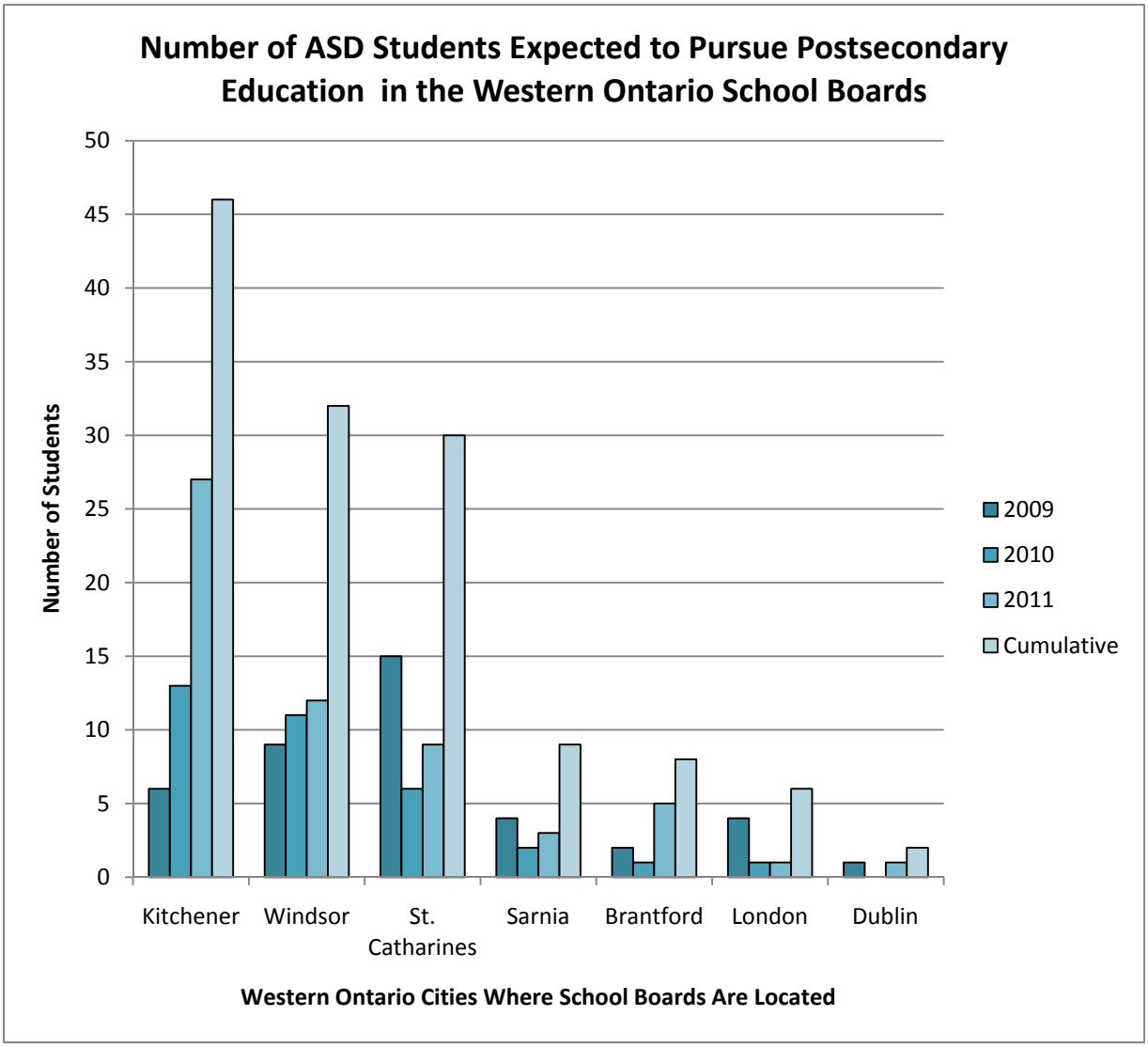
The numbers of students with ASD were grouped by the major city in each school board region. This revealed that regional characteristics are similar for both the school board divisions of the Ministry of Education and the regional boundaries of the Ministry of Training, Colleges and

Universities. Since colleges and universities do have regional identities, the results are reported here by region.

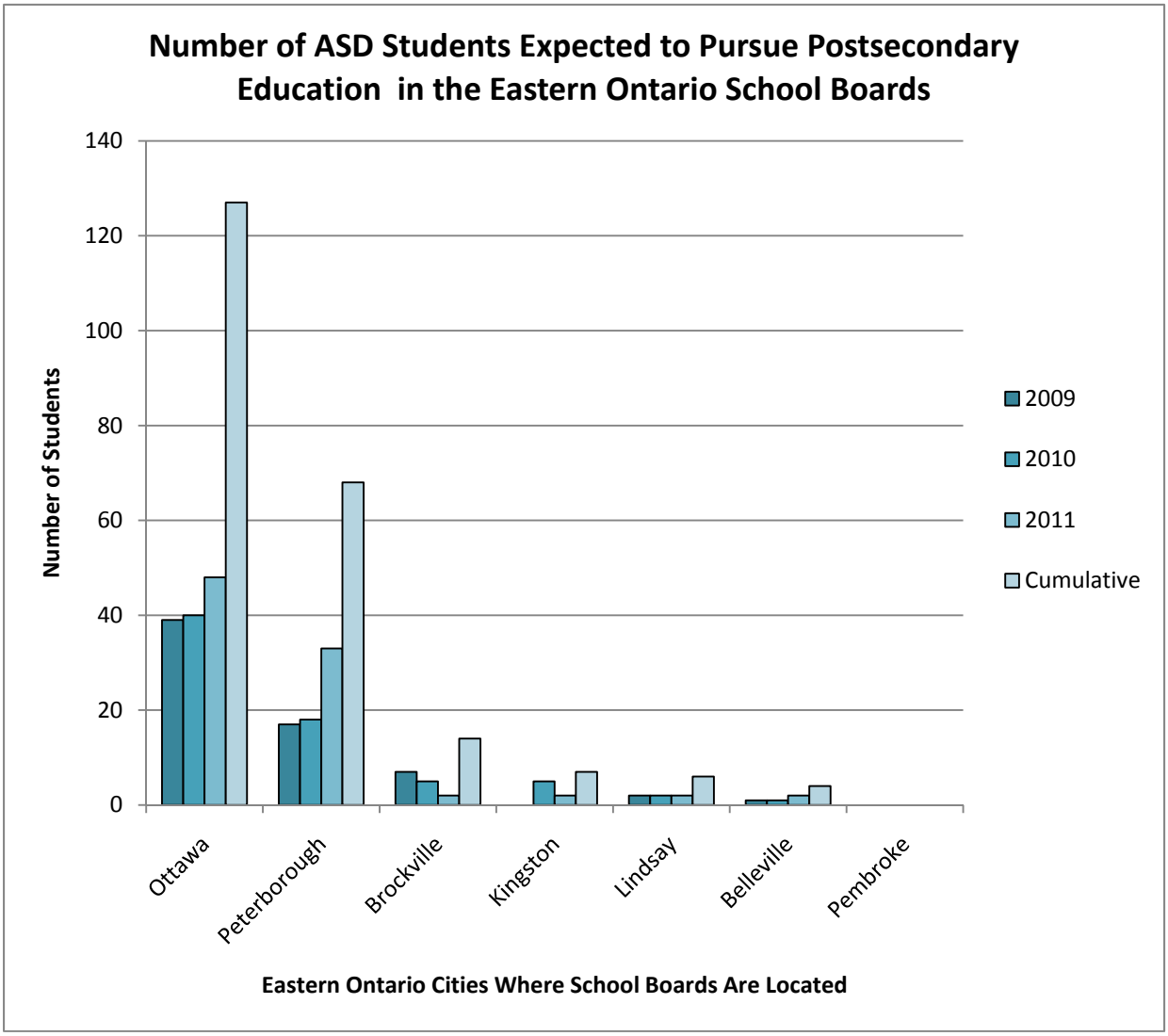
The results indicated the fewest numbers in the northern region. Within this region, the largest concentration is in Sudbury, at 39 cumulative numbers. The next-largest concentrations are in Thunder Bay, at 13, and Sault Ste. Marie, at 11. Several boards were not able to participate in this survey, so the numbers may be underrepresented in this region.



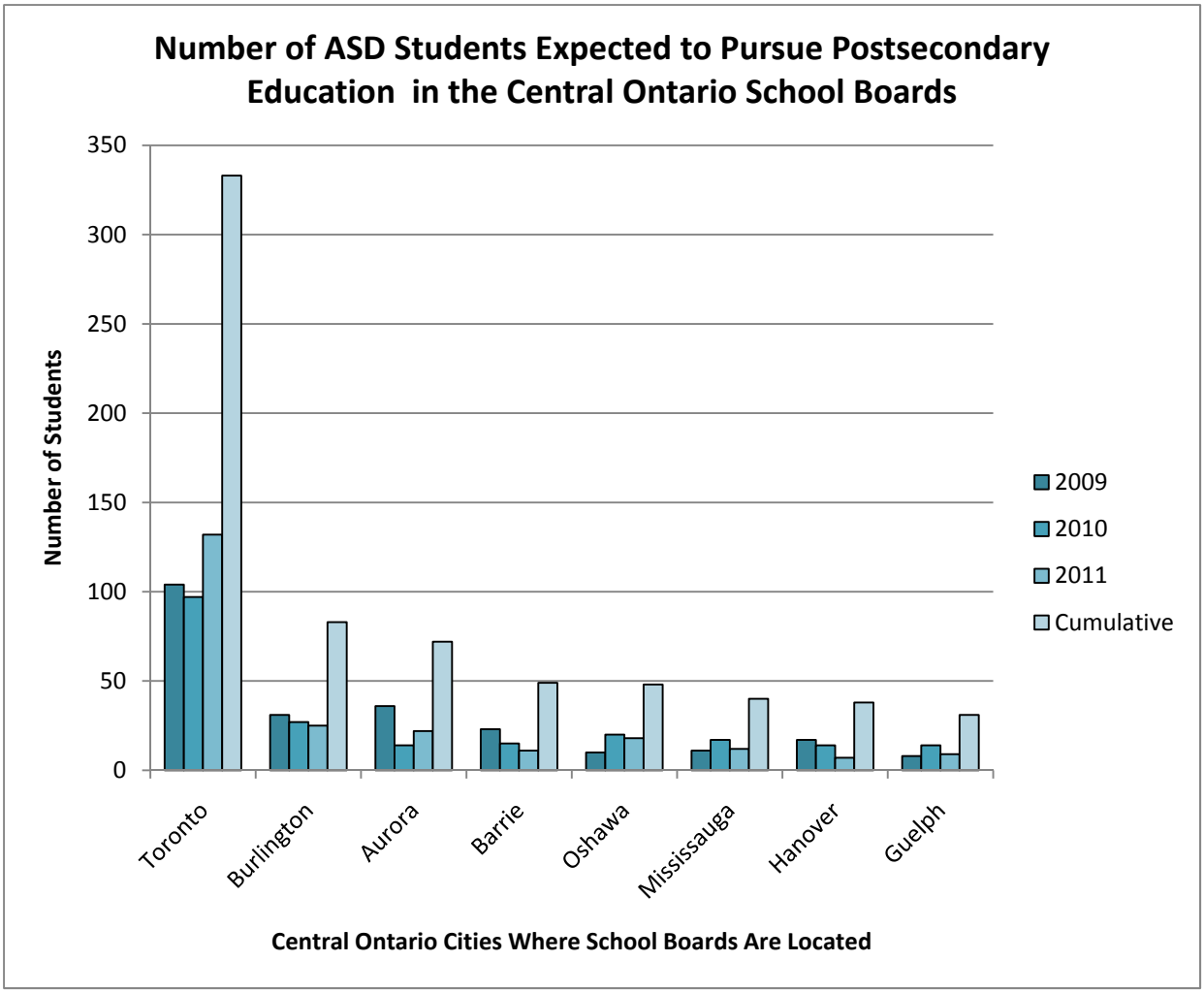
Numbers in Western Ontario were concentrated in Kitchener, at a cumulative number of 46, followed by Windsor, at 32, and St. Catharine's, at 30. However, these numbers may be underestimated, as some of the larger boards that were unable to submit data were in the Western Region.



The second-largest concentration of numbers was found in the Eastern Region, specifically Ottawa, at a cumulative number of 127, and Peterborough, at 68. This is also consistent with the highest numbers of PS students with ASD being concentrated in Ottawa at Algonquin College and Carleton University.



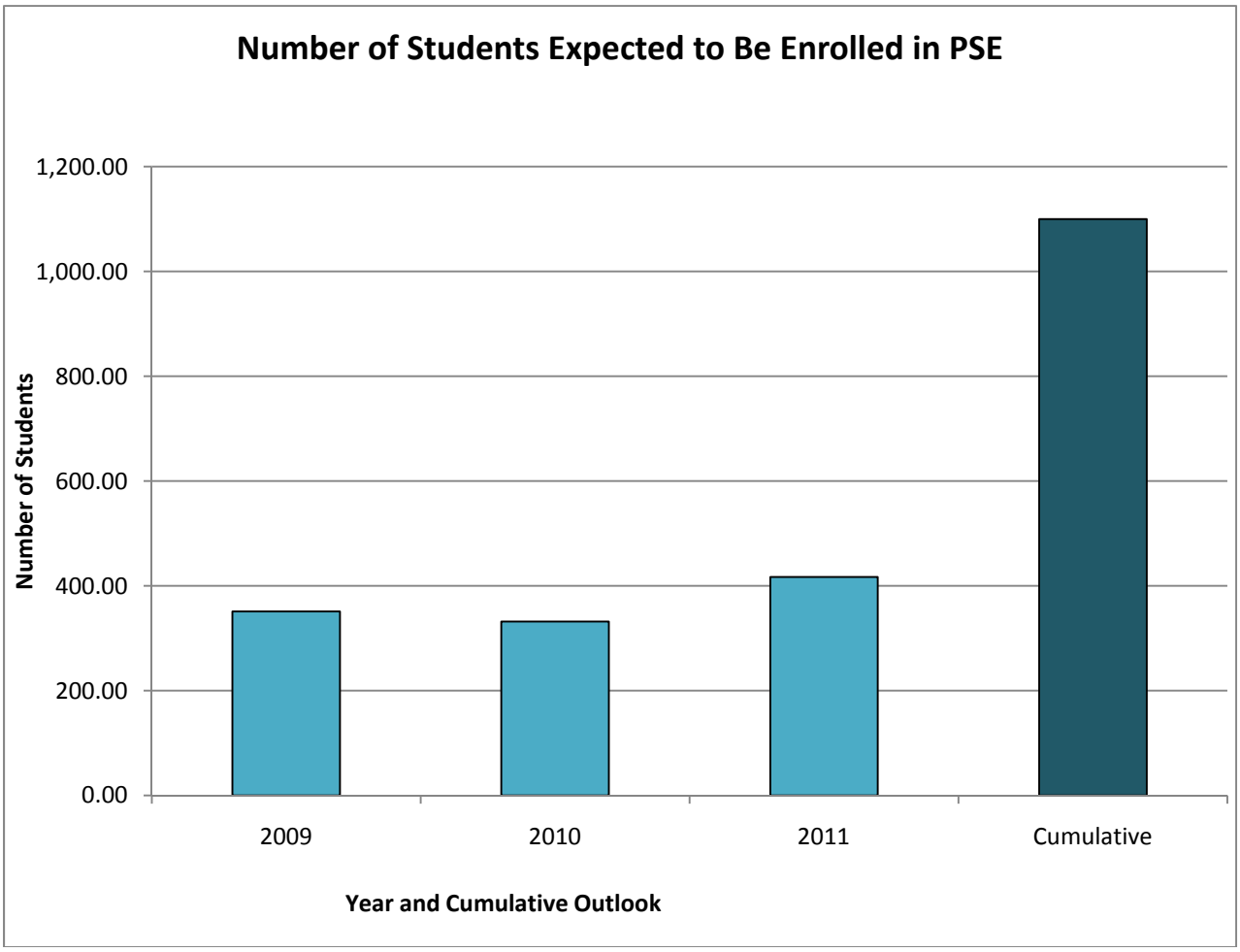
As expected, the largest numbers are found in the Central Region, concentrated in the Greater Toronto Area, at a cumulative number of 333. These concentrations are followed by Burlington, at 83; Aurora, at 72; Barrie, at 49; Oshawa at 48, Mississauga at 40, Hanover at 38 and Guelph at 31. The numbers in this region are underrepresented, as several of the larger boards unable to report are within this region.



The Cumulative Effect

Although the numbers in each of the next three years indicate only a modest increase by 2011, special educators also noted that there was a large "bump" in the numbers entering Grades 7 and 8 in the coming year This would result in a larger overall number entering secondary school over the next few years and potentially an increase in the number entering postsecondary.

An additional concern is the cumulative effect. Most diploma programs take two or three years to complete, and most degree programs take three or more years. Since many students with ASD have a reduced course load as part of their accommodations, this can result in students having to take an additional semester or additional semesters to complete a program. If students entering in 2009 are still enrolled in 2011, there is a potential for a large number of students with ASD being in postsecondary at one time.

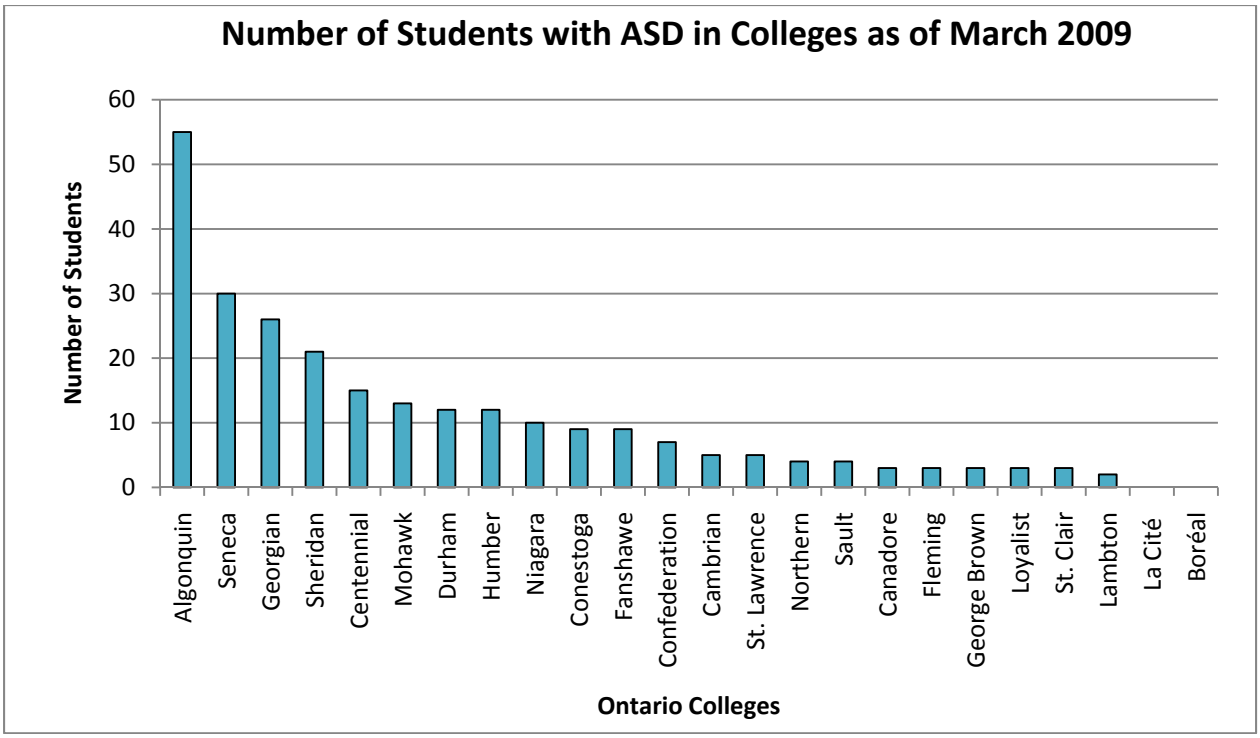


Anecdotally, educators also stated that these figures may be an underestimate of the numbers actually planning to attend postsecondary, noting that students are identified as exceptional only if there is a need for modifications or accommodations.

In the small school setting, for instance, some high-functioning students with ASD do not require any academic accommodations, so they may not be identified. In addition, students with ASD who, in previous years, did not go on to PSE although they had the potential to do so would not have been identified. This number is unknown, but it is reported to be a factor annecodatly by

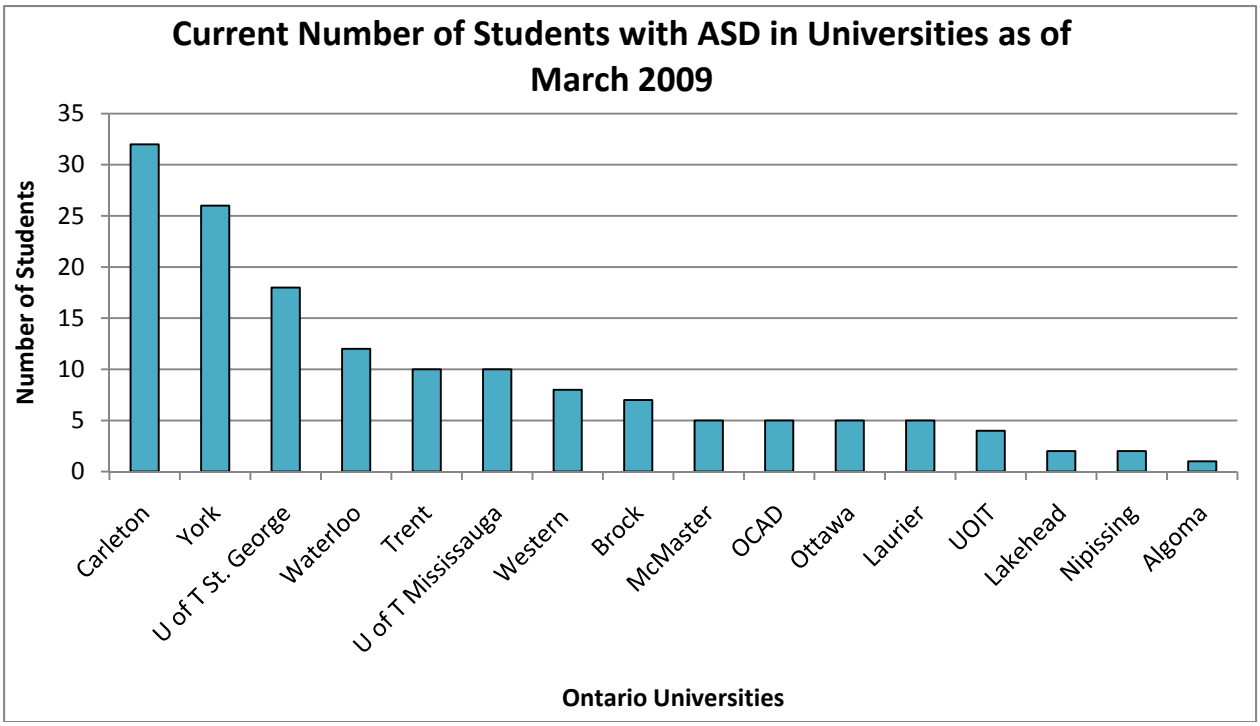
individuals surveyed who indicated that there were adults who would attend PSE if appropriate supports were available.

All 24 colleges (representing 100 per cent of the total full-time enrolment in 2008) and 15 universities (representing 86 per cent of the total full-time enrolment in 2008) completed the survey. Currently, 254 students with ASD are enrolled in community colleges, while universities have 148 students identified. The largest number can be found at Algonquin College, and the next-largest number is distributed throughout the GTA colleges.



Algonquin College had the largest number of students with ASD – almost twice the number of any other college, at 55. Seneca and Georgian followed, with 30 and 26 students, respectively. The number of students with ASD was not strictly related to the size of the institution, as some of the largest colleges had fewer students identified with ASD than some of the smaller colleges.

For the universities, Carleton led, with 32 students reported as having ASD. This was similar to the trend seen at Algonquin College (also in Ottawa), as well as at the school boards in the Ottawa area. York University had the next-highest number of students, at 26, followed by the St. George campus of the University of Toronto, at 17.



Researchers have suggested that some students with ASD may have a high aptitude for learning and are focused on a specific discipline. This may account for the lower incidence of identification in the university setting, as some of these students would do well in their area of interest without supports and would therefore never identify themselves as students with disabilities.

The Postsecondary Reality

Disability staff in many colleges and universities noted the following when asked about services for students with ASD:

- "This group can be very challenging to work with, especially at the beginning. It takes time to know what each needs and by that time, it is sometimes too late – a bad impression has already been made with faculty."
- "We have quite a number [of students with ASD] and faculty are constantly complaining about their behaviour in class – but they never come to the workshops we plan that would help them understand. Very frustrating."
- "I don't have any training in this disorder and wish there was something I could take that wouldn't interfere with my job."
- "Our number is very small but sometimes it feels like double because of the constant need to intervene."
- "I have one student who I see four times a day. This doesn't usually work for the student

as I am booked back to back with appointments and can only squeeze in a few minutes between appointments which is not good. I really don't know what to do about this. We don't have enough staff or staff with the expertise needed."

- "I run a group for some of our ASD students and find it the best part of my week. The students are amazing and really help each other. This needs to be done daily but I just don't have time."
- I look at the number now and what our board is telling us for September and I don't know how we're going to manage it."

The field researcher had the following comments to make after his interviews with educators at school boards and postsecondary institutions.

Notes from the Field Researcher

"[School] Boards have been increasingly gearing up for and successfully meeting, the needs of students with ASD for the past five years and are ramping up resources this year, 2009/10, and next.

For an increasing number of parents, advocates and the students themselves, postsecondary education is seen as a viable, and necessary, next step.

Specialized services and accommodations have been made for students with ASD, and the expectation of secondary school staff and the parents/advocates is that while differing in nature, the postsecondary educational providers will develop similar resources, quiet spaces, dedicated staff resources, support groups, etc.

The message was voiced very clearly by several boards, who told me, "Get ready fast, the numbers are huge." These front-line staff; psychologists, speech and language specialists, child care workers, etc., see a major cohort bulge entering their Grade 8s this year.

College and university staff I spoke to echoed what the boards told me, that many students with ASD would not have contacted our offices and are attending, not necessarily succeeding, in our institutions. In other words, our data collection is very likely an underestimate of the number of students.

I came away with the distinct message that college and universities are faced with a new order of service expectations that will grow very significantly over the next few years and that generally the postsecondary response is at this time viewed by secondary school staff and parents as inadequate to meet the needs of students with ASDs.

College and university staff who are presently engaged with providing services to their identified ASD populations consistently noted that the needs of these students were different than [those of] any other group they had worked with and that the increasing presence of these students was already overtaxing the resources of their DS offices." – Craig Barrett, Consultant

Support analysis at Secondary Schools versus Postsecondary Institutions

The students identified as having ASD who successfully attained an OSSD generally required extensive supports in secondary school. Educators noted that the support of autism specialists, an ASD team and other special educators were very important in supporting students and teachers. In-class educational assistants were also seen as vital. Specific assistance with, and monitoring of, coursework was often done by staff. Frequently, parents also played a pivotal role, and they were often a part of their child's school day and in frequent communication with school staff.

Testing accommodations were often found to be extensive and included rewording and explanation of key points and assistance with recall and formulation of responses. In some cases, the number of test questions may also have been reduced.].

In addition, safe areas were often set aside for these students to access when they were experiencing stress or difficulties. These rooms were monitored by staff and used exclusively for students with ASD.

When these supports were compared to the realities of the postsecondary environment, it became clear that, at colleges and universities, there may be some gaps in the services these students require. Using the categories of human resources, accommodations, professional development, learning environment, instructional considerations and learning strategies training, the following sections outline these observations:

- the services and supports that were deemed "helpful" in secondary schools;
- the current services and supports offered in postsecondary institutions; and
- gaps between services and supports offered in secondary versus postsecondary institutions.

Table 1, which appears at the end of this section (just before "Recommendations"), contains a detailed summary of the services and supports offered at both the secondary and the postsecondary levels, as well as the gaps in service that exist at postsecondary institutions.

Human Resources: Secondary

Human resources appeared to be the most important support found to be helpful for students with ASD at the secondary level. Access to resource teachers and educational assistants were most frequently recommended as important supports for these students in maintaining their integration into regular classes and providing the just-in-time supports required on a daily basis. It was often critical to have a designated mentor whom students could go to in times of stress and who was available to closely monitor the students' social-emotional needs.

In many boards, students with ASD are supported by a large number of specialists at both the elementary and the secondary school levels. Most frequently mentioned in the survey responses was the support provided by school board ASD specialists. Also mentioned as important were a variety of support teams from both community agencies and school board interdisciplinary teams, which included such professionals as speech-language pathologists, occupational therapists, physiotherapists, child and youth workers, social workers and psychologists. Additional supports from within secondary schools are being provided by guidance counsellors, peer mentors and job coaches. It was also noted that this group of students benefits from maintaining regular contact with parents.

Comments from a Parent

As you know, each student with ASD usually has a different medical problem/ concern/issue. Some are repetitive eaters, eating the same foods over and over again for years (i.e., my son has had a diet of 1 banana, 1/2 apple, Rice Krispies and milk, glass of water, glass of milk for breakfast; 1 peanut butter and raspberry jam sandwich, 1 cheese sandwich, 14 grapes, 1 glass of milk and 1 glass of water for lunch; and mashed potatoes and broccoli (with chicken or fish or turkey two times per week is all he'll allow), 1 bun, 1/2 apple, 1 glass of milk, 1 glass of water, for dinner – this has been the same diet for the past 7 years – before that it was a slightly different breakfast for 8 years).

Many have digestive problems, i.e., constipation, overly large stools, leakage accidents, etc. Sensory issues arise with respect to lotions on the skin, earphones over the ears; hats on the head can be a problem, as many have sensory issues with the scalp, and the list goes on.

All of these issues must be taken into consideration when planning for ASD students to attend postsecondary. They also validate the reasons why "safe rooms" and "alternative lunch areas" are important. Private washrooms should also be made available for ASD students.

This is where parents (and high school support staff) have so much to offer. These issues are "little" to the "normal" person but are paramount to a person with ASD, and if all is not as it should be, their day can be negatively impacted with a huge decrease in functioning levels and may cause inappropriate behaviours.

Human Resources: Postsecondary

At the postsecondary level, the primary contact person for students with ASD is the disability counsellor/advisor. Students voluntarily contact the disability advisor to request any services and supports they may need. Together, the student and advisor form a working partnership that requires the student to have the self-awareness to recognize the need for services and the self-management skills to follow through on any recommendations.

However, students have only time-limited access to their disability counsellor/advisor. During busy times of the year, typically at the start of each semester, students may need to wait a few

weeks before getting an appointment to see their disability counsellor/advisor. During the semester, it is not unusual to wait several days for the next available appointment. Appointments are usually weekly or monthly – seldom as often as is required by students with ASD.

Other human resources generally available within postsecondary institutions include tutoring services with general peer tutors (students in their program) and general staff tutors. These tutors are typically not trained in the specific needs of students with disabilities in general or ASD in particular but, rather, are content experts in various subject areas. In addition, most – but not all – postsecondary institutions make support available to the general student body in the form of brief counselling support that can help address academic-related issues connected with stress and anxiety.

Counselling services can also be very helpful in guiding appropriate program selection in order to capitalize on students' learning strengths and interests most effectively. However, most counsellors are not knowledgeable about the unique characteristics of adults with ASD. Therefore, as required and as supports are available, students may be referred for more intensive, community-based supports in the form of counselling, psychiatric and/or psychological services. If these services are available at all, there is usually a six-month or longer wait list for them in most communities.

If possible, it is also helpful for students to be referred for a psychological assessment so that a current learning profile of their strengths and needs can be obtained. This profile can be very useful in building students' self-awareness and in guiding the selection of appropriate supports and services. Unfortunately, at this time, few psychological providers are available who are experienced with the adult ASD population in a postsecondary setting.

A Parent's Advice

I am a parent of a child with autism. My son is 19 years of age and will be returning to Grade 12 for a third time this fall. Even though he could have graduated last year, we are keeping him in the system for the social/communicative opportunities he is able to experience at his secondary school. We are most fortunate to have our son attend a high school that is most supportive of students identified with mental challenges. His personal progress has exceeded our expectations, not to mention his academic achievements. He is now participating in the cooperative education program, which has proved to be a very positive experience thus far. The school's many supports that have been put in place have been paramount to our son's successes.

We have always dreamed, however, that our son could attend a postsecondary institution, not only to achieve scholastically with a goal of obtaining the necessary work skills to secure employment and to become as independent as possible, but also to be able to enjoy and experience the many opportunities of college life as a whole. I am very excited that this dream could become a reality.

As my son's advocate, I have made it a practice to meet with teachers prior to school starting so that my son can meet them, learn where the classrooms are located and get a level of comfort and familiarity prior to school starting. Then, within the first two to three weeks of the start of each semester, I arrange for my son's SERT [special education resource teacher] to set up a meeting with all persons involved with him (SERT, EAs, teachers, the vice-principal and my husband and I). This meeting is for us to provide background information about our son, inform them of his likes and dislikes, his quirks, his eating habits, what may contribute to an unfavourable behaviour, how to handle inappropriate behaviours (including consequences to actions), his sensory issues and to provide ways in which they will be able to reach our son in a positive manner.

Also, with this ongoing dialogue, my family and I are able to converse with our son about the day he has had, which promotes his communication skills. Having him engage in everyday conversation is a skill in itself.

Accommodations: Secondary

Providing accommodations as part of an Individualized Education Plan (IEP) was recommended as helpful for students with ASD. The most frequently recommended accommodation was access to assistive technology and laptop computers. Both screen-reading software and voice-recognition software were recommended in some situations to support reading and writing skills. Also frequently recommended was the need to provide support during transition periods.

Among other helpful accommodations was that of allowing students with ASD to complete their secondary school diploma (OSSD) over a longer period of time by maintaining a reduced course load. A variety of testing accommodations were also provided, including extra time, a distraction-reduced environment, oral or scribed tests and clarification or paraphrasing of test questions. Also suggested were accommodations for supporting note taking, including recording

of lectures and having a note taker. Students with ASD may also require extra time to complete assignments and projects, and they are most often supported by an educational assistant in the classroom.

Students with ASD are reported to have difficulty when transitioning from Grade 8 to Grade 9 and when moving away from secondary education into either the workplace or postsecondary education. They also experience problems moving from semester to semester and grade to grade in general (not just from Grade 8 to Grade 9). Guided pre-visits close networking and peer mentoring were found to be helpful in supporting students' adjustment during these periods.

Accommodations: Postsecondary

Postsecondary students with disabilities are accommodated in order to provide them with equal access to educational learning opportunities, as required under the Ontario Human Rights Code. However, students with ASD must have documentation of their diagnosed disability in order to be eligible for these accommodations. Accommodations are unique to each individual and are provided in an attempt to minimize or eliminate any disadvantages that occur as a result of their disability. Nevertheless, students with disabilities are expected to accomplish the "essential requirements" of their programs. Program modifications are not possible, as learners must meet the learning outcomes as stated and approved.

As required, students with ASD are accommodated with access to assistive technology and/or laptop computers as recommended by the assessment. Other accommodations include reduced course load, some consideration for extended time for assignments, copies of instructor's (if available) and/or classmates' notes, recording of lectures, general orientation programs and testing accommodations (such as extra time, assistive technology/ computers, scribing/oral tests, distraction-reduced environments. More extensive testing accommodations such as rewording, requiring fewer responses or otherwise changing the exam are not available, as these adjustments, more usual in secondary schools, would not be relevant in helping the student meet "essential requirements" of the curriculum.

It should be noted that students with ASD may suffer negative financial impacts when course load is reduced and additional time is therefore spent in a program because of all the associated educational and living costs. Employment income may also be delayed because of extended time spent acquiring education qualifications.

Professional Development: Secondary

Interwoven throughout the recommendations was a strong emphasis on the need for professional development. Teachers appeared to support students with ASD more effectively when they had a greater awareness of the characteristics and needs of these students. Learning how to manage behaviour problems with Applied Behaviour Analysis (ABA) and

learning to provide individualized instructional supports through Differentiated Instruction were both found to be helpful.

Professional Development: Postsecondary

Professional development for postsecondary disability service providers concerning awareness and supports for students with disabilities in general (including ASD) is available through conferences, workshops and seminars, as well as through journals, books and web articles. As the population of students with ASD continues to grow, disability service providers have more frequently sought out the professional development needed to support them. Generally, disability service providers are fully committed to their existing duties in supporting a large number of persons with disabilities and are unable to engage in the training required to become "ASD coaches" or "ASD specialists." This skill set is rarely available in PSE. No professional development in ASD is mandatory for professors and other instructors at the PSE level, though voluntary opportunities are available for self-managed learning.

Learning Environment: Secondary

Environmental considerations were another frequently mentioned theme among survey respondents at the secondary level, including the need to have a physical location where students could go to reduce sensory input (sensory friendly, calming or "time-off" rooms). These rooms allow students to remove themselves from stressful environments before they become overwhelmed and escalate into behavioural outbursts. Also mentioned was the need for preferential seating in classrooms in order to reduce distractions. Students with ASD are reported to benefit from clearly structured days with predictable routines, along with flexible timetabling, to allow for such things as later starts, earlier leavings and/or periodic breaks. Online courses and courses developed locally (at the school board level) enabled some students to be more successful. Students were also said to benefit from the opportunity to participate in cooperative education and work experience, especially when supported appropriately with mentoring or job coaching.

Learning Environment: Postsecondary

Students with ASD attending postsecondary institutions benefit from taking a reduced course load. Registering in fewer courses at one time provides some opportunity to individually structure timetables, so that start and end times can be tailored and periodic breaks can be built in during the day. It is very helpful to maintain, as much as possible, a predictable routine within a clearly structured day. However, in many programs, this may result in students having to spend additional years to complete a diploma/degree, since many courses have prerequisites that are offered only at specific times.

It is also helpful for students to have the opportunity to leave the class whenever they need to reduce their situational stress, though the expectation would be that they would still be personally responsible for obtaining any class information they may have missed as a result of leaving.

Few campus locations have a “time-off” room, where students with ASD could have a safe and quiet place to de-stress. Preferential seating is self-managed, so students need to be aware of their needs and plan when entering a classroom.

Some students have profited from taking online courses, as these provide them access to information within a computer-based learning environment while reducing the need for social interaction. However, only a limited selection of courses may be available, and they may be offered infrequently – thus extending the duration of a student’s program.

Students with ASD benefit from practical work experiences and this need can be met by many postsecondary programs, which incorporate work placements into their program graduation requirements. This is especially true at the college level. Students with ASD may require job coaches to help them prepare for, and adjust to, the demands of these new learning environments and to help them complete required placement components. However, job coaches are not currently available in most postsecondary environments.

Instructional Considerations: Secondary

Appropriate instructional strategies also offer effective support to students with ASD. In the survey responses, there was frequent mention of the need to provide visual supports such as graphic organizers in order to facilitate comprehension and help students develop organizational skills. It was also suggested that tasks be broken down in order to make them more manageable and to provide examples of finished products. Effective instruction provided choice and options to build on students’ strengths and interests. When working within groups it was very important that instructors provide clarification of the students’ roles and expectations. It was also helpful for some students to be provided with clarification of concepts and a reduced number of assignments.

Instructional Considerations: Postsecondary

Postsecondary learning requires students to assume greater responsibility for their own learning. As a result, students with ASD need to develop an awareness of their own learning needs in order to choose to access the supports and services they require. At students’ request, they can have access to general tutors, who will repeat, review and/or clarify concepts presented to students in their classrooms. However, availability of such tutors is limited and restricted by schedules.

At the postsecondary level, there is no opportunity to direct the type of instruction supplied by professors. Therefore, students need to adjust their learning to the existing teaching style.

Postsecondary studies do offer the advantage of providing more specialized learning opportunities. This can allow students to select programs that focus more on their particular learning strengths and interests.

Learning Strategies Training: Secondary

Survey respondents also pointed to learning strategies training as a meaningful support at the secondary level. This training is being provided either within learning strategies courses or as part of the individualized support received from resource teachers and/or educational assistants. Respondents frequently noted that students benefit from specific instruction in social skills. Students also needed to learn effective methods of self-managing their sensory issues, and many required training in organization and time management skills. Other areas where it was indicated that students would benefit from training included learning how to structure written assignments and developing problem-solving skills.

Training in self-advocacy skills was also presented as being important. These skills give students the greater independence required for success in the workplace and within postsecondary education.

Learning Strategies Training: Postsecondary

At the postsecondary level, disability counsellors/advisors are available to guide students as they develop problem solving and self-advocacy skills. However, they are available only on a limited schedule, as each disability counsellor/advisor generally has a caseload in excess of two hundred students with disabilities.

Students with ASD who also have coexisting learning disabilities are eligible for an enhanced level of service. This includes training in learning strategies that would address any documented processing or academic skills deficits in executive functioning (planning, organization, self-monitoring and evaluation), mathematics, reading, oral language and/or written expression. At the postsecondary level, such learning strategies training is typically structured in weekly or biweekly hour-long sessions or group workshops.

However, this delivery model is often not sufficient to meet the more intensive transition needs that students with ASD have as they learn to deal with the demands of postsecondary learning environments. Learning strategists are most often trained in learning disabilities but not in ASD.

Best Practices and Service Gaps at the Postsecondary Level

Human Resources

It appears that future planning concerning best practices for meeting the needs of students with ASD as they enter postsecondary environments should focus on enhancing the availability of human resources. (This conclusion is based on recommendations provided by the secondary schools and by some college and university staff with experience in ASD.)

Staff with Specific ASD Training and Job Description to Support Students with ASD

Most postsecondary institutions do not employ specialists who have been trained in meeting the needs of students with ASD. Even within institutions that have knowledgeable staff, these support providers are often restricted by assigned duties and service provision models that limit their availability. To help meet the needs of students with ASD, “autism spectrum disorder specialists” could be created and designated as the primary support for students with ASD. In this capacity, they could act as coordinators for all the required services and supports. For the greatest effectiveness, this position should be structured to allow for maximum flexibility so that students could more easily be provided with a “safe haven” in times of stress. ASD specialists could be employed at institutions where a large number of students are identified as having ASD.

Partnership with Parents

As students with ASD enter postsecondary adult learning environments, it is expected that they will advocate for themselves without parental intervention. However, this letter-of-the-law application is not always in the best interests of these students, especially during the crucial transition period.

An active partnership involving designated disability service staff, students and their families can provide important insights upon which to build an effective support plan. Although direct contact with parents is permitted when the student has completed and signed a “release of information” consent form, the expectation is that consultation with parents will be infrequent. But in the case of students with ASD, contact with parents may need to be frequent – even daily – and it may need to include face-to-face meetings. These meetings and/or a set communication system can be very helpful in overcoming any hurdles experienced during the transition period.

In preparation for the even greater demands for independence required in the workforce, this networking needs to be gradually reduced as students learn to self-manage and self-advocate to meet their own needs.

Learning Environment

Another best practice recommended for secondary schools was the creation of sensory-friendly rooms. These “time-off” rooms provide a location within schools where students can go to calm themselves when they are feeling stressed due to sensory overload or overly demanding social expectations.

These rooms are generally not available within postsecondary institutions at this time. In planning for the future, however, it would be very helpful to designate locations where students with ASD could go for sensory regulation. Such rooms would typically have bare walls (no high-contrast colours, no reflective surfaces, no windows), noise reduction (soundproof and with white-noise machines), uniform lighting (flicker free, no fluorescent lights) and soft flooring, and they would be relatively smell free. They could also contain a variety of objects (computer, rocking chair, yoga mat, etc.), which students could use to further calm themselves. These would be most helpful on campuses where a larger number of students had ASD.

Some schools have also effectively supported students with ASD by providing an alternative lunch space – away from the overstimulation of large crowds. Within their classrooms, some students also use “stress fidgets” such as a rubber ball, hand held game, or a piece of textured cloth which can be touched or squeezed to reduce stress. This reduces their anxiety and enhances their focus. These “stims” serve an adaptive purpose and should be allowed as long as they are not disruptive.

It is also helpful to arrange for preferential seating in some classrooms when this is needed to reduce distractions and sensory overload.

Instructional Considerations

Recommendations from the secondary schools included the suggestion that close monitoring of social-emotional needs is often crucial to the success of students with ASD, particularly during transition periods. However, this level of monitoring is generally not part of the responsibilities of postsecondary-level instructors. Faculty would usually refer students with perceived emotional needs to counselling and/or disability services for more intensive monitoring and support.

Given time restraints, specific content-related demands and their teaching styles, some faculty may also find it difficult to provide specific supports within their classrooms. It would therefore be advisable for students with ASD to have specialized instruction by trained tutors or coaches who are familiar with their specific learning needs.

Learning Strategies Training

Providing training in learning strategies was frequently mentioned by secondary schools as a helpful support for students with ASD. However, ASD-specific training in learning strategies is not presently available at most postsecondary institutions.

The current model of providing learning strategies training may therefore not be sufficient to meet the needs of this group of students. ASD-specific learning strategies training would be most effective if it was delivered in a manner that was flexible enough for support personnel to work more intensively with the students during transition periods.

In order to provide this service, there is a need for ASD specialists or ASD coaches with sufficient time, resources and training to work with these students. They could provide any necessary training in social skills, awareness and coping strategies for sensory needs, communication skills, organization, time management, structuring of written assignments, problem solving and/or self-advocacy skills.

The following suggestions from a parent of a student with ASD heading into college in the near future reveal some of the expectations some parents may have. However, several of these suggestions would be difficult to operationalize in most settings. Methods of harmonizing parental expectations with the realities of adult students in a postsecondary environment therefore need to be developed in relation to individual student needs and the reality of each campus.

Words of Advice from a Parent

Successes happen for ASD students when many of the following supports and practices are in place:

1. *Ongoing communication with parents/guardians. These parents/guardians are excellent resources that should be taken advantage of to learn everything possible about the student with ASD.*
2. *Understanding teachers willing to learn how to reach the student with ASD.*
3. *A trained overseer (or two) whom these students trust and feel they can go to in times of anxiousness. When issues arise, social stories[3] can be most helpful to ASD students, helping them to understand their concerns and how to overcome any problems.*
4. *EAs (education assistants) are probably the most important people that can help the students with ASD (other than the parents/guardians). They are the people who spend the most time with the students, getting to know them on all levels, and with whom the students build strong and trusted bonds. EAs at the postsecondary level are vital to these students' successes.*

[3] Social stories are real life examples that are used to help people with autism and other social disorders understand an otherwise confusing social interaction. The goal is to help the individual understand the event and develop appropriate responses.

5. *Peer mentoring is also very positive. Students who sign up to be a peer mentor are interested in ASD and have a desire to help these mentally challenged students.*
6. *ASD specialists or ASD coaches would be very beneficial to these students and could help them with: social/communicative skills, coping strategies for anxiousness and stress, learning strategies with respect to assignments and time management, organization and how to advocate for themselves, to name a few.*
7. *It can be very difficult for a student with ASD to "ask for help," but with patience and understanding, and learning how to teach the student this skill, frustration for all parties can be eliminated.*
8. *Alternative lunch area where it is not so congested, possibly containing computers, board games, cards.*
9. *A resource room that is sensory friendly for reducing stress levels and anxiety can be very beneficial, including low lighting, no windows, pastel-coloured walls, soft flooring, computers with earphones to block out distractions, soft flooring, etc.*
10. *At least a two-week orientation/transitional period, where students get into a rhythm and routine prior to the office start of school. Secondary school SERTS, EAs and teachers would be wonderful resources in this process, as well as the parents/guardians. Included in this orientation period should be a video of "a typical day at college," showing the high number of students that actually attend college – this shows the students what it will really be like when they attend college on opening day. Another orientation should be done prior to the start of the 2nd semester, which, of course, can be much shorter.*
11. *Breaking down expectations, homework, duties, etc., into a step-by-step process in a language level of no greater than a Grade 5 level.*
12. *Many ASD students have problems with vocabulary comprehension. The higher the grade, the higher the level of vocabulary. This presents obstacles to students with ASD. Redefining/simplifying the expectations in a level of vocabulary these students can understand easily eliminates this problem.*
13. *Online courses might be good for some, but ASD students are lacking in social/communicative skills, which are vital to successful community living; therefore, physical attendance at a college or university is the most beneficial in the long run.*
14. *Reduced course load and practical work experiences are excellent benefits for students with ASD.*
15. *The privacy issue should not be in effect when it applies to students with ASD. A partnership with parents/guardians is vital to the student's success. Parents are unable to help with any concerns or issues that may arise if they are not informed.*
16. *It would be very helpful if parents could have their child undergo a psychological assessment in Grade 11 or 12 (prior to the student attending college/university).*

Table 1 – Summary of Services and Support Offered in Secondary Schools and Postsecondary Institutions

Categories of Services and Supports **Human Resources**	
Helpful Services and Supports at Secondary School	• resource teacher support • educational assistants assigned to student • designated mentor that they can go to in times of stress – "Safe Haven" • school board ASD teams or specialists • consultation with community-based agencies • interdisciplinary team consultations: speech-language pathologists, occupational therapists, physiotherapists, child and youth workers, social workers, psychologists, etc. • guidance teachers • regular contact with parents • peer tutors or mentors • job coaches
Current Services and Supports at Postsecondary level	• disability counsellor/advisor (time limited) • general tutoring (peer and staff) • brief counselling support (not ASD specific) • referrals for more intensive community counselling support (if available) • referral for psychological assessments (if available)
Service Gaps in PSE	• autism specialists not generally available • designated staff with flexibility and availability to provide "Safe Haven" in times of stress not provided • no access to community-based agency supports with a mandate for adult support in most areas • no regular contact with parents generally arranged • ASD-specific tutoring and peer mentoring not available • no classroom assistants with ASD experience • no job coaches for placements • few psychological service providers current on adult recommendation for postsecondary environment

Categories of Services and Supports Accommodations (Individualized Education Plan)	
Helpful Services and Supports at Secondary School	• assistive technology and/or access to computer laptops • transition supports • reduced course load • extended time for tests and assignments • scribing or oral testing • distraction-reduced environment for tests • clarification or paraphrasing of test questions • note taker • recording of lectures
Current Services and Supports at Postsecondary Level	• assistive technology and/or access to computer laptops on a scheduled or limited basis • general orientation programs not specific to ASD needs • reduced course load • testing accommodations (scribing/oral, distraction-reduced, extra time) • copies of instructor's and/or classmates' notes when available • recording of lectures when appropriate
Service Gaps in PSE	• no ASD-specific orientation programs currently available • Tutors are peers or generalists, not trained in the specific needs of students with ASD • Class sizes may make recording of lectures problematic in some situations
Categories of Services and Supports Professional development	
Helpful Services and Supports at Secondary School	• staff training to develop awareness of ASD • training in behavioural strategies (e.g., ABA) • training instructional strategies (e.g., Differentiated Instruction)
Current Services and Supports at Postsecondary Level	• awareness training for disability service providers on an individual basis

Service Gaps in PSE	• Faculty PD on ASD for awareness and specific instructional strategies such as Universal Design for Instruction is done only on a voluntary basis. • Awareness training for residence and security staff specific to ASD potential issues not provided in general
Categories of Services and Supports **Learning Environment**	
Helpful Services and Supports at Secondary School	• sensory friendly, calming or “time-off” room • access to resource room • alternative lunch space • preferential seating arrangement – away from distractions • clearly structured day, with predictable routines • flexible timetables, with periodic breaks, late starts and/or early ends • opportunity to leave the class when needed to reduce stress • online courses • locally developed courses (developed at the school board level to accomplish specific goals for students with exceptionalities who can’t access regular programs) • cooperative education and work experiences
Current Services and Supports at Postsecondary Level	• reduced course loads to adjust start/end of days and allow for periodic breaks if possible (However, this may have implications for program requirements and length of time in program.) • opportunity to leave the class when needed to reduce stress • online courses for some courses • program placements (where part of a program)
Service Gaps in PSE	• sensory-friendly, calming or “time-off” room not available in most campus locations due to restrictions on space availability and lack of staff to monitor • alternative lunch space not available • preferential seating arrangement – away from distractions (currently self-managed and not always

	possible in some classroom settings) • insufficient institutional community understanding of the need for withdrawing from some situations due to stress • limited number of online courses available and little student support for these • ASD specialists not available to prepare and monitor placements (in addition to program staff) • no specialized orientation, course or program developed for students with ASD who require specialized transition experiences • insufficient support to promote adjustment in the residence environment
Categories of Services and Supports **Instructional Considerations**	
Helpful Services and Supports at Secondary School	• monitoring of social-emotional needs • providing visual supports to facilitate comprehension • providing graphic organizers • breaking tasks down to make them more manageable • providing models of finished products • building on strengths and interests with differentiated instruction • repetition or clarification of concepts • clear expectations • reduced number of assignments • clarification of roles for group work
Current Services and Supports at Postsecondary Level	• self-managed, limited access to general tutors for repetition or clarification of concepts when available • program selection in order to build on learning strengths and interests
Service Gaps in PSE	• insufficient monitoring of social-emotional needs • no ASD-specific tutors/coaches for graphic organizers, breaking tasks down, etc.

Categories of Services and Supports Learning Strategies Training	
Helpful Services and Supports at Secondary School	• social skills • managing sensory issues • organization and time management skills • structuring written assignments • self-advocacy skills • problem-solving skills
Current Services and Supports at Postsecondary Level	• disability advisors/counsellors available to guide development of problem-solving and self-advocacy skills on a very limited basis • LD-specific learning strategies training for students with coexisting learning Disabilities on a limited basis
Service Gaps in PSE	• no ASD-specific learning strategies or training/coaching in social skills, management of sensory issues, organization, time management, structuring written assignments, etc.

Recommendations

> *The voice of students with autism spectrum disorder should be an integral part of activities; we need to understand their needs through their experiences to promote authentic interventions and supports.*

There is no doubt that increases will be seen over the next three years in the numbers of learners with ASD graduating from secondary schools who have the prerequisites to enter Ontario's colleges and universities. At this time, the cities with the largest populations of students with ASD include Toronto, Ottawa, Barrie, Peterborough, Sudbury, Windsor, St. Catharine's, Kitchener, Aurora and Brockville. Other areas may also be identified as having large concentrations when all school boards are able to respond with transition information and expected numbers. All areas, with the exception of the Far North, are expected to experience growth over the next few years.

In many instances, students with ASD may be more likely to choose colleges over universities since the great diversity of applied programs can be appealing to these learners for a variety of reasons. However, a considerable number of students with ASD also enter university settings. They most often choose institutions close to home with smaller class sizes.

These students present with largely social-based problems. Anecdotal information indicates that some students with ASD are of concern to faculty and classmates, as they present with characteristics that could lead to security issues. Some colleges and universities have already reported difficulties in residences, classrooms and with placements. Students with ASD also require special consideration when institutional emergency plans are being developed.

However, information from the secondary schools does indicate that these students can prosper and succeed when the appropriate supports and services are in place. In view of the well-structured disability supports built up in Ontario over the past 20 years, the infrastructure is already available for these learners; all that is required is the application of various specialized supports to promote their success.

These recommendations should be considered in the context of the numbers of students with ASD at a given campus.

1. Staff Trained as ASD Coaches

Staff with specialized ASD expertise would be able to work within existing Disability Offices to support students, staff and faculty. The focus could be on students with ASD, but the individual or individuals in this position could also assist other students with disabilities. ASD-specialized

staff would carry out the following services:

- coordinate specialized activities related to learners with ASD, such as orientations
- develop social programming and supports as required
- recruit, train, schedule and support peer mentors and tutors with specific information about providing supports to students with ASD
- be available to provide a supportive environment during stressful times with just-in-time counselling and interactions
- support transition issues into the institution, between semesters and into the workplace
- support residence and security staff with issues related to students with ASD
- assist in providing professional development to institutional personnel as required
- link with parents and agencies
- provide learning supports as required

2. Professional Development in General

Colleges and universities should encourage and support a collection of comprehensive learning materials for adults with ASD to be made available to all institutional staff – especially disability staff, faculty, security and campus housing. Workshops, conferences and/or coursework should be promoted within institutional professional development guidelines.

3. Institutional Space

Each campus location that has a concentration of students with ASD should have an area that is devoted to students with ASD who require a safe place to retire to when activities are stressful. This space could be co- located with tutoring, peer mentoring or other activities to support academic and social integration.

4. Transition Opportunities

Every institution should develop an orientation activity targeted and marketed directly to students with ASD. This could vary with each institution, based on demand, and could be any of the following, depending on the needs of the learners and the population:

- Where feasible, a college could develop and offer a specialized “Transition” program to provide for transition activities in a supportive environment that could lead to the workplace or further postsecondary activities. An institution would likely offer this where there is a high concentration of learners with ASD.
- Summer orientations could be developed to prepare those who would benefit from a more in-depth transition, especially those coming from out of town. This type of orientation could be offered by every institution with a number of students with ASD who evidence a willingness to attend such an orientation.

- Some orientation should be planned for each semester.
- Specific orientation should be provided that would lead to the workplace upon graduation and that would link students with community resources if beneficial.
- Specific links and accountability should be set up between school boards and local PSE institutions to develop information that will help in planning and preparation for successful transition.

5. Parent Partnership Development

Parents should be specifically invited to plan for their son's or daughter's postsecondary experience on a regular basis. They should be welcomed to the extent that they wish to participate and that their son or daughter wishes to have them participate.

At institutions that have a concentration of students with ASD, consideration should be given to activities that would promote parent education concerning the transition to postsecondary prior to the year in which the student with ASD graduates from secondary school.

6. Psychological Practitioners Development

There are relatively few practitioners with extensive experience in the assessment of adult learning disabilities, particularly within a postsecondary setting. However, the Regional Assessment Centres at Queen's University and Cambrian College have provided a model and training opportunities for practitioners working in this area. It is likely that relatively few practitioners are sufficiently experienced with the ASD learner profile in the case of students who are *adults*. Professional development activities should be made available for psychological practitioners who wish to become more familiar with the postsecondary needs and supports requiring consideration as part of the recommendation section of assessments that will support the learning and success of adults with ASD.

7. Directions for Future Research

Future research activities could include any of the following:

a. Case studies of students in a large area such as Toronto or Ottawa to establish some baseline data about the numbers, course loads, program selections, supports required and success rates of the present cohort of students with ASD.
b. A follow-up of this study, to see how many of the estimated students actually went on to post secondary education and who presented at the Disability Office for services, and to quantify with the Ministry of Education the numbers expected to graduate with an OSSD by 2012-2015 as a result of the reported increase in the numbers of students with ASD currently in Grade 8.
c. A study that would include the "student voice," to determine from their perspective what their needs are and to discover how they have reacted to the requirements of

postsecondary – including lessons learned.

d. A study that would determine what components should be included in a “transition program” (such as a one-year certificate program) that would promote successful transition.
e. A research symposium to bring together the collective knowledge on providing services to this group of adult learners and to disseminate emerging best practices.
f. A training opportunity developed for postsecondary staff, such as an ASD coaching certificate for adult learners in postsecondary or in the workplace.
g. Other topics that would clarify the impacts of ASD conditions and behaviours when the student is in a postsecondary environment. This would include such items as the importance of pragmatic language, the social implications of repetitive movements, general social implications in a campus setting (both in class, in residence and in student life) and the impact of co-morbid conditions on learning and supports.

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Appendix A

Survey Distributed to Secondary Schools

NOARC/CÉRNO

Northern Ontario Assessment and Resource Centre
1400 Barrydowne Rd
Sudbury, ON P3A 3V8
Canada
(705) 560-1889 – TTY
(705) 524-7397 – Telephone
(705) 524-6779 – Facsimile

Centre d'évaluation et de ressources du Nord de l'Ontario
1400, rue Barrydowne
Sudbury, ON P3A 3V8
Canada
(705) 560-1889 – ATME
(705) 524-7397 – Téléphone
(705) 524-6779 – Télécopieur

noarc-cerno@cambrianc.on.ca

ASD Questionnaire
Secondary Schools

This questionnaire is part of a study to determine the number of students with ASD who are expected to enter colleges and universities in Ontario in 2009, 2010, 2011.
It is also designed to determine those accommodations and services which secondary schools are currently finding to be supportive of students' success within their institutions.

Autism Spectrum disorder is a neurological disorder resulting in developmental disability. This affects: Communication Social understanding Behaviour, activities & interests (http://autismsocietycanada.ca/)
Terms used to refer to various Autism Spectrum Disorders (ASDs) can be very confusing at first: one will hear terms such as: autism, classic autism, high functioning autism, Autistic Disorder, Asperger Syndrome or Asperger's Disorder, Pervasive Developmental Disorder (PDD), and/or Autism Spectrum Disorder (ASD)

The term **"spectrum"** refers to a continuum of severity or developmental impairment. Children and adults with ASDs usually have particular communication and social characteristics in common, but the **conditions cover a wide spectrum, with individual differences in:**

- Number and particular kinds of symptoms
- Severity - mild to severe
- Age of onset
- Levels of functioning
- Challenges with social interactions

Individuals with ASDs have varying degrees of difficulty in social interaction and communication and may show repetitive behaviours and have unusual attachments to objects or routines

Individuals with ASDs have varying degrees of difficulty in social interaction and communication and may show repetitive behaviours and have unusual attachments to objects or routines.

1. Board Name: _____

2. Contact person completing questionnaire:
    a. Name:_____
    b. Phone:_____
    c. E-mail address:_____

1. What is the number of students enrolled in secondary schools in your Board, as of September, 2008, who have a diagnosis of Autism Spectrum Disorder? _____

2. Of that number, how many do you expect will be graduating with an OSSD:
    - In June 2009_____
    - In June 2010_____
    - In June 2011_____

3. Of that number, how many students do you expect will be seeking entrance into a college or university?
    - In June 2009_____
    - In June 2010_____
    - In June 2011_____

4. Outline services and supports that students with ASD are finding helpful in your school.

    - _____
    - _____
    - _____
    - _____
    - _____

Do you have any additional comments?:_____

_____

May we contact you for clarification?_(name, e-mail & phone #)

Appendix B

Survey to Disability Offices, Colleges & Universities in Ontario

ASD Questionnaire
Colleges & Universities

This questionnaire is part of a study to determine the number of students with ASD who are expected to enter colleges and universities in Ontario in 2009, 2010, 2011.
It is also designed to determine what accommodations and services colleges and universities are currently finding to be supportive of students' success within their institutions.

Autism Spectrum disorder is described as: (http://autismsocietycanada.ca/)

Terms used to refer to various Autism Spectrum Disorders (ASDs) can be very confusing at first: one will hear terms such as: autism, classic autism, high functioning autism, Autistic Disorder, Asperger Syndrome or Asperger's Disorder, Pervasive Developmental Disorder (PDD), and/or Autism Spectrum Disorder (ASD)

The term **"spectrum"** refers to a continuum of severity or developmental impairment. Children and adults with ASDs usually have particular communication and social characteristics in common, but the **conditions cover a wide spectrum, with individual differences in:**

- Number and particular kinds of symptoms
- Severity - mild to severe
- Age of onset
- Levels of functioning
- Challenges with social interactions

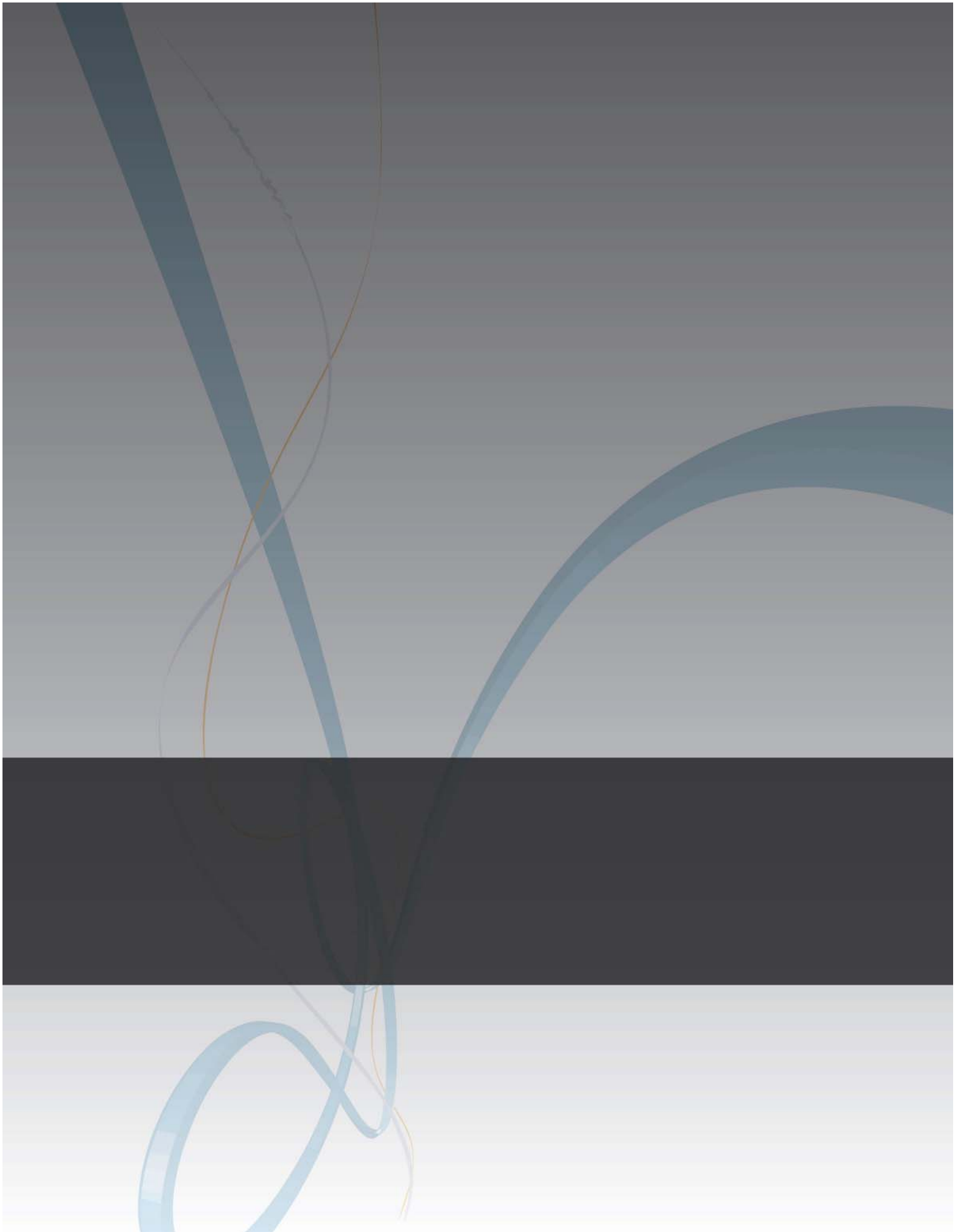
Individuals with ASDs have varying degrees of difficulty in social interaction and communication and may show repetitive behaviours and have unusual attachments to objects or routines.

1. What is the number of students enrolled in your institution who are receiving services through the Disability Service who have a diagnosis of Autism Spectrum Disorder as of January 2009? _____ (if you have numbers for previous years, please include here _____ 2008; _____2007.

2. Outline services that students with ASD are finding helpful in your institution (DSO services and other institution services may be identified).

    a. _____

    b. _____

    c. _____

    d. _____