Insights and Strategies to Support Students with Autism Spectrum Disorder in Post-Secondary Contexts: A Canadian Perspective

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Abstract

The number of students with Autism Spectrum Disorder (ASD) entering post-secondary institutions is increasing, but students with ASD are struggling more than their typically developing peers, with high rates of mental health challenges and a lower graduation rate. This study's purpose is to understand the learning needs/experiences of students who identify as being an individual with, or having a formal diagnosis of ASD, while highlighting perspectives of faculty members and students from Sheridan College. Our research finds that the learning experiences of students with ASD at Sheridan are impacted by: (a) Environmental stressors, (b) Gaps in transitioning from high school to college, (c) Lack of access to leadership opportunities, (d) Lack of awareness or understanding of available supports, (e) Inadequate quiet spaces to support sensory and emotional needs, (f) Difficulty navigating inconsistent approaches in academic accommodation implementation, (g) Too much onus being placed on students to prove their need for accommodations, and (h) Difficulty navigating multiple platforms in the online learning context. Faculty participants' responses revealed factors and strategies that have impacted their experiences teaching students with ASD including: (a) Building rapport and cultivating trust to encourage open communication and discussion regarding accommodation needs, (b) Recognizing challenges with group formats and allowing choice in group selection or foregoing mandatory group work, (c) Understanding stressors and strategies to support students' social, communication and emotional challenges, (d) Collaboration with student affairs and Accessible Learning (AL) to support students with ASD, (e) Applying strategies learned in previous training and community employment to support students with ASD.

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Introduction

Post-secondary educational institutes have seen an increasing number of students with ASD joining their campus communities. To understand this phenomenon, some researchers have looked at factors behind the rising numbers. One factor relates to a greater number of people being diagnosed with ASD; a study by Hallahan et al. (2020) suggests that the increasing prevalence of ASD diagnoses is related to greater professional and public awareness, a more liberal diagnostic criteria and inclusion of individuals who were previously diagnosed as intellectually challenged (Para. 6). Although there are no definitive statistics, several studies suggest that the percentage of individuals with ASD has significantly increased in recent decades (U.S. Centers for Disease Control [CDC], 2009, as cited in White et al., 2011, p. 683). The Center for Disease Control found that approximately 1 out of every 166 children were diagnosed with ASD in the United States (Van Bergeijk & Volkmar, 2008, p.1359). Similarly, a 2016 nationwide survey study in the United States estimated a prevalence of 1 in 40 children (ages 3 to17) with ASD (Kogan et al., as cited in Widman & Lopez-Ryena, 2020, p.3166)).

This increase in the number of people diagnosed with ASD has caused more students with ASD to enter post-secondary education. A study of "24 Ontario colleges (representing 100 per cent of the total college full-time enrolment in 2008) and 15 universities (representing 86 per cent of the total full-time university enrolment in 2008)", published by Alcorn Mackay (2010) found that 254 students with ASD attended community colleges and 148 were registered in universities (p. 15). More recently, a 2019 unpublished report from Sheridan College, located in Ontario, reported the number of students with ASD that were registered with AL; 148 students with ASD were registered in the 2017-2018 academic year: 169 in 2018-2019 and 187 in 2019-2020 (out of 3132 students in total for 2019-2020) (Fennell, 2017, 2018, 2019). These data sets are consistent with the increasing trend of students with ASD in post-secondary institutions. Based on data collected during the 2018-19 academic year on post-secondary students with

ASD across all Ontario colleges, Sheridan ranks second overall and number one in the Greater

Toronto Area (College Committee on Disability Issues, 2019). It is important to note that these

numbers reflect students who have self-identified as having ASD and registered with AL, and it

is possible that the data does not sufficiently account for the true number of students with ASD.

Despite the increase of this population, there is a shortage of research addressing post-

secondary education experiences of students with ASD, especially in the Canadian context, as

most research is completed in the USA and UK (Anderson et al, 2018, p.652). The research that

does exist suggests that there is a need for enhancing supports in post-secondary for students

with ASD, as it indicates that students with ASD are struggling more than their typically

developing peers, with high rates of mental health challenges and an increased incidence of

dropping out before completion of their studies (Hanley et al, 2016, p.167).

There are academic challenges faced by students with ASD at the post-secondary level

with the "most common academic issues identified [including] problems with understanding

abstract or ambiguous concepts, poor planning skills, a tendency towards procrastination, and

struggles with group work, presentations, social skills during class (Anderson et al, 2019, p.1).

But Siew et al. (2017) noted that in post-secondary institutions, lower retention rates and poor

academic outcomes for students with ASD are likely non-academic (pp. 2-3). In their analysis,

Siew et al. argued that the core features of ASD make it challenging for students with this

diagnosis to cope within a post-secondary environment which lacks structure and predictability

of activities. Presentations and social interactions with their peers and staff can be particularly

difficult. In addition, students with ASD struggle with their "nonverbal communication and

pragmatic language, social skills, repetitive behaviors, resistance to change, sensory challenges

and difficulties related to executive functioning and emotional intelligence," which all can result

in affecting a student's ability to be successful in college (Berry, 2018, p.112).

For many students with ASD, co-occurring mental health conditions compound their

academic challenges. Students with ASD have an increased prevalence of comorbid psychiatric

disorders, including "social anxiety and depression as well as higher levels of aggression and hostility" (Siew et al., 2017 p. 2). Consistent with these findings, anxiety and depression are prevalent co-occurring disorders with ASD (Hedges et al., 2014, p. 65).

This blend of academic and non-academic challenges impacted by frequent additional disorders makes navigating post-secondary education as a student with ASD extremely challenging, even if a student registers with their school's accessibility office, like AL at Sheridan (Jackson et al., 2018, Kuder & Accardo, 2018, p.729). Academic accommodations that are typically granted to students with Learning Disabilities, such as extra time on exams and separate exam rooms, may not be sufficient for students with ASD. Yet postsecondary institutions offered the same accommodations and supports for students for all types of disabilities (Kuder & Accardo, 2018, p. 729). To address the unique features that were identified in students with ASD, some postsecondary institutions have responded by offering specialized programs (Kuder & Accardo, 2018, p. 729). However, in reviewing the effectiveness of these practices, Kuder & Accardo (2018), found that results were mixed and, in certain cases, data was limited (p. 729).

Faculty are a critical part of any plan for supporting students with ASD at the post-secondary level, as they are the primary channel for providing instruction and ensuring students' comprehension of knowledge in post-secondary institutions (Murray et al., 2008, p. 96). To help students succeed, it is important to examine the challenges faced by students with ASD as well as faculty perspectives on teaching practices which could enhance students' academic outcomes. Some researchers suggest that post-secondary transition programs, comprehensive accommodations and supports are factors that can contribute to the success of ASD students both socially and academically (Vanbergeijk & Volkmar, 2008, p. 1359). Recognizing the link between social supports and academic success, Ames et al (2016, p. 27) supported the view that postsecondary students with ASD could be successful academically given appropriate social supports.

This study aims to explore the classroom experiences and unique needs of students with ASD in post-secondary education while exploring faculty perspectives on pedagogical approaches utilized to support students with ASD. Taken together, these findings will be used to propose pedagogical practices and create resources for faculty in post-secondary education, thereby improving academic outcomes for students with ASD and possibly enhancing faculty experiences with teaching students at the same time.

Definitions of Terms

Accessible Learning (AL)

Department within Student Affairs at Sheridan College that provides academic accommodations for students with disabilities (Sheridan College, 2020, para.1).

Accommodation

"Accommodation is a means of preventing and removing barriers that impede students with disabilities from participating fully in the educational environment in a way that is responsive to their own unique circumstances" (Ontario Human Rights Commission, [OHRC], 2018, para. 1).

Autism Spectrum Disorder (ASD)

ASD is a neurodevelopmental disability with symptoms ranging from mild to severe on a continuum (Center for Disease Control and Prevention, 2020, para. 1). Individuals with ASD struggle with communication, behavioural and social challenges which may result in misreading nonverbal interactions, difficulty in building friendships, dependence on routines and repetitive behaviours (American Psychiatric Association, 2013, para. 4). In 2013, the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-V), redefined the diagnosis as a "spectrum" by including a variety of previous disorders formally known as autism, Asperger's syndrome (AS) and pervasive developmental disorder (PDD) (Black & Grant, 2014, pp. 40-41).

Disability

"A broad range and degree of conditions, some visible and some not visible. A disability may have been present from birth, caused by an accident, or developed over time. Includes: physical, mental and learning disabilities, mental disorders, hearing or vision disabilities, epilepsy, mental health disabilities and addictions, environmental sensitivities, and other conditions" (OHRC, 2018, para. 1).

Individual Education Plan (IEP)

An IEP is a document developed for students who require specialized support in Ontario's elementary and secondary schools based on an assessment of their individual learning strengths and needs. This document outlines accommodations, modifications and/or alternative expectations the student requires to achieve and meet curriculum and age-appropriate level expectations outlined by the Ministry of Education (Ontario Ministry of Education, 2004, p.6).

Medical Model of Disability

The Medical Model of Disability views disability as a disease or personal deficit and locates the impact of disability squarely within the individual (Oliver, 1996). The medical model does not consider disability to be a product of the relationship between individuals with impairments and a disabling society (Shakespeare, 1996).

The medical model of disability refers to an older perspective that positions disability as a deficiency or an abnormality (Haegele & Hodge, 2016, p. 195). There are varied views and assumptions about the medical model. In the context of our study, the medical model provides insight into the negative identities internalized by students accessing accommodations (Fennell, 2016, p. 17). Fennell's (2016) article shows how for people with disabilities, the medical model of disability forms the basis of a culture which denounces them as flawed and unusual (p.17). Furthermore, the medical model casts human variation as a deviance from the norm, further reinforcing the idea that disability belongs in the medical establishment.

Social Model of Disability

The Social Model of Disability makes a clear distinction between impairment and disability and views disability as socially constructed. The social model reinforces that disability is not a simple medical fact, but instead is the result of the relationship between the person and the barriers in their environment and community which stop the person from full participation in that community (Oliver, 1996).

In the last few decades, the general acceptance and language associated with the social model of disability has been subject to debate by many scholars in academia (Haegele & Hodge, 2016 p.196). As there are different versions of the social model, this commentary refers to the North American, which portrays disability and impairment as separate entities (Haegale & Hodge, 2016, p. 197). In this context, Haegele & Hodge (2016, p.197) contends that impairment is "perceived as an abnormality of the body, such as a restriction or malfunction of a limb while disability is considered, the disadvantage or restriction of activity caused by a social organization that does not take into account people who have impairments and excludes them from community life." This explanation suggests that an individual's bodily function does not limit their abilities. Instead, when social organizations erect barriers that exclude individuals from participating in community life, these individuals assume the label of being disabled. An example of this phenomenon is when an individual who is unable to walk or stand is denied access to a wheelchair or ramp.

Universal Design for Learning (UDL)

UDL is a framework to improve and to optimize teaching and learning for all people based on scientific insights into how humans learn (CAST, 2021, para.1). The UDL framework removes barriers to learning through the principles of multiple means of engagement, multiple means of representation, and multiple means of action and expression in order to embrace all forms of human diversity (CAST, 2021, para. 4).

Literature Review

To enhance current supports and improve academic outcomes for students with ASD, understanding the experiences of students with ASD and faculty perspectives has the potential to inform future practices and targeted interventions. This literature review focuses on the lived experience of students with ASD in post-secondary institutions and identifies the gaps in student experiences and attempts to gain insight into the perspectives of faculty who work with students with ASD. Current service models, teaching practices and learning in post-secondary institutions are also discussed, as well as the experience of accessing supports and perceptions of living with ASD.

Service Models and Practices

In exploring literature on accommodations provided by disability services, a study by Brown (2017) proposed that practitioners encounter several challenges when attempting to provide appropriate accommodations to students with ASD (p. 144). Brown suggested that a lack of benchmarks or comparison standards is related to the extent and broad range of accommodations provided to students with ASD across different postsecondary institution types. In addition, "the functional limitations associated with ASD pose unique challenges within the living-learning environment" (Brown, 2017, p 144). As such, accommodations commonly provided to other students with disabilities may not be appropriate for students with ASD. Brown (2017) contends that executive function tasks and social-emotional relationships are critical elements in the lives of students with ASD, yet these areas are often unaddressed in postsecondary education (p. 144).

According to Haegele & Hodge (2016), the use of Universal Design for Learning (UDL) principles in determining programing requirements, recruiting students and designing supports and services is a critical factor in post-secondary education, as traditional service delivery models had limitations in meeting the needs of students with disabilities (p. 202). Haegele and Hodge (2016). As an alternative to traditional models, the author proposed the concept of

universally designed educational environments to foster a culture where willing students can feel comfortable to disclose their differences without fear of recrimination. In their approach, Haegele and Hodge (2016) suggest that "the development of universally designed education environments must be multi-layered and in alignment with needs of students (p.202). Through this integration, accommodations can co-exist with universally designed environments to enhance supports that equip students to complete their degrees.

Barriers in Accessing Support

Supports like academic accommodations for students with ASD are available through AL. However, registration is optional and Grogan, (2015) noted that students with ASD do not often register for these services, suggesting that students with ASD are often unable to self-disclose their disability (p.10). Grogan (2015) suggests that this may be due to associated anxiety as well as staff difficulties in establishing the purpose and provision of appropriate academic accommodations (p. 10). Given the limited knowledge and the invisible nature of ASD, it is possible that faculty can struggle to identify and support students with ASD (Grogan, 2015, p. 10).

Social communication is a hallmark feature for students with ASD entering post-secondary institutions (Grogan, 2015 p. 12). Grogan (2015) suggests that these students are often expected to communicate effectively with faculty and their peers in social environments which are new to them (p.12). As such, the presence of overwhelming social environments can determine the academic experiences of students with ASD.

A study published in 2017 by Brown found that over 90% of postsecondary institutions offered academically-focused accommodations, while only 44.7% of institutions provided sensory accommodations and 28.3% of institutions offered ASD-specific services (p. 141). Even though many students with ASD are negatively impacted by sensory and social functional limitations, these findings show that most students with ASD in post-secondary educational institutions will not be appropriately accommodated. With this gap in service noted, it is crucial

that appropriate services that address the needs of students with ASD are provided with their

learning environment (Brown, 2017 p. 149).

In a study published in 2015, Van Hees et al., found that while students with ASD often

disclose diagnosis when requesting academic accommodations, they are reluctant to self-

disclose to faculty and peers (p. 18). According to Van Hees et al (2015), students only disclose

when in distress or when they experience a sense of safety and when supports were required

(p.18). In this study, the authors suggested that their hesitancy to request accommodations is

likely influenced by past negative perceptions, the fear of stigmatization, prejudice, and rejection

(Van Hees et al, 2015 p. 18). However, the same study highlighted that some students

experienced positive outcomes when they disclosed to faculty and their peers.

ASD Stigma and Acceptance

The term autism acceptance is described as an individual feeling "positively recognized

and accepted by others and self as someone living with ASD as an integral part of that

individual (Cage et al., 2018, p. 474). Engaging with like-minded individuals to develop a sense

of belonging is considered critical to the well-being of adults with ASD (Cage et al., 2018, p.

474). Additionally, greater acceptance in postsecondary is associated with previous interaction

with individuals on the spectrum and those with family members with ASD. A longitudinal study

argues that individuals with ASD are likely to develop greater feelings of self-worth when they

have supportive family and friends (Cage et al., 2018, p. 473).

Since autism acceptance involves appreciation or recognition and acceptance by others,

prejudices and negative attitudes towards individuals with ASD can often negatively impact

feelings of acceptance. For example, individuals with ASD will attempt to fit in with neurotypicals

through strategies that camouflage ASD features (Cage et al., 2018, p. 474).

A study published in 2015 by Ohan et al., stated earlier concerns that the ASD label

would increase stigma. In contrast, the study found a positive effect of greater help-seeking and

perceived treatment effectiveness, for both Asperger's and ASD labels (para. 1). The study

findings suggest that there were no changes in attitudes towards the ASD label following the incorporation of Asperger's into ASD in the DSM-5 (para. 1).

Student Self-Disclosure

ASD is an invisible disability which poses challenges to non-disabled persons because there are no visible indicators of a disability, for example, a mobility aid for individuals with physical disabilities (Austin et al, 2017, p.30). Students with ASD reported that when they requested support, these requests were not always taken seriously due to the invisibility of their disability (Anderson et al, 2018, p.655; Wiorkowski, 2015, p.853). In addition, students with ASD are less likely to ask for help or register for accommodations when confronted with the possibility of being stigmatized (Tarallo, 2012, p.36). Assumptions about the legitimacy of their accommodation request often negatively impacts student success (NEADS, 2018, p.56), as students will choose diagnosis non-disclosure if they are afraid of people not understanding them (Berry, 2018, p.82) and being bullied (Anderson et al, 2018, p.661). In a study conducted by Knott and Taylor (2014) a student stated they were more comfortable disclosing to a trusted friend but not to others as others may "misinterpret" the student because they are "so different" than neurotypicals (p.420). Worry about how peers will react can also make a student more likely to choose to self-identify to staff (Knott & Taylor, 2014, p.420).

In contrast, a respondent with ASD stated that they prefer letting people know about their diagnosis so that they can be understood: "I'm pretty open about it. I don't see anything to be ashamed of or keep quiet about ...it's best they know you are weird" (Knott & Taylor, 2014, p.420). Another respondent described his Asperger's as "sometimes a disability can be a strength - it's just a matter of breaking down the barriers that come with it" (Tarallo, 2012, p.88). In Berry's (2018) study students with ASD are often believed to display difficulties with social functioning and unusual behaviours that often results in peer rejection (p. 124). The stigma and behaviours attached to the invisibility of their ASD is likely a factor that explains students with ASD struggles within the post-secondary environment.

Impression Management and Self-Identity

While students with ASD are often seen as antisocial (Maxam, 2012, p.109), post-secondary students with ASD want to have friendships and social contact but are unsure of how to engage in this process (Knott & Taylor, 2014, p.418). Similarly, Knotts & Taylor (2014, p.419) suggested that at a very fundamental level, it is difficult to address the issue of social contact. In this study, one participant expressed that "people with ASD definitely have a need for social contact. The problem is that, at a very fundamental level, [they] do not know how to achieve this [and] just keep thinking how to react in social situations" (Knott & Taylor, 2014, p.419). Van Hees et al (2015) identified some key features which affects students with ASD ability to engage with others socially such as the awareness of their social communication difficulties, being afraid of saying the incorrect things and challenges with understanding neuro-typical behaviour (p.1684). Loneliness and less meaningful connections are common outcomes of social communication difficulties. By way of example, in the study a respondent endorsed feeling lonely, isolated and uncertain against their urge or desire to have more social contacts (Van Hees et al, 2015, p.1679).

To socialize more easily, many experts, believe a significant number of students with disabilities engage in impression management or self-presentation (NEADS, 2018, p.56). More details are found in Goffman's theory of impression management or self-presentation theory which states, "in everyday life to a theater in which individual actors (people) create, maintain, defend, and control others' reactions to and impressions of them through assumptions, settings, props, and scripts" (Fennell, 2016, p.21). This theory suggests that students with ASD may engage in impression management when trying to make social connections, teaching themselves through observation and media how neurotypical people behave and then adopting those behaviours (Taylor, 2014, p.419). The stress of trying to fit in and knowing "how to behave" can become so overwhelming that it can negatively affect a student's daily life (Van Hees et al, 2015, p.1684).

Sense of Belonging and Connectedness

Student attrition is influenced by feelings of belonging and connectedness to their college campuses, which can be achieved by providing an inclusive and welcoming college community (Berry, 2018, p.107). A sense of belonging, social acceptance, self-determination (including self-advocacy and self-regulation) increases academic success for students with ASD (Berry, 2018, p.117). Participants with ASD reported that they felt they finally belonged and were accepted in their post-secondary settings which was something they had never felt before (Wiorkowski, 2015, p.859). 85.4% of survey participants with ASD agreed or were neutral in their responses to feeling more accepted in university than previous schooling (Anderson et al, 2018, p. 655). Similarly, other participants with ASD who live on campus described feeling grateful that they had roommates who they considered their friends. In addition, the participants noted that their roommates helped them through some stressful times and that they could relate to one another (Berry, 2018, p.94). These examples demonstrate that when students with ASD feel a sense of belonging and acceptance, they are more comfortable with self-advocating and will increase their success in post-secondary.

Self-Advocacy

Other important considerations for students with ASD involve experiences with the need for self-advocacy as they transition into post-secondary education and become more independent. This transition can be especially difficult for students with ASD who have less experience self-advocating, instead receiving this support from multiple persons throughout their schooling, including, parents and educators (Manett & Stoddart, 2012, p.1). In post-secondary, for the first time, students are expected to communicate their required accommodations and supports, organize their own time and become self-dependent. Students with ASD reported that "communication, organizational and time management skills impacted both academic and non-academic demands" (Anderson et al, 2019, p.1). Additionally, students with ASD reported that due to their poor self-advocacy skills they struggled with getting the help they needed, as it was

available for students who ask for it (Anderson et al, 2018, p.656). For students with ASD who have difficulty self-advocating, they are being treated "the same as [neurotypical] students and so [they] feel that [the post-secondary institution staff and faculty] don't understand" (Anderson et al, 2018, p.656). Study respondents surveyed noted that 34.2% withdrew due to lack of support and 22% reported that not all supports requested were provided (Anderson et al, 2018, p.655). Long wait times and lack of follow up were noted by respondents as to why they struggled (Anderson et al, 2018, p.655).

Tensions Between Independence and Parental Involvement

For some students with ASD, parental or family support may be required to navigate post-secondary education. In a study involving parental perspectives of students with ASD and access to supports in post-secondary, parents reported that they feel more collaborative approaches should be available to support students in academic settings (Cai & Richdale, 2016, p.38). In this study, parents described that a breakdown in communication can occur between them and staff due to student privacy laws. This barrier can result in negative impacts to their students' academic success as they are blocked from assisting in support (Cai & Richdale, 2016, p.38). Similarly, one student participant noted "When it comes to going, and talking to someone that they need to, I think having a parent around is important" (Berry, 2018, p.88). In contrast, another student respondent initially did not want their parents involved but decided later to allow it as they needed help with reminders on deadlines (Taylor, Baskett, Duffy, & Wren, 2008, p.234). This study highlights tensions between parental involvement and some students desire to be independent and learn important life skills.

Faculty Preparedness and Understanding of Students with ASD

In exploring the literature on faculty perspectives working with students with ASD, Austin et al (2017) noted faculty are less aware and prepared to support these students due to lack of information and training (p.30). Faculty participants expressed feeling less confident in working and teaching students with ASD because of this lack of training (Maxam, 2012, p.101). From

this same study, faculty participants who described having more experience working with students with ASD, still did not feel these experiences made them more confident in their skills and knowledge of working with students with ASD (Maxam, 2012, p.101). In this study, Maxam (2012) identified key challenges from faculty as wanting more direction on creating inclusive classroom environments (p.96) and strategies for effective and appropriate communication practices (p.98). Faculty expressed a fear of making students with ASD "feel intimidated, threatened or uncomfortable in [their] company" (Maxam, 2012, p.98). They also highlighted challenges with misunderstanding behaviour of students with AS, not knowing if the student was acting inappropriately or if their behaviour was due to disability-related manifestations (Maxam, 2012, p.100). Group work was cited as another challenge for faculty working with students with ASD (Knott & Taylor, 2014, p.417). Faculty identified other students feeling disadvantaged when having to work in groups with students with ASD, so they are challenged with balancing the needs of the group and coming up with solutions (Knott & Taylor, 2014, p.417).

According to Brown (2017), faculty perceptions are critical in the provision of academic accommodations (p. 143). The article suggests that faculty play a significant role in encouraging students to use their accommodations (p.149). Although this approach is recommended, some researchers suggest that faculty often lack knowledge about disability supports and accommodations (Brown 2017, p. 149). For example, faculty have misconceptions that students use their disability to avoid working as hard as their peers or the idea that academic accommodations contribute to lower academic standards (Brown, 2017, p. 149). An alternate view is that faculty negative beliefs about students with ASD can often result in discriminatory actions such as unwillingness to make accommodations due to erroneous perceptions of a student's abilities (Brown 2017, p. 143). Furthermore, in a study of faculty perceptions, Brown (2017) reported that the inclusion of students with intellectual disabilities and ASD would interrupt class routine and waste time for the instructor (p. 143).

Many experts contend that faculty within some academic units were more willing to provide certain accommodations than were faculty in other academic units (Murray et al., 2008, p. 98). Several factors influenced how accommodations were provided including differences in personal beliefs, knowledge and understanding of accommodations, and non-tenure-track faculty versus tenure track faculty (Murray et al., 2008 p,112).

Peer Understanding and Acceptance of Students with ASD

Peer acceptance and social integration have been identified as critical factors which contribute to students' success in college (White et al, 2019, p.2699). The successful integration and acceptance of students with ASD, however, appear to be negatively impacted by the stigmatization and misunderstandings about ASD among college faculty, staff and peers (White et al, 2019, p.2700). White et al. (2019) suggest providing peers with a label of ASD or reasons behind student's inappropriate behaviour could decrease this stigmatization and misunderstanding (p.2700). In their study, exploring college student's attitudes based on labelled and non-labelled vignettes depicting behaviours of someone with ASD, Matthews et al., (2015) found that the students given the vignette labelled with ASD shared more positive behavioural and cognitive attitudes towards students with ASD than those without the label (p. 96). In this same study, it was found that students' affective attitudes towards the vignettes were not changed, which demonstrates that when students are aware of the ASD diagnosis they may act more positively towards that individual (Matthews et al, 2015, p.96). Similarly, in a study performed over a five-year period by White et al., (2019) with two cohorts of university students' attitudes and knowledge of ASD and what factors contribute to these attitudes, the later cohort shared they knew more and were aware of what ASD is and therefore had more positive attitudes towards students with ASD (p.2702). White et al (2019) also noted that participants own beliefs, although false, about students with ASD still impacted their overall attitudes towards students with ASD (p.2703). An example of this negative belief system and its impact on students with ASD is shown in a study by Knott & Taylor (2014) where peers of students with

ASD refused to work with them as they perceived the students with ASD as a liability to their overall grades (p.417). Consistent with the literature, White et al (2019) also found that students who participated in both cohorts that personally knew someone with ASD held more positive attitudes towards students with ASD (p.2703). The literature exploring peer attitudes and understandings towards college students with ASD is still limited and requires future investigation (Matthews et al, 2015, p.90).

Teaching Strategies to Support Students with ASD

A key indicator of student academic success in college is based on the interactions between students and instructor's relationship and instructional strategies used in the learning environment (Austin et al, 2017, p.30). This relationship is integral for students with disabilities, especially students with ASD, as they struggle with asking for help (Austin et al, 2017, p.30). However, as indicated by Austin et al (2017), there is a lack of evidence and literature which demonstrates the most effective instructional strategies to use for students with ASD (p.30). A study with faculty by Austin et al. (2017) explored this topic to collect faculty insights on teaching strategies they have used and found helpful when working with students with ASD (p.30). Faculty participants reported using UDL principles and individualizing teaching approaches based on students learning strengths to be effective strategies used for students with ASD (Austin et al., 2017, p.32). For example, one faculty participant reported that they provide an opportunity at the beginning of the term for students to write down ideas that the instructor can do to better promote an inclusive environment and get to know what works best for the student (Austin et al., 2017, p.32). Consistent with this idea, Gobbo & Shmulsky (2014) reported that by understanding these individual preferences at the beginning of the term, instructors can help create a positive and respectful environment for all students to participate successfully (p.19). Another effective communication strategy is using non-judgmental approaches when providing feedback or support when communicating with students with ASD (Gobbo & Shmulsky, 2014, p.19). Other effective teaching strategies recommended by faculty were structured scaffolding to

assist in breaking down assignments (Austin et al, 2017, p.33) and providing opportunities for

students with ASD to work independently instead of in a group (Taylor, 2005, p.489). Faculty

members identified collaborating with other faculty members and disability services as critical

strategies to support academic success of students with ASD (Austin et al, 2017, p.33).

Methodology

This section describes the research methodology and theoretical approaches guiding this study. It discusses the qualitative approach used in the study, describes the recruitment of participants, and outlines the data collection process, procedures, and analysis also it explores the ethical considerations that guided the research.

In the initial study design, focus groups were planned to be held in-person at Sheridan College. With the Coronavirus outbreak (COVID-19), all face-to-face human research was halted to protect researchers and study participants. The research team adapted to use remote and virtual technology by replacing in person visits and interaction with remote options for meetings, recruitment, focus group interviews, consent processes and other research activities.

The purpose of this study is understanding the needs of students with ASD so that faculty can use inclusive teaching strategies to help students thrive in post-secondary education. To achieve this purpose, this study conducted focus group interviews of current Sheridan College students with ASD regarding their lived experience as post-secondary students. To understand the current training and approaches of post-secondary instructors, Sheridan College faculty were invited to participate in focus group interviews to share their insights and experiences teaching students with ASD.

Qualitative approach

A qualitative research design was used to capture participants' perspectives and experiences through focus group interviews. Padgett (2017) suggests that qualitative methods are suitable for exploring topics from the "inside" perspective (p. 16). Using this approach helped the researchers to understand both the perspective of students and faculty and how both groups make meaning from their lived experiences. Qualitative research methodology aims to develop deeper understanding of people's beliefs, experiences, attitudes, behaviour, and interactions (Jena et al., 2013, p.192). By using this approach to better understand the narrative

of faculty and current Sheridan College students with ASD, the education community may build

on processes and supports that enable students to thrive.

Grounded Theory

The methodological framework employed in this study was Grounded Theory. Glaser &

Strauss developed this theory in 1967 for use primarily in qualitative research (Glen, 2016,

para.1). This theory is based in the process of collecting and analyzing data simultaneously

(Pat's Psychology MSc, 2019). When using this theory, data collection begins most commonly

using focus groups, interviews and study of artifacts or texts (Glen, 2016, para 4). Then,

analysis of the collected data begins immediately, as Grounded Theory was identified as the

ideal methodology for collecting and analysing data from participants through constant

comparison of codes to codes and codes to categories (Birks & Mills, 2015). This analytical

comparative process continues until a grounded theory is fully integrated (Birks & Mills, 2015).

This methodology focuses on understanding a phenomenon through an inductive approach, the

idea of building theory up from data (Birks & Mills, 2015).

Constructivist Grounded Theory

A constructivist approach was adopted to understand the data collected through focus

group interviews. The fundamental principles which underpin constructivist grounded theory

emphasize how the researcher interacts, questions, codes and analyzes throughout the

research process, which can achieve deeper analysis of the collected data (Charmaz, 2017,

p.41). Rather than an objective analysis, constructivist grounded theory is concerned with

people's perspective and interpretations (Mills et al., 2006, p.31). From the constructive

grounded theory lens, we aimed to develop a deep understanding by learning from and with

participants through the process of systematically engaging with data collected. Data analysis

was conducted throughout the study by a constant comparative process which included: writing

memos, journaling, and going back to review the data with participants. Charmaz & Henwood,

(2017) posits that grounded theory methods involve a "systematic inductive, iterative, abductive

and interactive approach" (p. 238). This approach removes objective analysis and instead includes people's perspective and interpretations (Mills et al., 2006, p.31). By engaging with research participants in the focus groups and data analysis, their perspectives and the meanings attached to the issues discussed were understood from the context of the participants' experiences. The format used to collect data and analyze data enabled study participants to share ideas based on their beliefs and experiences.

Participant Selection

Study participants were recruited using purposeful sampling directed at current students and teaching faculty of Sheridan College. This is a type of non-probability sampling and is also known as judgmental, selective, or subjective sampling (Lund Research Ltd, 2012, para.4). When using this technique, a researcher has a purpose in mind sampling a specific group to gather data (Trochim, 2020, para.4). This includes choosing participants or groups of people that have experience with or understandings in different areas and are open to sharing this knowledge for the study (Palinkas et al., 2013, p.534).

Purposeful sampling technique is employed "for the identification and selection of information-rich cases for the most effective use of limited resources" (Palinkas et al., 2013, p.534). In this study, purposeful sampling was useful in recruiting students who have lived experiences and faculty from a variety of disciplines, diverse educational and teaching backgrounds. This was intended to target a wider range of perspectives for the purpose of obtaining a comprehensive understanding required to support students with ASD. Researchers planned to recruit participants from different faculties within the college. However, the participant selection was limited by availability, volunteerism, and schedule conflicts.

Participants

Participants included ten full-time and part-time Sheridan teaching faculty and three current Sheridan students. The researchers attempted to have at least two sets of focus group interviews with faculty and students. However, the number of participants recruited was

dependent on participant volunteerism and scheduling conflicts. Furthermore, it is likely that student numbers were impacted by the unanticipated COVID-19 Pandemic protocols which prevented on campus, in-person group sessions and were conducted using the online virtual platform Zoom. This shift to online learning was unexpected and happened fast, which may have affected students' comfort level and willingness to share in the online focus groups. Another factor which may have impacted student participants were students may not have had access to the appropriate technology to use for the online focus groups. Lastly, another factor impacting student participation in the study may have been due to the timing of the online focus groups which were held during a busy time of year within the academic calendar.

In recognizing the dual role of being part of the Sheridan faculty and staff (Counsellor and Learning Strategist), efforts were made to avoid the potential for a power relationship with students who might be connected with Counselling and AL. This was accomplished by the assistance of an external moderator to facilitate group discussions and two student research assistants to facilitate the recruitment and data collection process.

Participants were selected based on the following criteria: in the first group of participants, a total of three students identified as living with ASD. These participants were selected for their learning experiences as current Sheridan College students. A total of six part-time and full-time faculty participated in the first interview and the second group of four participated in the second focus group interviews.

 In exploring the phenomenon under investigation, personal identification data (gender, age, ethnicity, culture) was not collected. The demographic data collected was for the purpose of describing study participants. However, the researchers aimed to have a representation that was reflective of the Sheridan demographics and faculties.

Ethical considerations

Prior to recruitment of participants, approval to conduct the study was obtained from Sheridan Research Ethics Board (SREB). The SREB required a proposal detailing the study

plans, including informed consent, data incentives, and confidentiality. Additionally, the SREB required a plan that would ensure participants in this research would not be harmed because of their participation in the focus group interviews. Confidentiality was maintained by storing audio recording files and transcribed documents in a specific folder on a secure Sheridan OneDrive. Students and faculty were provided an informed consent summary detailing the study and their participation expectations in the study. All participants were given the option to withdraw their participation at any time during the study.

Online Focus Group Interviews

Online focus group interviews were used to gain insight into faculty experiences and perspectives on supporting students with ASD in the classroom and gain an understanding of the lived experiences of students with ASD in post-secondary education. This online format was advantageous in bringing together geographically distant individuals and groups. Online focus groups also offered additional practical advantages of avoiding costly and difficult transcription as well as the ability to facilitate greater participation and disclosure for participants who are comfortable with the social uses and privacy of the internet (Moore et al., 2015). To obtain different and/or supplementary viewpoints on the topic, a moderator facilitated the focus group interviews using guiding questions.

An external consultant with adequate background knowledge and experience in post-secondary education and ASD was hired to moderate the focus group interviews. Researchers aimed to hire a skilled facilitator to ensure that issues under discussion were addressed comprehensively. The moderator was expected to build rapport while creating a safe and supportive environment to foster dialogue in a virtual environment. The moderator was supported by two student-research assistants. One of the research assistants was selected to take notes during the online focus group. Using Zoom software platform, the other research assistant was responsible for managing the audio recording and transcribing the interviews. No names or other identifying information were used in the transcription. Recordings for the focus

group were stored electronically on the Sheridan College secured drives, using encrypted password protected devices.

Upon completion of the transcription and data analysis, the researchers conducted further analysis reviewing the initial data and themes that had emerged. Through convenience sampling from focus group participants, three faculty members volunteered to review and comment on accuracy and interpretation of the researchers. This approach aligns with Charmaz's Grounded Theory strategies, which encourage researchers to build a series of checks and refinements in their qualitative inquiry (Charmaz, 2008, p. 156).

Findings

This section of the report includes findings from the focus group interviews conducted with students diagnosed with ASD and with the faculty who teach classes of neurotypical students as well as students with ASD. The material is presented in summary form and includes verbatim comments by participants in response to specific questions. The information represents the researchers' interpretation of notes captured during focus group meetings, individual follow-up interviews with faculty focus group participants, a review of the audio recordings and a content analysis of transcribed material from focus group meetings.

Focus group participants made the following observations in discussing their experiences as students with ASD and faculty involved in support and implementation of academic accommodations.

Challenges Supporting Students with ASD

Faculty focus group members offered significant insight into their experiences in supporting students with ASD in testing, classroom, and experiential learning contexts. One faculty focus group participant indicated that students with ASD often request additional time to submit assignments and requests are sometimes made close to assessment deadlines, underscoring the need for faculty to be concrete with explanations and clear about deadlines for assignments or tests. Students with ASD may also need their instructors to re-state information, where possible, and use more hands-on approaches to support their understanding of what is required of them. It is of particular importance that some faculty reported challenges with supporting students who failed to self-advocate and made last minute requests despite having accommodations from the outset. Some faculty also found that students were not always willing to ask for feedback if the environment is perceived as unwelcoming and faculty considered unapproachable.

These issues can make it challenging for faculty to implement consistent supports for students with ASD. Van Hees et al (2015) supports these observations, explaining that students

with ASD only disclose their diagnosis and need of support when in distress or when they experienced a sense of safety and when particular supports were required (p.18). Existing research points out that one possible reason that students with ASD experience barriers in self-disclosing their need for support and accommodation in a timely manner is due to comorbid mental health diagnoses, particularly anxiety, which can make it challenging for students to self-disclose their disability and seek help (Grogan, 2015, p. 10).

In this spirit, one faculty focus group participant noted the importance of cultivating trust in order to encourage students to be open and forthcoming about their needs. The same faculty indicated that they felt guilty or anxious about appearing frustrated when students make last minute requests. These observations of the importance of cultivating students' trust that faculty will respond to requests for support and accommodation without judgment or frustration is consistent with Tarallo's (2012) findings that students with ASD are less likely to ask for help or register for accommodations when confronted with the negative effects of stigma (p.36).

Illustrative Quotes from Focus Groups

"In terms of in-class setting and feedback I've received from several students… getting things completed the exact same [timeline] as other people… class discussions, and… when it's appropriate for them to be speaking and when to… stop those discussions, because they might have a hard time with those social cues. And… deadlines for assignments and having a concrete explanation, and that really hands-on approach in terms of assignments." (Faculty)

"Oftentimes I just feel like I've said things very clearly and I've laid it out, and… the communication is not there." (Faculty)

"I have had experiences in the past where students have approached me, and then it might potentially only come up… a couple days prior to the first midterm or first assignments, and that's… where I find it challenging to support. Because I haven't been able to prepare or have enough time to you know create another… midterm, another approach to an assignment, that's going to support them. And I feel really down on myself. And I… get very anxious about

that, because… I feel… maybe that I'm coming across as frustrated, because it wasn't

approached sooner or wasn't discussed, and I know that there is a lot of… that mental aspect of

coming in and saying 'hey this is this is what's going on.' So, in terms of support, I would like to

support better, but I do need time to be able to support better." (Faculty)

Supporting Students in Group Work Contexts

Experiences supporting students with ASD as they navigate group work dynamics was a

recurring theme in faculty focus group interviews. Overall, most faculty focus group participants

reported that this was an area that they found difficult. One faculty participant indicated that

there is a marked difference between faculty-assigned groups and groups formed and regulated

by students themselves. The same faculty participant observed that students who appeared to

be on the autism spectrum tended to be selected last for groups or excluded altogether. This

faculty noted the additional challenge of finding appropriate solutions when a student is being

left out of a group but group participation is a required course learning outcome. Another faculty

focus group participant suggested that even in programs where students are generally inclusive,

it is not uncommon to observe an exclusionary approach to group formation if students without

disabilities perceive and/or assume that their marks will be negatively impacted by peers who

might not contribute to the group's performance. These observations confirm Berry's (2018)

findings that students with ASD are often believed to display difficulties with social functioning

and peculiar behaviours that often results in peer rejection (p.124)

Some faculty focus group members suggested that it would be helpful to have more

information about the learner profile of the students in their classes and, in particular, how to

support students with ASD in group settings. Additionally, faculty expressed that it would be

helpful to have specific accommodations included on accommodation forms for supporting

students in courses requiring teamwork. Similarly, one faculty participant noted that, in addition

to typical academic accommodations, adding some information about group work would allow

faculty to better manage group dynamics, particularly because some students willingly share their diagnosis but others choose not to disclose this information.

Illustrative Quotes from Focus Groups

"It would be really helpful if accommodation plans had more information about the learner profile and how to support in… group settings. Because that's completely missing from the accommodation form, there is nothing around how to support students through at group interactions." (Faculty)

"We're never told the diagnosis… the identification is up to the student… but some students willingly shared and some don't. But there isn't any information on the accommodation form about how to support in group work. So it's always about classroom, access to materials, to help and then how to accommodate during testing, and assignments, but there's never anything about helping to manage group dynamics or group work for that student based on their profile." (Faculty)

"If the faculty are responsible for putting those groups together, sometimes that ends up being OK, so we can move the chess pieces around in the classroom, to… put people together... create supportive groups. But in situations where the groups are self-regulated or self-formed, we often end up with the student… who appears [to be] on the [autism] spectrum, and they might be sitting by themselves, or…the last player picked on the team…. And if you end up having literally in a class of 25… a single student…[who] doesn't have a group, doesn't know how to function within a group, and we're looking at those learning outcomes saying: you must perform successfully in a group production or whatever, then it becomes a challenge as to how to evaluate that individual. But that's a huge challenge, [which] just keeps on coming up over and over and over again." (Faculty)

"When students are more integrated or inclusive, even in our program [where] our students are learning to work with kids with disabilities, so they tend to start off very inclusive,

but when they realize their mark is being determined by this other person's ability to perform in

their group, they quickly want that person out of their group." (Faculty)

"I have also found adding specific persons to groups can sometimes work to ensure

guidance can be provided within group work when needed." (Faculty)

Supporting Students with ASD in Work Integrated Learning Contexts

Faculty focus group participants expressed that they are aware of Sheridan's

commitment to protect and respect the privacy of students with disabilities. Maintaining

students' confidentiality can cause challenges, particularly, in field placements, internships and

Work Integrated Learning (WIL) contexts. Several faculty focus group participants reported that

their primary difficulty in these situations were because they do not know what students had

shared with host organizations and they knew that faculty were unable to disclose information

about students' disabilities. Another faculty focus group participant expressed that although

faculty are aware of students' needs and feel confident about how to support them in the

classroom, faculty are unsure about how students' need for support translates into field

placement, how much and/or what students disclose to host organizations and, more generally,

host organization and students' expectations. This is especially pertinent given that students'

accommodation forms are not relevant in WIL environments and lack of information often

contributes to misunderstanding about students' abilities, readiness and accommodation needs.

Illustrative Quotes from Focus Groups

"I think one of the areas where we have the most number of challenges [is] anything

involving work integrated learning or internship placement for students with ASD…. historically

we have not done a good job with that." (Faculty)

"In terms of supporting some of my students in the field… we may have experience

working with students with ASD, but how does that translate in their field placement, in terms of

how they are being supported on that end? …they're spending 8-hour days in these

environments, and… I don't know what's happening on the placement aspect side of it, if they're

disclosing any of this information as they're going in. So… you've got these [placement mentors]

that have very high expectations for their [placement] students coming in and completing the

same work, but if that information isn't being disclosed to them, is it fair to have the same

expectations?" (Faculty)

Classroom Behaviour and Emotional State

Some faculty focus group participants acknowledged that their lack of experience

working with students with ASD and their belief that they have insufficient knowledge of the

functional limitations associated with ASD have contributed to feelings of discomfort and

uncertainty about how best to support students in the post-secondary teaching and learning

environment. Similarly, a few faculty focus group members reported having mixed feelings

about their comfort level in supporting students with ASD in their classrooms. In general, there

was a sense that faculty's perception of their level/lack of readiness and competence often

resulted in assumptions being made about students simply based on behaviours, especially if a

student has not self-identified as having ASD.

Concerns like these can be particularly challenging in faculty's attempts to determine

differences between personality and perceived antisocial behaviours when setting up small

groups. The insights shared by faculty members align with findings from Maxam's study that

shows that some faculty members encounter challenges in trying to understand and/ or manage

perceived unusual behaviours of students with ASD (Maxam, 2012, p.100). In this study, the

author highlighted that it is not easy to recognize characteristics of ASD or if their behaviours

are disability-related manifestations (Maxam, 2012, p.100). While these challenges exist, Brown

(2017) cautions that faculty negative beliefs about students with ASD can often result in

discriminatory actions such as unwillingness to make accommodations due to erroneous

perceptions of their abilities (p. 143). In contrast, one faculty participant expressed the idea that

her educational background and lived experience, as a parent of a child with a disability, have

allowed her to feel comfortable engaging with students with ASD in a respectful, inclusive and

supportive manner. One faculty participant stressed the responsibility and importance of building rapport and relationships with students to support them in the classroom. It is interesting to note that one faculty participant suggested that male faculty appear to have more challenges supporting students with ASD compared to their female counterparts.

Faculty focus group participants indicated that they have seen many students struggle to control their emotions during class and it is helpful to learn from the students' perspective what they are experiencing in managing their emotions (stress, anger, frustration, anxiety etc.) because it allows faculty to understand not to take behaviours personally. However, supporting students with ASD in navigating the social life of the classroom can be more challenging; several faculty focus group members reported finding it stressful to support students with ASD in handling social situations, managing relationships with peers and navigating group work scenarios. In consequence, one faculty focus group participant noted that group conflicts are sometimes mistakenly reported to Student Rights and Responsibilities Office (SRRO), because faculty is unaware of how to handle group dynamics involving students with ASD. However, it is not only students with ASD who find the new social world of post-secondary education challenging; one faculty participant suggested that in general, students with and without disabilities have difficulty transitioning into college and navigating group dynamics. This faculty acknowledged that developing these social relationships can be especially complicated when students are unprepared and lack understanding of how to work with peers with exceptionalities. A faculty focus group member noted that this can be a good learning experience for all students as they progress through subsequent semesters and gain a better understanding of each other.

Student focus group participants agreed with faculty observations in describing how specific environmental challenges in their classrooms impacted their emotional state. For example, one student focus group participant reported that their learning is impacted by noises in the classroom and despite repeated requests for faculty support with this issue, their concern was not addressed. This confirms Brown's position that many students with ASD are negatively

impacted by sensory and social functional limitations and that appropriate services must thus

also be implemented to shape the learning environment (Brown, 2017 p. 149). Some faculty

similarly noted the need to be aware of learning environment considerations such as lighting,

volume on video presentations and customizing the classroom to be more inclusive for learners.

Additionally, faculty focus group participants suggested that less experienced faculty tend to be

uncomfortable about making changes to the learning environment to better accommodate the

needs of students with ASD.

Students' classroom behaviour and academic engagement was also shaped by their

personal emotional backgrounds. Some students described their inability to retain information

when frustrated. Other students indicated that anxiety, past trauma and histories of being

targeted by bullies have affected their learning and productivity in classroom environments. One

student focus group participant reported feeling angry and frustrated whenever things appear to

be unfair, while others shared difficulties with feeling easily overwhelmed, maintaining control

over verbal outbursts and experiencing meltdowns that affect their entire day. One student

indicated that they experience "dark thoughts" when their mental health is compromised.

Despite these experiences, student participants expressed that their mental health has

improved during their time at Sheridan. In general, student focus group participants indicated

that they felt less isolated because of Sheridan's inclusive culture and access to a community

through the FACE IT club. This gives students a sense of belonging through establishing social

connections with like minded individuals with shared experiences which contributes to their

sense of safety and social-emotional wellness.

Illustrative Quotes from Focus Groups

"Once I'm frustrated, my brain doesn't work properly.… I can't retain knowledge

anymore…And it builds and builds! …I'm going from so excited and like, 'Wow! I'm going to get

this!' to 'What the hell is the point to show up?'" (Student)

"Bullying evolves with age. I was more physically bullied in middle school, verbally abused in high school, backstabbed and manipulated at university." (Student)

"Once my anxiety gets raised, my ability to learn and my ability to perform and produce materials goes down significantly." (Student)

"When my mental health is bad… I have some pretty ugly and dark thoughts." (Student)

"It's also knowing [the] student and developing a relationship. It's so important to develop relationships with students who need extra support… [because then] you know how to… manage some of the behaviors that they will exhibit within a classroom as well to support them effectively, so that you can support all the learners in the classroom as well." (Faculty)

"I realized that... you hold, as a faculty member, a huge weight… because you're holding, not in a bad way, but you hold the lives of students and the responsibility for students when you're a faculty member and it is a big it is a big weight of responsibility. If the… student doesn't self-identify, then you are just making assumptions, and then you just try to work around those assumptions. … Having the conversation outside the classroom… to… say… what's going on and so on. …Sometimes people are antisocial and they're just being antisocial because that's their personality type." (Faculty)

"It's half having using some sort of empathy and the other part is just guesswork." (Faculty)

"I felt very comfortable [teaching students with ASD] and I think possibly because it's just my background in early childhood education, and taking the ES program and being immersed in it. I… have a son who has learning disabilities and ADHD, and so we had investigated if he…was on the spectrum for many years…. Having all of that experience…and… being sensitive to… individual needs, I think I'm fairly comfortable with it." (Faculty)

Gaps in ASD-Specific Supports and Services

Poor coordination between secondary schools and post-secondary education institutions poses many barriers for students with disabilities, and both faculty and student focus group

participants identified this issue impacting students' post-secondary experience. Some student focus group participants struggled to access supports when they first started at Sheridan and faculty had no idea how to support them or where to direct them for help. Similarly, several faculty focus group participants indicated that although some students mentioned that they received support in high school, they were uninformed of available supports in college. Student focus group participants reported that they were unaware of Sheridan's AL department and did not know what services were available to them. Others explained that they were connected with AL by being referred to Student Affairs after mentioning that they had an IEP in high school. These experiences highlight the possibility that the terms "academic accommodations" and "Accessible Learning" do not mean anything to students who are transitioning from high school and who are familiar with describing all of their academic accommodations and access to resources and supports for students with disabilities as being part of their IEP.

Feedback from faculty participants was consistent with the students' perspective that students have difficulty determining what supports were available to them when transitioning from high school to college. Similarly, one faculty focus group participant explained that although many students do not know how to self-advocate, some faculty are equally unaware of how to advocate for their students in order to bridge the gap between students' needs and available supports. Several faculty focus group participants mentioned that their knowledge of AL and other supports offered by student services allowed them to offer guidance and refer students to appropriate services. Some faculty participants reported having longstanding relationships with AL, Wellness and Counselling, and other student affairs staff. These relationships have allowed for open and timely communication in working collaboratively to support students with ASD in classroom or placement contexts. In contrast, one faculty focus group member reported that they are unsure about when to refer students to student services and questioned if trying to be helpful sometimes creates more harm or confusion for students with ASD. Both student and faculty participants suggested that it would be helpful to have an

on-campus liaison to specifically assist students with ASD with system navigation issues in post-secondary education institutions.

As students become more knowledgeable about available resources, students reported that new challenges emerged. Once connected with Accessible Learning, one student reported that they struggled with having to repeatedly justify their need to use their approved accommodations. Several students expressed difficulty finding quiet spaces on campus to learn, study or meet with a tutor. Students expressed other frustrations including requirements to arrange exam bookings early and lack of adequate quiet space for testing.

Illustrative Quotes from Focus Groups

"I knew what I was struggling with and I was begging for someone to help. And no one would…. You are put in almost a subservient role, where you…must comply with whatever they're saying regardless if it's fair. Regardless if it's even helpful, but just because they're in charge of you and you're going to do it the way they said to do it." (Student)

"In terms of accessible learning, I think it's just the attitude that …it's something you have to go out of your way to get rather than it being defaulted and seen as a human rights thing." (Student)

"If I… book time with… one of the tutors, we'd have to hunt around trying to find somewhere that I could actually take in the information that I'm trying to get from him. Because you got all kinds of people partying in all these little rooms and then, [for] people that actually do you want to study, there's not a quiet space around at all." (Student)

"Just someone that...that's like the soft cushion that can basically give you the road map of what you need to do to navigate what's happening, instead of just trying and trying and trying and trying, like with my situation that I had. Until basically, now instead of having the situation resolved, you now get yourself in a situation where your marks have been decimated." (Student)

"Growing up throughout my life, I didn't have many leadership opportunities, which I found saddening at times. And when I did have such chances, I shone, and I thrived. We can be

amazing and excellent leaders and our input and insights are often invaluable, and we deserve

to have our voices [heard]" (Student)

"There's this desire for leadership. If they had any year three or four student with autism

who could become a peer mentor to other students with autism" (Faculty)

"I've had Accessible Learning… come in and have conversations with my

classes…about services, and it wasn't only Accessible Learning, I think it was just a general…

'these are the services that are available at Sheridan'". (Faculty)

"I think the primary thing is… if the student does have accommodation, what are the

actual accommodations for the social interaction aspect? Those are often missing. …How do

you tell someone that they should go to Student Services, and then Student Services will say,

'oh you probably should go speak with… a health professional,' and then that whole cascade…

If you're wrong, then how does that look… coming back to you?... The student now thinks that

you thought they had something which we didn't… or.. [that] you're…. diagnosing from afar or

when you shouldn't have." (Faculty)

"I didn't know... where the Counselling and everything is, when my Program Coordinator

suggested I try there. So, [when] I found [those services]…it was actually because I wanted to

learn... [and I wanted] my IEP from high school to transcribe over." (Student)

Academic Accommodations Limitations and Barriers

Some faculty focus group participants reported that although they understand that

accommodation forms are individualized based on students' unique needs, they note that

approved accommodations appear to be very vague. This notion is supported by Brown (2017),

who suggested that accommodations that are commonly provided to other students might not

be appropriate for students with ASD given the unique functional limitations associated with an

ASD diagnosis (p. 144). Faculty participants also noted that some students do not appear to

need or use the supports listed on the accommodation form. It is important to point out that

although a student might forego use of a particular accommodation in one class/course, it does

not mean they do not need to access the accommodation in another course. Similarly, some students have disabilities that are episodic in nature and thus their accommodations are also used episodically. However, faculty participants agreed that it was challenging to implement accommodations because every student appeared to use these supports differently. In addition, some faculty mentioned that they have difficulty approaching students to discuss their accommodations if they have not self-identified as a student with a disability, making it even more challenging for faculty to implement approved accommodations. These insights are supported by Haegele and Hodge (2016) who pointed out that gaps in traditional models of accommodations impacted postsecondary institution's ability to meet the needs of students with disabilities (p. 202). The authors also suggested that universally designed environments would allow students to comfortably disclose their needs and differences.

Some faculty participants indicated that although they understand the need to preserve student confidentiality by not being privy to students' diagnoses, it would be helpful to have more information about a student's functional limitations and learning profile in order to support classroom management and better prepare for student's needs in meeting specific course requirements. Brown (2017) offered insights into faculty's comments in suggesting that although they have a major role to play in how student's access accommodations, they often lack knowledge about disability supports and accommodations to do so effectively (p. 149). Several faculty participants discussed what they see as a disconnect between academic accommodations and preparing students for the world of work.

Some student participants reported challenges with faculty inconsistences in the implementation of their accommodations. Students specifically noted that trying to remember an individual faculty's approach can sometimes be challenging and confusing. Other challenges highlighted by students included struggling to remember different processes for requesting and renewing accommodations, instructors forgetting their approved accommodations, too much onus being placed on students to prove their disability-related needs and possibly faculty lack of

knowledge or understanding and recognizing students' unique needs, rights, and the accommodation process. One student participant noted that academic accommodations need to be treated as a human rights issue instead of a privilege. Overall, the foregoing experiences cited by students are consistent with findings from Brown's (2017) study that explored barriers encountered by students with ASD in postsecondary institutions, which found that faculty misperceptions regarding the work ethic of students with disabilities and legitimacy of accommodations impact the academic experience of students with ASD (p. 149). Brown also suggests that faculty's negative perceptions sometimes result in discriminatory practices and a denial of accommodation requests (p. 143).

Some student focus group participants expressed that their interactions and engagement with faculty have been supportive and positive, and the majority of their professors are proficient although a small number of professors tend to be less organized, hard to understand and lack insight into how inaccessible course design impacts the learning experience.

Illustrative Quotes from Focus Groups

"*A few [Professors] can be a little bit disorganized… and hard to reach.*" (Student)

"*Most professors have been extremely accommodating of me.*" (Student)

"*Sometimes those accommodations are very vague…. They will highlight a whole bunch of areas where these students… may potentially need supports, but… they may not actually need the supports that are on there. So… even though the accommodation letters are very specific in terms of the different needs, each student is also very different in terms of what they will actually utilize.*" (Faculty)

"*We don't have guidelines for classroom management, but we are expecting to put these students into real life working situations, and… [prep] them for industry work. The industry obviously has some sort of accommodation plan, like HR, Human Rights Tribunal, all of those*

things those are in place. But that sort of information… needs to filter down into the academic realm and I don't see that really necessarily happening." (Faculty)

"There's a process in place... [but] every Prof does it a little bit differently. So…I had to… figure out what each one did and that led to some hassles." (Student)

"Disability accommodations need to be treated like human rights rather than privileges. I have not had too many issues with this, but I often see signs and posters about disability being treated as a privilege rather than a right. Too much onus is placed on us to 'prove' we are disabled, too much on us requesting the accommodations." (Student)

ASD-Related Professional Development and Experience

Most faculty focus group participants reported that they have not received any training at Sheridan specific to teaching students with ASD. This was especially true of part-time faculty, who noted that there are very few organized professional development opportunities available to them. New full-time faculty similarly explained that they have not received training because it would need to be their choice to pursue it as a Professional Development (PD) opportunity, but they are unable to access PD funding at the start of employment. Several faculty participants noted that they generally have little knowledge of ASD, with minimal prior experience working with this population and few training opportunities through Sheridan. This is consistent with Austin et al's (2017) findings that faculty express feeling unprepared to teach and support students with ASD due to lack of training (p.30).

External sources provided training or professional development for several faculty focus group participants, including training for their careers in the fields of educational support or early childhood education and organizations such as Geneva Centre for Autism, Halton School Board and ErinoakKids. Some faculty mentioned that they have been able to incorporate strategies from those sessions to support students in the college setting. Other faculty participants reported that although they have no formal training, their experience working in settings that provided support for youth with exceptionalities, including ASD, has equipped them with

transferrable knowledge and skills to appropriately support students with ASD in the teaching and learning environment. One faculty participant noted that, although not relevant to college classrooms, being trained in Applied Behaviour Analysis and Behaviour Management has provided them with in-depth understanding of ASD which shapes their approach to teaching in postsecondary contexts.

Much of the knowledge and experience of working with students with ASD that one faculty member reported comes from having a child with ASD and being actively involved with the school board. This has helped them improve their educational practice, as they have personal experience with what works for someone with ASD in a classroom environment. Other faculty participants also had previous direct experience working with students with ASD, reporting that they gained insights and strategies about ASD from teaching in programs such as ECE and educational support.

In the absence of formal training opportunities, one faculty member indicated that they took the initiative to research UDL strategies to support all studies including students with ASD.

Illustrative Quotes from Focus Group

"*ErinoakKids or the region of Halton would come in and give us in-centre training to work with those specific children.*" (Faculty)

"*Prior to this career… [I] worked with children and youth who had a wide range of exceptionalities and so learned mostly experientially… [I learned] how to support a wide range of exceptionalities… That's been very helpful for informing how to support students with a wide range of exceptionalities, including ASD.*" (Faculty)

"*I had a lot of training through the Geneva Centre. [They offer] online training, but it really does focus on applied behavior analysis and… having issues around behaviour and creating functional behavior analysis around that. So, it's not always relevant to our classrooms.*" (Faculty)

"In a part-time capacity… there hasn't been a great deal of opportunity for organized PD, but there has been a lot of… staff chat, when something would come up." (Faculty)

"I have a 15-year-old son with autism, so I'm continually looking for ways to better my practice and even to support my son. I also [learned] a lot when I was the chair of SEAC for the HDCSB." (Faculty)

"I've had absolutely no experience with autism. I've had no experience with professional development. I don't even know that much about autism." (Faculty)

"I actually haven't had any professional development for training in this area. So, no formal training, workshopping, or professional development here, but kind of the beginning of a journey for me at this point" (Faculty)

"[I've had] no formal training…since coming to Sheridan, and… in my teaching career, I haven't had any kind of training or professional development for working with students." (Faculty)

Self-Perception and Significance of Social Support

Student focus group participants shared insights into how they feel about themselves within the Sheridan community. Negative treatment by peers was highlighted by one student who said they overheard peers making disparaging comments about them once they observed differences in his behaviours. The student added that they were bullied on social media. These comments offer insights into how negative treatment of students with ASD can be minimized and normalized although the effects can have devastating and long-term impact on their well-being. This is especially noteworthy as many students with ASD appear to lack awareness of available supports to address issues of isolation, bullying, and mistreatment in the college community. Berry (2018) similarly suggests that the invisible nature of ASD often results in students being stigmatized and rejected by peers because they display difficulties with social functioning and "peculiar" behaviours (p. 124).

Despite these observations, several student focus group participants emphasized appreciation for the supports at Sheridan College and noted that overall, they have had positive experiences. AL and the FACE IT club were identified as most essential for coping with academic and social challenges/stressors. Student participants reported that involvement in a student-led club (FACE IT) for students with ASD is rare and contributed to a sense of belonging. One student expressed that opportunities for socialization has contributed to their academic success and social emotional health. This notion is supported by several researchers (Berry, 2018; Wiorkowski, 2015) who have found that students' sense of belonging and social acceptance within their postsecondary institutions positively impacted their ability to persist and succeed academically. Student participants credited FACE IT and Thriving in Action for the encouragement and confidence to be engaged in school, progress academically and participate in the broader community. Overall, students' responses were consistent with findings from studies that have shown that students felt more accepted in postsecondary institutions than previous schooling (Anderson et al, 2018, p. 655).

Illustrative Quotes from Focus Group

"A specific individual in my program .... got the idea that I was a little more jittery, that I was different.... I was overhearing a conversation in the cafeteria where someone was talking about autistic people… making some degrading remarks... it quickly degraded into casual insults. Eventually it went into full blown bullying and abuse. People creating fake accounts on social media and messaging... and saying… nasty disgusting stuff." (Student)

"Things have been pretty positive. I think, other than that one incident, overall, it's been pretty positive." (Student)

"I think Sheridan ...is a tier above many other institutions with accessibility... More supportive and helpful of all disabled students. …We actually have a club by and for autistic people… that's something I've never seen… at any school before… Participation and being part of FACE IT has been great." (Student)

"FACE IT provided that stimulus for me. I started getting really good grades… connecting with friends… that [not only] look out for you but actually listen to your problems openly… This helps so much in school, outside of school and everything, including social and emotional support." (Student)

Significance of Academic Accommodations on Student Experience

Faculty focus group participants reported that they appreciate receiving students' accommodation forms as it helps them better prepare and anticipate conversations with students. Some faculty indicated that receiving accommodation forms early contributes to opportunities for them to create welcoming environments. This practice supports the notion that a student's accommodation form acts as a communication tool between AL, students and faculty. Additionally, faculty noted that being aware of students' accommodation needs allow them to engage with students in ways that support them to comfortably introduce themselves and work on their self-advocacy skills. Anderson et al (2018) affirm the importance of recognizing that some students struggle to receive the help they need due to their poor self-advocacy skills and students' expectation that someone within the postsecondary institution will follow-up with them to ensure they are receiving needed supports (p. 656).

One faculty participant indicated that her practice involves creating learner profiles of all students during the first week of class. Although students are not required to disclose personal information such as a diagnosis, the tool allows them to inform faculty of their needs in relation to the functional impact of their disability. This is especially helpful for students who have not yet registered with AL and would benefit from being referred for formal academic accommodations. Additionally, this approach allows students to articulate their strengths and needs while also normalizing the experience of all leaners in the teaching and learning environment. Some student focus group members expressed feeling satisfied with their academic accommodations and noted that they did not have many issues with them. Some students noted that they felt particularly supported in accessing and using accommodations in certain academic

programs including educational support and personal support worker. Other students noted that instructors in these programs tend to be more accepting and accommodating than other programs. Several students indicated that the most frequently used accommodations included use of the assessment centre and extensions on assignments. These students reported feeling less anxious and able to produce better quality work once they were able to access extensions on assignments. Another student noted that faculty were gracious with extensions on assignments.

Illustrative Quotations from Focus Groups

"Sometimes because we've had the benefit of getting that letter, I almost anticipate that conversation, I don't really know how it's going to go, but I do have the opportunity to anticipate. And that's what I found is that the self-advocating piece is beneficial to the student. And sometimes yes, I do have to talk them through it and sort of encourage how they might self-advocate, but it does tend to be helpful." (Faculty)

"I was able to get a lot more support that way. I was able to connect with accommodations and everything. …But I found that profs still didn't really know what to do or how to help. So… they pushed back… But once I got into this program, because it's all about helping others, …I found that the Profs are a lot more accepting …If I needed a two-day extension, they're like, 'Yeah. You can have a 4-day extension, if you need it.' And I find… different teachers have been more helpful than others." (Student)

"[Getting extensions is] huge for me… because…once my anxiety gets raised, my ability to learn and my ability to perform and produce materials goes down significantly." (Student)

"[I] don't have many complaints about instructors and not being accommodating." (Student)

Impact of Self-advocacy

Faculty shared that some students are doing a really good job advocating for themselves. Several faculty participants noted the importance of self-advocacy in enhancing

open communication and collaboration in addressing issues in the accommodation process. Similarly, self-advocacy is seen as contributing to students' sense of empowerment and self-determination as they are able to articulate their needs without faculty having to make assumptions.

In contrast, some faculty expressed the idea that some students lack self-advocacy skills which often makes it difficult to support their accommodation needs. One faculty and one student participant both noted that it is not uncommon for students who experience challenges in describing their accommodation needs to fall through the cracks. This is consistent with the literature that students with ASD who struggle with poor self-advocacy skills identified that it affected acquiring their accommodation needs (Anderson et al, 2018, p.656). Faculty focus group participants agreed that students with ASD must be supported in learning how to self-advocate.

One faculty expressed the idea that self-advocacy is a needed learning outcome for professional development in higher education as this skill is needed in advocating for accommodation in the workplace. This view was supported by another faculty member who argued that students don't have to rely on somebody else to get information. Giving opportunities to practise these skills can enable students to go out into the field knowing their abilities, their needs and the conditions necessary to succeed in the workplace. Another faculty member suggested that advocacy is a shared responsibility, and it allows for more engagement and helps students identify what is important to them.

Illustrative Quotes for Focus Groups

"A lot of students are coming up to me saying, 'so I'm on the spectrum' or 'I have this,' or 'I have that.'" (Faculty)

"It gives them that power, gives them that control of exactly what they need. Even though it is uncomfortable sometimes when they come up, and when faculty members get the letter and they don't know, don't want to assume, so often wait for the students to self-advocate.

On the other hand, when students don't advocate, supporting student with the appropriate

accommodation is often more [of a] challenge." (Faculty)

"There needs to be some sort of advocating by the student, and whether that comes

from us or whether that comes from students, there is that aspect of both sides of the

spectrum." (Faculty)

"It allows for more engagement and helps students to identify what's important to them."

(Faculty)

"Lots of people that don't speak up… you'll never hear from them. They'll just fall by the

way." (Student)

Teaching Strategies

Several faculty focus group participants mentioned that in their program, it is common

practice for faculty to share teaching practices and strategies with one another to better support

students with disabilities. Some faculty focus group participants highlighted several strategies

they continue to use to ensure inclusive and welcoming environments, including establishing

open and approachable environments, being vulnerable and empathetic, and recognizing

diversity and heterogeneity among students. A faculty focus group respondent reported that

individualized meetings have been productive and fruitful in proactively addressing student

concerns, understanding students learning styles and preferences, and enhancing connection

with students. In general, faculty focus group participants felt that students with ASD benefit

from clear communication including messaging related to changes in routine (i.e., what has

changed and why) and guidance/instructions for tasks, assignments, etc. Students confirmed

this need for support in navigating changes; one student shared their frustration when they felt

that there was a lack of communication relating to classroom changes that resulted in missed

classes and ultimately impacted their ability to continue in the course.

One practice identified by a faculty focus group participant was being sensitive and

responsive to the needs of students with ASD, as the instructor found that this was critical to

students' learning experience. Similarly, a faculty focus group participant spoke to the importance of faculty recognize when students with ASD are experiencing fatigue or course-related stress. This requires sensitivity and active engagement in determining students' needs related to deadlines, course content, and workload. Faculty who are aware that ASD can impact students' executive functioning (time management and organizational skills) and processing also pointed out the need for understanding when students need additional time for conversations and in-class group work. Similarly, other faculty participants noted the need to recognize challenges with group formats by allowing choice in group selection or foregoing mandatory group work. The teaching strategies noted throughout these findings were overwhelmingly supported by several studies by Gobbo & Shmulsky (2014), Austin et al, (2017) and Taylor (2005).

Illustrative Quotes from Focus Groups

"They said… they're changing the classroom. They sent me my new timetable. Showed up there, there's another teacher that's actually teaching a class in that class. … And then I go back again. I missed another class now because of all of this. And then I actually missed the deadline for withdrawing from the course." (Student)

"We share teaching strategies with one another for students with exceptionalities." (Faculty)

"I found that providing an open environment and being approachable has alleviated the issue." (Faculty)

"I also keep the weekly lessons consistent, which always allows all my students to know what to expect each and every week, however this is easy to do with the material I teach." (Faculty)

"This works well for all students with ASD: providing alternative assignments (not requiring that all assignments are group assignments), looking at how learning outcomes might be achieved through alternative means. When group work is difficult or anxiety is overwhelming, I work hard to 'normalize' exceptionality. I set up a framework in my classroom that looks at the fact that we all need different things to learn and [I] invite all students to talk to me if there is some way that I can support them to learn more effectively. When I go over assignments, I talk about what is required and also mention that I am willing to discuss alternatives if there is something about the assignment that seems impossible. Calling all of these things out into the open, normalizes them and has the effect of students disclosing to me what they need, which can often translate to a better learning environment." (Faculty)

"[I say] 'If anyone has any information they'd like to share with me about their best learning' [and ask] 'how can I support you best in this classroom,' and then just have that conversation. Sometimes [a] student would come in before the rest of the class, and I would say… 'I notice that you know this is happening in the classroom, how can I support you in your learning?' …I think once the students with ASD feel comfortable and they trust you." (Faculty)

"I found, in the educational support program, students were more knowledgeable than me. But I'm definitely always being open to sharing my vulnerability in that aspect so I find that they respect them a little bit more… when… I say 'hey I might not know much about this, or not know how to support you, so guide me through this and we can kind of learn through this together.' …Speaking with them, and not in a condescending way whatsoever, on a level of inclusion." (Faculty)

"Be open and honest. There is a saying that… 'I've met one person with autism, so I've met one person with autism.' …You can't just assume that… one particular person with autism really likes to go to the library… we can't assume any of those things… Speaking with people on an individual basis about their modalities, their learning styles, and getting to know them and

just helping them to feel comfortable in the classroom and asking them…'how do you learn best?' (Faculty)

"I lean on my… empathy skills and connect with students to assist and make their learning environment more positive. And I notice that specifically amongst my male colleagues, they are often honest or vulnerable or open dialogue." (Faculty)

"For group work, choice of groups. So, not picking the group for students with ASD, so they can pick group partners that they are comfortable with." (Faculty)

"The environment in the non-virtual settings low lighting and softer volume on any video presentations, taking the environment into consideration.... taking a more inclusive approach to how the entire design of the classroom looks, and the whole environments, I think would be beneficial. ... I'm pretty comfortable going into the classroom and changing things around." (Faculty)

"When I post an announcement or I send a group email, I use a lot of language like an assignment has changed and this is why it's changed…. sometimes students can feel very overwhelmed by the amount of material in Slate. We use a very specific way of organizing our content in Slate… because when students get lost it can be very anxiety provoking for them." (Faculty)

"We got rid of our mandatory group work except in one course which is literally called 'Working in Teams.' Every other course, you have options to be evaluated in group work or the option to work independently, and that comes under multiple means of engagement and action and expression with UDL." (Faculty)

"I'll… make a mental note to, at some point in the very near future, sit down and have an individual one-on-one meeting with them. And I try to frame it as best as I can… I just tend to find that the one-on-one situations are a little bit more productive or fruitful." (Faculty)

"[Considering] fatigue…is actually something that we don't do at Sheridan…We don't take into consideration what other instructors are doing in other courses…You…have no idea of the workload a student is going through. And if a person is on the autism spectrum, their reaction to deadlines and the workload are going to be completely different than other students." (Faculty)

Experiences with Online Teaching and Learning

Student focus group members indicated that the virtual learning environment has resulted in a lack of social interaction. Some students similarly reported that although they have positive experiences with online education, they still feel that connecting with fellow students in a classroom provides a richer experience. Several students who identified themselves as hands-on learners reported that online learning makes using their preferred learning style challenging. In contrast, other students expressed appreciation for online classes and noted that some of the barriers that they experienced in the classroom were removed.

Faculty members also report contrasting experiences with online teaching. Some faculty reported that the sudden switch to online learning resulted in faculty using platforms, tools etc., with which they were already familiar. Others noted that their own technology skills have improved and have started using new software programs and features to accommodate students. For instance, while recording video lectures, some saw the need to find technology that allowed for accessibility features like closed captioning. Participating faculty implementation of accessibility features by using new technologies is consistent with a survey of over 600 Ontario post-secondary students and 70 disability staff by HEQCO in 2020, which cited that many teaching faculty across the province have made their course design and delivery more accessible to students with disabilities (Piccini, 2020, p.21-22). As noted within these findings, faculty in this survey have started to record their lectures as well as providing more options for students to demonstrate their learning (Piccini, 2020, p.22). Similar to our findings, student

survey respondents indicated difficulties with creating meaningful social connections and community due to the online learning environment (Piccini, 2020, p.22).

One faculty indicated that they have had different reactions and varied levels of participation from students in the online learning environment. For example, they found that, as in an in-class setting, some students with ASD appear quiet in large group settings but are engaged in one-on-one discussions. Another faculty participant noted challenges in receiving feedback or measure engagement when students turn off their video. One faculty acknowledged that the use of different technologies and platforms can often be overwhelming to some students. Several faculty participants commented on the barriers experienced by students in the online environment including testing tools and number of steps required to access information in a self-directed setting.

One faculty member indicated that some students are unclear about expectations for faculty availability and, as such, expect immediate responses to emails. Similarly, some faculty expressed the need to set clear boundaries and expectations around online communication, address challenges with meeting students in the online environment, and being prepared to assist with challenges related to online platforms.

Illustrative Quotes from Focus Groups

"All my teachers use Bongo… When it comes to virtual learning, …in some aspects, it's easier to… pay attention and take notes." (Student)

"All my experiences with online education have been pretty positive. But at the same time, I also understand like why there's also something nice about being able to connect to an actual classroom." (Student)

"Set very clear boundaries and expectations around online communication. It was important from the beginning… to say, 'I promise you're going to get an answer, and the answer

will come in the next day or next 48 hours and if you don't hear from me at 48 hours, please email me back as a prompt.'" (Faculty)

"We had much higher rates of engagement across the board for students have a variety of different backgrounds, and circumstances." (Faculty)

"A student self-identified to me as having ASD and expressed to me that a lot of the barriers she experienced in the classroom were removed in the online setting due to things like asynchronous delivery, feeling more comfortable about the version of herself that she could curate and portray through video, having a bit of access, being able to type things more." (Faculty)

"[In my program], I think sometimes we get into having far more tech heavy things. Nothing that I had access to had live captioning, which is a feature that I would like, which I think now my faculty is purchased Zoom for the fall, and I also know exists in Teams which I'm very excited about." (Faculty)

"I'm using a program called Otter.ai, that transcribes when I'm speaking, so I give my students the option on top of things like Slate and Bongo, which I used because my students already familiar with that… I also tried things like WebEx which ended up not being terribly stable." (Faculty)

"Students… have experienced all these different technologies and platforms and that is really overwhelming… whether you are on the autistic spectrum or not… that is a lot to deal with." (Faculty)

"I'm experiencing two very different types of reactions. In a classroom environment, where I have 15 plus students online at the same time, my students who identify as [having] ASD… are extremely quiet. Very much… echoing their involvement…. in in-person or physical classroom. But the opposite experience is also there, where I find that on a one-to-one basis, if

I'm doing a private Zoom call, … [they] are actually more engaged. Sometimes I've attributed it

to them… feeling that they are somewhat protected by their screen, …. But again, two different

environments two different reactions." (Faculty)

"Students are turning off their video capture; that whole feedback mechanism is being

lost. So, you don't know when someone is actually stop talking or they're being sarcastic or

serious, or what, or how. The inflection is gone. And I think we also talk with their hands a lot, so

that also being lacking when video is off, or where there's too many people in the chat."

(Faculty)

"Things like the quizzing tool within Slate or where students have to do facial

recognition… [while] walking through some number of different steps that you have to you have

to go to in order to confirm your identity. … [There] definitely were barriers. …The number of

steps that you have to go through definitely caused high anxiety and it was it was definitely a

challenge." (Faculty)

Universal Design for Learning (UDL) Practices to Support Students

Student focus group participants reported that their classroom experiences have allowed

them to appreciate that inclusive teaching strategies are beneficial to students with and without

disabilities. Several faculty focus group participants provided feedback on strategies and

approaches they have undertaken to support different leaning styles in the classroom and virtual

environments during the pandemic. The strategies discussed involved UDL approaches aimed

at improving student learning and engagement. Faculty strategies reported are consistent in the

literature that applying UDL principles and individualizing teaching approaches based on

students learning strengths are effective strategies used for students with ASD (Austin et al.,

2017, p.32). The ideas include:

- Measuring students' competencies in the course content versus their ability to work with others. This approach has resulted in eliminating evaluation of group skills in classes where group work is not a learning outcome.

- Visualizing abstract concepts.

- Creating opportunities for alternate presentation formats or multiple means of presentation (e.g., narrative, checklist).

- Administering a Learner Profile Survey for all students using a reflective practice exercise that involves students completing a survey in week one. The survey is designed using a strength-based, empowerment approach that includes questions related to learning preferences, barriers to success, strengths, tasks that they will do well in on placement and areas of anticipated challenges.

- Building in flexibility and options for multiple ways of engagement and modifying requirements instead of putting the burden entirely on students.

- Using breakout rooms for group conversations in online learning contexts, so there's still opportunity to practice group skills without the evaluation.

Illustrative Quotes from Focus Groups

"Strategies that they were teaching us were inclusive… they weren't specifically for just the students with ASD, they ended up being beneficial as a whole." (Student)

"Our team uses UDL in our approach to teaching, so all our content is in Slate." (Faculty)

"We are aware of the different types of learning styles that's happening during the pandemic. …I'm a seeing a visual, where I'm talking through the slides and I'm trying to make it as real as possible. And then the Otter.ai is transcribing what I'm saying, so by the time am uploading everything, I'm giving an audiovisual option." (Faculty)

"[In a] professional capstone course, …my program decided to do away with the grad show this past year, and suddenly, instead of having students planning a wedding in the last

semester… what meaningful professional work could we undertake? So, we spent some extensive time and research re-calibrating all the projects and making them truly UDL. So, around students totally being able to identify what they wanted to undertake, setting the goals around it, setting the metrics for success around it, talking about and deciding how they wanted to give evidence of that and learn about that." (Faculty)

"Students with executive function difficulties, including those with autism, may have difficulty taking in a lot of text at once. We still present a narrative description… but then we also present the checklist version… [which] they can check off every time they completed one sub-task, to guide them. …And then there's a video presentation. So just giving them multiple ways to take in the information, and make sense of it, and to chunk it for them as well." (Faculty)

"We had to eliminate evaluation of group skills in classes where that wasn't a learning outcome. We adjusted our learning outcomes to evaluating the skills related to that content knowledge that was not around working in a group… when we do online learning, we can use breakout rooms and have group conversations, so there's still opportunity to practice group skills but we took away the evaluation." (Faculty)

"I started using what we call [a] 'learner profile survey' in my course. So in week one… students are asked to complete a survey by the end of the first week and the survey asks them… their preferred way of taking in information, their preferred way of showing what they know, what makes learning hard for them, what were their barriers to success in the previous term, [and] is there anything else you want your professor to know about you. But it gives them another opportunity to say here is what I need, but most importantly, they are forced to reflect on what they can do for themselves. …We ask them to identify their strengths, what task do they think they will do well on in field placement, where will their challenges be, and then we help them formulate what they might want to say to their placement supervisor, to share about their learning needs." (Faculty)

"We give voice to visual elements. So, if there's a meaningful picture or diagram on a PowerPoint slide, that we're making sure we explain the symbolism behind that. Because everyone else in the class will get it… these students might not." (Faculty)

Summary, Limitations and Recommendations

Several insights were gained from the focus group discussions and our summary has been organized around the three focus group objectives.

Objective 1: Gather information from students with autism about their experiences with virtual (online) and non-virtual (classroom) learning in post-secondary.

The themes identified from student focus groups highlight that some of the major factors impacting their learning experiences at Sheridan are: (1) Environmental stressors impacting behaviours and emotional self-regulation, (2) Gaps in transitioning from high school to college, (3) Lack of access to leadership opportunities, (4) Lack of awareness or understanding of available supports, (5) Inadequate quiet spaces to support sensory and emotional needs, (6) Difficulty navigating inconsistent approaches in academic accommodation implementation, (7) Too much onus being placed on students to prove their need for accommodations, (8) Difficulty navigating multiple platforms in the online learning context, (9) Opportunities for socialization and support through FACE IT club, (10) Ability to produce better quality work with academic accommodations.

Objective 2: Gather faculty perspectives on strategies and pedagogical approaches used in navigating difficulties with teaching students with autism in post-secondary.

Focus group participants highlighted the following factors and strategies which impacted their experiences teaching students with ASD: (1) Building rapport and cultivating trust with all members of the campus community to encourage open communication and discussion regarding accommodation needs, (2) Recognizing challenges with group formats and allowing choice in group selection or foregoing mandatory group work (3) Understanding stressors and strategies to support students' social, communication and emotional challenges, (4) Collaboration with Student Affairs and AL to support students with ASD, (5) Applying strategies learned in previous training and community employment to support students with ASD, (6) Researching and applying UDL approaches to create a more inclusive environment, (7)

Creating learner profiles of all students to determine strengths and areas of need, (including learning strategies like self-advocacy) (8) Sharing best practices with colleagues, (9) Recognizing diversity and heterogeneity among students, (10) Recognizing fatigue or course overload and impact of different technologies and platforms on students' emotional state, (11) Awareness of executive functioning challenges such as difficulties with time management and organization and different processing speeds, (12) Establishing clear boundaries and expectations around online communication, (13) Clarity in communication/messaging regarding tasks, assignments, changes in routines, tasks, etc.

Objective 3: Use the information collected from both groups to develop a resource toolkit for faculty.

Based on responses from student and faculty focus groups, the following suggestions have been offered to inform development of a specific faculty toolkit for understanding and supporting students with ASD. (1) Develop interactive and in-person training sessions/modules for full and part time faculty to learn about students with ASD, available accommodations and supports, and how to refer for services, (2) Create videos with specific case scenarios, (3) Host webinars to allow for best practice sharing and discussions about teaching experiences, (4) Work with CTL to support faculty with intentional application of UDL principles in course design, (5) Design modules/workshops to address range of topics including WIL accommodation guidelines, disability disclosure and confidentiality, emotional and behavioral considerations of the learner experience, managing group dynamics/relationships (students with and without ASD), (6) Create modules that include voices of students and faculty with ASD discussing their diagnosis and learning experiences.

Recommendations

Based on the focus group results, the following recommendations are made to enhance the experience of students with ASD:

- AL to develop groupwork accommodation and create guidelines outlining procedure for implementing this accommodation.

- AL to create a communication plan to ensure/enhance faculty awareness of the Work Integrated Learning (WIL) Accommodation Guidelines and resources that are available to support students with disabilities in WIL contexts.

- Consideration of on-campus liaison role(s) specifically for students with ASD in post-secondary education institutions.

- Ensure transition planning sessions for students with ASD addresses self-advocacy skill building, disability disclosure and confidentiality, requesting academic accommodations, stakeholders' roles, and responsibilities.

- Consideration for designated safe spaces, for example, quiet rooms and sensory rooms that meet specific needs for studying, sensory, lighting, relaxing and decompressing.

- Planning for intentional access to leadership opportunities that leverage strengths and insights of students with ASD. This is especially critical in creating opportunities for their voices to be heard and included in programming.

- Support creation of mentorship programs that allow students with ASD to have access to peer mentors and to become peer mentors.

- Develop interactive and in-person training sessions/modules for full- and part-time faculty to learn about students with ASD. Range of topics should include the accommodation process, student affairs' services and supports, disability disclosure and confidentiality, emotional and behavioral considerations of the learner experience and managing group dynamics/relationships (students with and without ASD).

- Work with the Centre for Teaching and Learning (CTL) to develop training on UDL and provide guidance for intentional application of UDL principles in course design.

Limitations of the Study

This study encountered several limitations that should be considered in interpreting the findings. First, although the researchers intended to recruit 8 -10 student participants for the focus groups, only 3 students participated. The small number of student participants could be attributed to COVID-19 pandemic protocols that prevented on campus in-person group sessions resulting in the shift to focus groups being conducted online by a third-party moderator. Although this is considered a small sample size, participants were able to offer significant insights into their experiences and the findings were presented in a way that highlights their voices using illustrative quotes, where possible. Second, focus groups were conducted using the Zoom virtual platform instead of in-person sessions. This unanticipated change potentially impacted students' comfort level and readiness to share their perspectives. This shift to online learning happened quickly and students may not have had access to the appropriate technology to access the virtual platforms to participate in the online focus groups. Third, the online focus group interviews were conducted during a busy time of year within the academic calendar which may have prevented students from participating. Four, there was significant disparity between the number of student participants versus faculty participants resulting in more feedback from faculty in the research findings.

Despite the stated limitations, the purposive sampling approach resulted in participants providing "rich descriptions" of their experiences in the teaching and learning environment. These insights provide possible recommendations for future research for ensuring more inclusive and supportive environments.

Recommendations for Further Research

This study identified the experiences of students with ASD and faculty's insights and strategies in supporting them in post-secondary institutions. How students navigated work integrated learning contexts was a source of concern and, given the limited number of studies in this area, further research is recommended to explore student's readiness, understanding and

awareness of supports in Work Integrated Learning contexts and overall transition to working environments.

The current study did not identify the presence and impact of comorbidity on the academic achievement/experience of students with ASD. Another worthwhile area to explore is the impact of comorbidity on the academic achievement of students with ASD to determine how mental health services can be organized to support comorbid mental health conditions.

Based on faculty members' observation regarding male counterparts experiencing more challenges teaching and supporting students with ASD, further qualitative research should explore gender roles in supporting students with ASD.

Finally, given the rise in remote learning and possibility of online delivery becoming a mainstream teaching modality, it is important to investigate the long-term implications of online instruction on the educational experience for students with ASD.

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Appendix A - Additional Insights

This section includes additional illustrative verbatim comments and additional insights collected from faculty and student focus group participants that were not able to fit within the body of this report.

Gender of Instructor and Teaching Students with ASD

"I lean on my ability to be able to use my empathy skills and connect with students to assist and make their learning environment more positive. And I notice that specifically amongst my male colleagues, they often run into challenges with students, the same students that I'm teaching and not running into challenges with. And I've always wondered, if that may be part of it. That that I'm having a more honest or vulnerable or open dialogue. Also, kind of makes me wonder about how we could equalize the emotional labour of that or teach others how to connect like that. So, it's not just my own implicit knowledge, or skills as a designer coming up." (Faculty)

Unawareness of Formal Diagnosis

"While I was experiencing all the issues I was experiencing, I honestly did not know it was because [of] ASD... And I don't know if it's because I didn't know I was ASD until… a few months ago. So, I was just dealing with this with not understanding really what was going on. I was always different. Always. I wouldn't want to be like everybody else. There's way too much vanilla in this world." (Student)

Supporting Students in Group Work Contexts

"I think there are a lot of social errors that are happening in group work that can explode into conflict, that we end up having to direct to the Student Rights and Responsibilities Office. And it's just because of social misunderstanding that those social errors are happening, but I don't always know how to handle those group dynamics, because…oftentimes students with autism deal in concrete terms. Social interaction is not concrete, [it] is very abstract, so there is… a lot of growth there." (Faculty)

"The most stressful parts of supporting a student with ASD is actually the dynamics with other students. …Particularly … in group work, and particularly in first year first year classes, first semester classes. Because… so often students can learn about the exceptionality of a particular student by second, third or fourth semester, hopefully. …They learn it can be a good learning experience about learning how to work with someone with an exceptionality and learning from [one another]. But particularly in first semester, when you don't know how to support that student, when that student is making that transition, and then that all of those students are making a transition into a new environment, and then all of a sudden… it's difficult. …There's nothing that prepares you for how to support that…student in that environment, and it's tricky. Because you have to be that much further ahead to be able to prepare that group environments, …to help them work together…there [are] a lot of variables." (Faculty)

"About the level of information that's conveyed to us as faculty with respect to the diagnosis or whatever the student is comfortable with releasing in terms of information to the faculty. I totally understand the confidentiality reasons behind it, but boy would be nice if we could have just a little bit more information…with respect to group work. How can we anticipate, what can we expect that that student is, how are they going to fall within the group work environment?" (Faculty)

"Some students might be blown completely out of the water as soon as I put this particular group of students together when that dynamic just kind of doesn't work or something isn't happening there." (Faculty)

"Oftentimes they are the very quiet ones, or in the first couple of weeks when I'm trying to get student groups working together, small groups, pairs, triples, that type of thing that thing, oftentimes just be the ones that are left out, and sometimes just the ones that are very engrossed in their laptop screens in front of them but obviously not paying really close attention to what it is that I'm doing. And that's not all, as we all know, those aren't always the hallmarks of the student somewhere on the spectrum, sometimes those are just lazy students." (Faculty)

Classroom Behaviour and Emotional State

"At my old university, where I had issues, ...a big issue in my first year there was when I was living in residence and it was a very loud and rambunctious party type of school... Sometimes the loudness would make it like pretty hard to sleep sometimes and people wouldn't always understand." (Student)

"Number one [has] been… finding my own community, like finding groups of autistic people to spend time with. ...I never had that growing up. I only started to get that in recent times. ...It's not as bad as it would have been if I had truly felt isolated. That might have broke me. …The other thing… is... being in a more inclusive environment, where people treat you better." (Student)

"Things can become overwhelming, Like I had... a complete breakdown on Friday in the morning. ...It was because... I have a lot going on and I have mainly school happening. (Student)

"It's very difficult for me to hold my tongue, like extremely difficult." (Student)

"I'm huge on fairness. And at that point my brain just starts getting angry and it's, like, 'why are you trying to make this harder for me?'" (Student)

"Recognizing those social cues and then over sharing also can also be a challenge to manage in a classroom as well." (Faculty)

"I'm not always comfortable. So even though there are times I feel prepared, there's times I don't. So, I need more information on how to manage group dynamics when we're mixing students with autism [with those] who don't have autism." (Faculty)

"When somebody does snap on you… it's not a personal attack; it's something that they're going through on their own and they maybe don't have the ability to sort it out mentally like they have to say it out loud." (Faculty)

Gaps in ASD-specific supports and services

"That I might be too overwhelmed or hard to remember to take certain steps or go to certain websites, which can also be hard to navigate… But, in terms of counseling... I think that a lot of people have preconceived notions about how autistic people are." (Student)

"[It would help to have] One or two rooms for students' accommodations, or even like 5% of the rooms." (Student)

"[It would help] *To have quiet rooms. Like sensory rooms: a couch or a couple chairs, light dimmers built in, [that] kind of thing. Equipped with beanbags and touch sensory stuff. A place to sit down, relax and decompress. I think it's crucial and vital. And sensory rooms would be nice cause it allows you stand... without judgment."* (Student)

Academic Accommodations Limitations and Barriers

"The course was inaccessible to students with autism, [the] structure and format of the course. I did find that the course in general to be somewhat inaccessible to me. I know a lot of people did." (Student)

"They don't get it. I find my biggest issue, beyond the noise issue [because] it's massive for me, is the lack of integrity in the understanding of what the process is between teachers. … There [are] different ways in roads, everybody expects you to go. There are different platforms that everybody expects you to use, even though there's Slate. And it's, 'You're the problem,' if you have a question." (Student)

"Just the 'mish mash' of expectations, of what the process is and certain teachers are okay if you just shoot them off. Like, say you're booking the assessment center. Some folks are okay with just, 'Hey, send me that and were good.' Others need it populated in a specific way and…there [are] no standard expectation. …It's very difficult when you're trying to navigate being in school and all these different platforms and all this other stuff. And then suddenly, each thing that you have to accomplish has to be accomplished 12 different ways by 12 different people. ...Sometimes in my head I can't remember, 'Is it this teacher that wanted it this way? Is that this teacher that wanted it this way?' Where do I go?" (Student)

"When [expectations from Professors] changes by moment, you spend a lot of time learning how to learn instead learning, which is really not the best use of time." (Student)

ASD-Related Professional Development and Experience

"I had a lot of training through the Geneva Centre, …their online training. …It really does focus on applied behavior analysis and… having issues around behavior, and creating functional behavior analysis around that. So, it's not always relevant to our classrooms." (Faculty)

"I have a 15-year-old son with autism, so I'm continually looking for ways to better my practice, and even to support my son. I also learn a lot when I was the chair of SEAC for the HDCSB." (Faculty)

Significance of Academic Accommodations on Student Experience

"When it came to extensions, I'm not one to commonly ask for them, but when I do, I found… them usually helpful." (Student)

"Profs were pretty gracious with extensions and all. I would say there are few complaints from my end on accommodations in particular." (Student)

Teaching Strategies

"I've had classes where four students have autism in my one class and they're all very different from each other with very different strengths and needs, and so not pigeon holing under a diagnosis is probably really important." (Faculty)

"Just making sure that I am reaching these students in the classroom and opening up reciprocal communication with the students with ASD." (Faculty)

"I often like to give more opportunities for group work in the classroom, so that I'm there and able to support, and then walking around the classrooms are in that way. But I often find that time to helping facilitate conversations with me around supports a little bit better." (Faculty)

"Once we have that conversation, seeing a lot more engagement and check in and just to say, 'I don't expect you to be one specific, thing I'm looking for you to say what do you want to learn, what are you looking to get out of this.'" (Faculty)

"I have also found adding specific persons to groups can sometimes work to ensure guidance can be provided within group work when needed." (Faculty)

"I supported students that were direct referral from Students Success, who were having difficulty or high anxiety around Slate…so… I would walk through some of the different challenges that they were having, and so there definitely were some students so those would just be students who Accessible Learning counselors would send my way because… they thought that… their anxiety was too high for them to get regular slate help." (Faculty)

"I take some of what you do in a social story, and I apply it to how I deliver the message. So, in a social story, when you're introducing social understanding on a situation to somebody with autism, you use affirmative statements and perspective statements, directive and descriptive. So, we use directive statements: this is the change. We just use descriptive statements to gently guide the behavior through this new change." (Faculty)

"This is a lecture that's going to take me an hour to deliver the content and then we're going to turn it over to the students to explore that content for an hour on their own and then we're going to come back and summarize, and revisit." (Faculty)

"Some students might be blown completely out of the water as soon as I put this particular group of students together when that dynamic just kind of doesn't work or something isn't happening there." (Faculty)

"We have learning outcomes in many of our courses …. geared towards successful completion of group work…in a class of 25, if we end up with a single student that's leftover, doesn't have a group, doesn't know how to function within a group, and we're looking at those

learning outcomes saying: you must perform successfully in a group production or whatever,

then it becomes a challenge as to how to evaluate that individual." (Faculty)

"We want to measure the skill of the competencies of the course content and not blend

that with their ability to work with others to demonstrate those competencies." (Faculty)

"I tend to move towards individual meetings… as soon as I start to see some of those

tell-tale signs." (Faculty)

"In classrooms…I would ask students… 'why don't we just have a chat for a few minutes

or can we meet just after class just for a couple of minutes, nothing major just want to have a

quick chat.' It's a little bit different a little bit harder to do in the virtual world." (Faculty)

"Every single person has a different learning style. So, asking them 'what works best for

you,' and not… pinpointing 'okay, this person specifically needs this.' We all learn in different

ways, so finding ways to support all our students, I think is definitely it works in this context."

(Faculty)

"Something I've had a lot of success with is just having very frank conversations with all

my students, but also students with ASD, saying, 'what are your actual goals around success or

performance in this course,' and I think sometimes… it just levels the playing field or makes

[them] aware that I don't think higher grades are morally superior or better anything to lower

grades, but just to say 'what is your level of success, what are you looking for, how can I help

you.'" (Faculty)

Faculty Recommendations for Training

"Not just a passive training module on Slate. people have not really seen extensive

behavior change from passive modules on Slate."

"I think that would be beneficial to have a faculty training module and agree with on an

in-person training session."

"If it would be more thinking about how you support students with a wide variety of exceptionalities. But maybe broadly looking at what are some of the exceptionalities that you might find in your classroom."

"When you frame training as 'here are the learning challenges, and here are the strategies for those challenges,' and you remove the disability label, then that applies to all student groups."

"What I would do is give them a workshop or show them a video. And I would… call that video 'here are the five types of learners that you might find in your class' …and with that we can hopefully try to cast a wide enough net that would capture some of those typical learner profiles."

"Classroom management…and student management would be probably the first thing… Is a student reluctant to do group work? Is the student always preoccupied with something else in class?"

"Body of work where links could be provided to short, probably sometimes longer videos, where we do get people who are willing to speak about their diagnosis, and how throughout their young adults and adult life they have learned to learn."

"Module is developed for faculty, would be important to include students with autism and faculty with autism, who could contribute to their strategies."

Appendix B - Best Practices for Faculty

This section includes illustrative verbatim comments from faculty focus group

participants on inclusive practices they implemented into their teaching which were found to did

not fit within the recommendation section of the report.

"This is a lecture that's going to take me an hour to deliver the content and then we're

going to turn it over to the students to explore that content for an hour on their own and then

we're going to come back and summarize, and revisit." (Faculty)

"I also keep the weekly lessons consistent, which always allows all my students to know

what to expect each and every week, however this is easy to do with the material I team."

(Faculty)

"This works well for all students with ASD. Providing alternative looking at how learning

outcomes might be achieved through alternative means, when group work is difficult or anxiety

is overwhelming, I work hard to normalize exceptionality: I set up a framework in my classroom

that looks that the fact that we all need different things to learn and invite all students to talk to

me if there is some way that I can support them to learn more effectively. When I go over

assignments, I talk about what is required and also mention that I am willing to discuss

alternatives if there is something about the assignment that seems impossible. Calling all of

these things out into the open normalizes them and has the effect of students disclosing to me

what they need, which can often translate to a better learning environment." (Faculty)

"'If anyone has any information, they like to share with me about their best learning,

[and] how can I support you best in this classroom,' and then just have that conversation.

Sometimes [a] student would come in before the rest of the class, and I would say… 'I notice

that… this is happening in the classroom; how can I support you in your learning?' …Once the

students with ASD feel comfortable and they trust you." (Faculty)

"Professional capstone course... my program decided to do away with the grad show this

past year, and suddenly, instead of having students planning a wedding in the last semester,

what meaningful professional work could we undertake? So, we spent some extensive time and research re-calibrating all the projects and making them truly UDL. So, around students totally being able to identify what they wanted to undertake, setting the goals around it, setting the metrics for success around it, talking about and deciding how they wanted to give evidence of that and learn about that." (Faculty)

"I found in the educational support program, students were more knowledgeable than me. But I'm definitely always being open to sharing my vulnerability in that aspect so I find that they respect them a little bit more when I when I turn on and say, 'hey, I might not know much about this, or not know how to support you, so guide me through this and we can kind of learn through this together.' …Speaking with them, and not in a condescending way whatsoever, on a level of inclusion." (Faculty)

"I often like to give more opportunities for group work in the classroom, so that I'm there and able to support, and then walking around the classrooms are in that way. But I often find that time, to helping facilitate conversations with me around supports a little bit better." (Faculty)

"Something I've had a lot of success with it just having very frank conversations with all my students, but also students with ASD, saying, 'what are your actual goals around success or performance in this course,' and I think sometimes… it just levels the playing field or makes it aware that I don't think higher grades are morally superior or better anything to lower grades, but just to say 'what is your level of success, what are you looking for, how can I help you.'" (Faculty)

Appendix C - Demographic Table

Participant Profile

Role	Faculty	Program of Study/Academic Program
Student	FAST	Computer Programming
Student	FAHCS	Social Service Worker
Student	PSB	BBA Human Resources
Faculty	FAAD	Honours Bachelor of Interaction Design
Faculty	PSB	All Accounting Programs in PSB
Faculty	FAHCS	Educational Support Program
Faculty	FAHCS	Early Childhood Education
Faculty	FAHCS	Educational Support Program
Faculty	PSB	General Business
Faculty	FAHCS	Educational Support Program
Faculty	FAHCS	School of Community Studies
Faculty	FAAD	Honours Bachelor of Film and Television
Faculty	FAST	Interactive Media Management, System Analyst

Appendix D - Student Focus Group Questions

1. What program and year of study are you currently enrolled in?

2. How would you describe your experience as a student with ASD at Sheridan?

3. How have these experiences impacted your overall student life (academic, interactions with instructors/faculty/peers, social interactions)?

4. What has been helpful in your social, emotional, and academic success?

5. What barriers, if any, have you experienced in accessing services including accessible learning, counselling, academic advising, and support from instructors/faculty?

6. For current students, during the COVID-19 pandemic, what virtual platforms have you used to complete your courses?

7. For current students, how has the shift from in-class learning to virtual learning impacted your experience at Sheridan?

8. Identify your most significant supports/services on campus and, why have you have chosen them?

9. Is there anything else you'd like to tell us about your experience at Sheridan that would help in understanding the barriers facing students with ASD in post-secondary environments?

Appendix E - Faculty Focus Group Questions

1. Tell us about your professional background including what program you teach, fulltime/part time status, length of time teaching etc.?

2. Have you had opportunity to participate in any training or Professional Development for students with ASD?

3. During this pandemic, what virtual platforms have you used to conduct your classes?

4. What barriers, if any, has this learning environment presented for students with ASD?

5. How comfortable/prepared are you in supporting/teaching students with ASD in virtual/non-virtual contexts?

6. What challenges, if any, do you encounter in teaching/supporting students with ASD

7. What strategies have you used to support students with ASD in virtual/non-virtual settings (E.g. group work, meetings with students, etc.).

8. What support services have you accessed to ensure appropriate support for students with ASD? If you have not used support services, why not?

9. a) How might a faculty training module on strategies for supporting students with ASD contribute to an inclusive classroom and enrich your teaching practice

    b) what topics would you like to see included?

    c) What platform(s) and mode(s) of delivery would you recommend (For example videos, webinar)

10. In your experience teaching students with ASD, is there anything else you'd like to tell us that would be helpful in improving their academic success?

Appendix F - Student Consent Forms

Sheridan

STUDENT PARTICIPANT LETTER OF INFORMATION & CONSENT FORM

Strategies to Support Post-Secondary Students with Autism in the Classroom: A Canadian Case Study

Approval Reference: SREB No 2019-09-001-027

You are being invited to participate in a study entitled Strategies to Support Post-Secondary Students with Autism in the Classroom: A Canadian Case Study that is being conducted by Suzyo S C Bavi, Counsellor, Wellness and Counselling and Janice Galloway, Learning Strategist, Accessible Learning at Sheridan College and you may contact them at suzyo.bavi@sheridancollege.ca or janice.galloway@sheridancollege.ca. If you have any further questions, you can call 905-845-9430 ext. 2401/ 2536.

The investigators are being assisted by Research Assistants, Mireille Dubé and Yara Kashlan. Mireille Dubé is currently completing her Honours Bachelor of Health Sciences degree in Kinesiology and Health Promotion at the Davis campus. Yara Kashlan is currently completing her Honours Bachelor degree in Interaction Design at the Trafalgar campus. You may contact them if you have any questions about participating by emailing them at mireille.dube@sheridancollege.ca or yara.kashlan@sheridancollege.ca.

The purpose of this research project is to understand the learning needs of students that identify as an individual with, or have a formal diagnosis of, Autism Spectrum Disorder (ASD), highlighting perspectives of faculty members and students. The study will be used to identify challenges faced by students with ASD in the classroom, including e-learning; how faculty can apply strategies that promote academic success for students with ASD. The findings will be used to develop appropriate policy, teaching practice and support services for students with ASD in post-secondary.

By examining and understanding successful and effective strategies for supporting students with ASD, institutions can help advance teaching practices and interventions that contributes to academic success of students with ASD.

The funding for this research is from Sheridan's Scholarship, Research and Creative Activities 2020 growth grant.

You have agreed to participate in this study because you are a student with Autism attending Sheridan College and can provide feedback on strategies that will be helpful in meeting the academic, social, and behavioural needs of other students with ASD.

Should you agree to participate, your participation in this research will involve one focus group which will be held over Zoom and will be audio recorded. Your responses, verbal and/or written in the chat box will later be transcribed into writing for record purposes only. To participate in the focus group, you must agree to voluntarily participate in the research; be available to participate

in the focus group on Zoom Video Communications Inc. at the agreed date and time in the summer of 2020 and must currently be a student at Sheridan College. It is estimated the focus group will take about 60-90 minutes. There is an option for you to turn off the video camera if you do not wish to be seen on camera as well as a chat box option. You will also be able to use a fake name/pseudonym if you prefer to not use your real name.

There are some potential risks to you by participating in this research and they include being triggered by the questionnaire as it relates to negative and positive lived experiences. Counselling services and/or helplines will be provided for those to contact for support. You will be able to discontinue your participation at any time.

The potential benefits of your participation in this research include knowing you are contributing to improving post-secondary experiences for individuals with Autism by providing your input and opinions about best practices, effective policies, inclusive teaching strategies and universally designed environments.

To thank you for your time and involvement you will be given a $10 gift card to be mailed out upon completion of the interview.

Your participation in this research must be completely voluntary. If you decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data will not be used. You may decline to answer any question(s) you prefer not to answer. You will have the option to request a copy of the transcript and at your request will be provided a copy of the final report.

There are minimal risks associated with this research study; however, a risk of breach of confidentiality always exists within focus group participation. We have taken the steps to minimize this risk as all focus group participants will have to read and sign a confidential agreement form.

Identifiers such as your name will be replaced with a unique pseudonym. These identifiers will be kept separate from the study data and linked to study data by the pseudonym only.

It is anticipated that the results of this study will be shared with others in the following ways: direct communication with participants, learning modules, posters, research briefs, publications, attending seminars, published in academic journals, conferences and community forums.

In addition to being able to contact the Research Assistants at the email addresses provided, you may verify the ethical approval of this study, or raise any concerns you may have, by contacting the Chair of the Sheridan Research Ethics Board, Dr. Kirsten Madsen at 905-845-9430 (ext. 2795).

For more information about this study please contact:
Suzyo SC Bavi, MSW, RSW, Counsellor, Wellness and Counselling Tel: 905-845-9430 ext. 2401 or Email: Suzyo.bavi@sheridancollege.ca,
or
Janice Galloway, Learning Strategist, Accessible Learning, Tel: 905-845-9430 ext. 2536, or Email: Janice.galloway@sheridancollege.ca

Your signature below indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the investigators.

_____

Signature

_____

Date

  Participant Signature* Date

  OR

_____

Signature

_____

Date

  Authorized Representative Signature** Date

Where written consent is culturally unacceptable, or where there are good reasons for not recording consent in writing, the procedures used to seek free and informed consent shall be documented.

**Free and informed consent must be obtained from an authorized representative for someone who is not legally competent to consent to be a research participant.*

Subject to applicable legal requirements.

Appendix G - Faculty Consent Forms

Sheridan

FACULTY LETTER OF INFORMATION & CONSENT FORM

Strategies to Support Post-Secondary Students with Autism in the Classroom: A Canadian Case Study

Approval Reference: SREB No 2019-09-001-027

You are being invited to participate in a study entitled Strategies to Support Post-Secondary Students with Autism in the Classroom: A Canadian Case Study that is being conducted by Suzyo S C Bavi, Counsellor, Wellness and Counselling and Janice Galloway, Learning Strategist, Accessible Learning at Sheridan College and you may contact them at suzyo.bavi@sheridancollege.ca or janice.galloway@sheridancollege.ca. If you have any further questions, you can call 905-845-9430 ext. 2401/ 2536.

The investigators are being assisted by Research Assistants, Mireille Dubé and Yara Kashlan. Mireille Dubé is currently completing her Honours Bachelor of Health Sciences degree in Kinesiology and Health Promotion at the Davis campus. Yara Kashlan is currently completing her Honours Bachelor degree in Interaction Design at the Trafalgar campus. You may contact them if you have any questions about participating by emailing them at mireille.dube@sheridancollege.ca or yara.kashlan@sheridancollege.ca.

The purpose of this research project is to understand the learning needs of students that identify as an individual with, or have a formal diagnosis of, Autism Spectrum Disorder (ASD), highlighting perspectives of faculty members and students. The study will be used to identify challenges faced by students with ASD in the classroom, including e-learning; how faculty can apply strategies that meet academic, social, and behavioral needs of students with ASD. The findings will be useful in informing current teaching practices that promote academic success in post-secondary.

Research of this type is important because by examining, identifying and understanding successful and effective strategies for supporting students with ASD, institutions can help advance teaching practices and interventions that contribute to academic success of students with ASD.

The funding for this research is from Sheridan's Scholarship, Research and Creative Activities 2020 growth grant.

You have agreed to participate in this study because you are a faculty member at Sheridan College and can provide feedback on strategies that will be helpful in meeting the academic, social, and behavioural needs of students with ASD.
Your participation in this research will involve audio recording. With your consent, the focus group interview will be audio recorded. Your responses, verbal and/or written in the chat box will later be transcribed into writing for record purposes only. To participate in the focus group, you must agree to voluntarily participate in the research; be available to participate in the focus

group on Zoom Video Communications Inc. at the agreed date and time in the summer of 2020 and must currently be a teaching faculty member at Sheridan College. It is estimated that the focus group will take about 60-90 minutes. There is an option for you to turn off the video camera if you do not wish to be seen on camera as well as a chat box option.

The potential benefits of your participation in this research include, improving post-secondary experiences for individuals with Autism by providing best practices, informing policies, inclusive teaching strategies and universally designed environments.

You will be given a small token of appreciation of a $10 gift card to be mailed out after the completion of the focus group.

Your participation in this research must be completely voluntary. If you decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data will not be used. You may decline to answer any question(s) you prefer not to answer. Your responses, verbal and/or written in the chat box will later be transcribed into writing for record purposes only. You have the option to request a copy of the transcript and the final report.

There are minimal risks associated with this research study; however, a risk of breach of confidentiality always exists within focus group participation. We have taken the steps to minimize this risk as all focus group participants will have to read and sign a confidential agreement form.

Identifiers such as names will be replaced with a unique pseudonym. These identifiers will be kept separate from the study data and linked to study data by the pseudonym only.
It is anticipated that the results of this study will be shared with others in the following ways: direct communication with participants, learning modules, posters, research briefs, publications, attending seminars, published in academic journals, conferences and community forums.

In addition to being able to contact the Research Assistant(s) at the email addresses provided, you may verify the ethical approval of this study, or raise any concerns you may have, by contacting the Chair of the Sheridan Research Ethics Board, Dr. Kirsten Madsen at 905-845-9430 (ext. 2795).

For more information about this study please contact:
Suzyo SC Bavi, MSW, RSW, Counsellor, Wellness and Counselling Tel: 905-845-9430 ext. 2401 or Email: Suzyo.bavi@sheridancollege.ca,

or
Janice Galloway, Learning Strategist, Accessible Learning, Tel: 905-845-9430 ext. 2536, or Email: Janice.galloway@sheridancollege.ca

Your signature below indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the investigators.

_____
Signature

_____
Date

Where written consent is culturally unacceptable, or where there are good reasons for not recording consent in writing, the procedures used to seek free and informed consent shall be documented.

**Free and informed consent must be obtained from an authorized representative for someone who is not legally competent to consent to be a research participant.

Subject to applicable legal requirements.

Appendix H - Focus Group Confidentiality Agreement Form

Sheridan

Confidentiality Agreement

Strategies to Support Post-Secondary Students with Autism in the Classroom: A Canadian Case Study

Approval Reference: SREB No 2019-09-001-027

I, _____, will not share or disclose any information discussed during the focus group for Strategies to Support Post-Secondary Students with Autism in the Classroom: A Canadian Case Study on June 23/June 24, 2020, after the focus group has been completed. I understand that it is important to keep the identity of the other focus group participants confidential to protect the privacy of everyone involved in the focus group.

If I have any questions about confidentiality, this agreement or the research project, I will contact Mireille Dubé, mireille.dube@sheridancollege.ca or Yara Kashlan, yara.kashlan@sheridancollege.ca.

_____
Name of Participant (print)

Appendix I - Audio Recording Consent Form

Sheridan

Sound Recordings Consent Form

Strategies to Support Post-Secondary Students with Autism in the Classroom: A Canadian Case Study

Approval Reference: SREB No 2019-09-001-027

Title of Research Project:

Strategies to Support Post- Secondary Students with Autism in the Classroom: A Canadian Case Study

Investigators:

Principal Investigators:

Suzyo SC Bavi, MSW, RSW, Counsellor, Wellness and Counselling Tel: 905-845-9430 ext. 2401 or Email: Suzyo.bavi@sheridancollege.ca,

Janice Galloway, Learning Strategist, Accessible Learning, Tel: 905-845-9430 ext. 2536, or Email: Janice.galloway@sheridancollege.ca

Research Assistants:
Mireille Dubé and Yara Kashlan

I hereby consent to participate in a focus group that will be audio taped for the research project: Strategies to Support Post- Secondary Students with Autism in the Classroom: A Canadian Case Study.

The Research Assistants will listen to the audio recording and review responses submitted in the Zoom chat box and they will be typed out word for word. We are doing this so that the research team will be able to listen to the tape recording and read what was said in the interview, so that we can pull out themes that come out of the interviews. I understand that I do not have to participate in this part of the project and that if I agree to participate, I am free to withdraw from this part of the project AT ANY TIME and that my data will be excluded. These recordings will be stored electronically on the Sheridan secured drives and using encrypted password protected devices. The electronic files will be deleted after 5 years.

_____

Name (Print)

_____

Signature

_____

Date

In addition, I give permission for this tape to be used for:

1. Other research projects on the same topic o

2. Not to be used for anything else.   o

In giving permission for the use of the tape beyond the current research, I have been offered the opportunity to hear the tapes and I understand that I am free to withdraw my permission for other uses of the tapes at any time.

_____

Name

_____

Signature

The Person(s) who may be contacted about the research are the Principal Investigators:

Suzyo SC Bavi, MSW, RSW, Counsellor, Wellness and Counselling Tel: 905-845-9430 ext. 2401 or Email: Suzyo.bavi@sheridancollege.ca,

or

Janice Galloway, Learning Strategist, Accessible Learning, Tel: 905-845-9430 ext. 2536, or Email: Janice.galloway@sheridancollege.ca

Names of Interviewers: Research Assistants – Mireille Dubé and Yara Kashlan.

Name of person who obtained consent:

_____

Signature

_____
Date

Appendix J - Ethics Approval Form

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Sheridan College Institute of
Technology and Advanced Learning
1430 Trafalgar Road
Oakville, ON L6H 2L1
Tel: 905-845-9430
Fax: 905-815-4086
www.sheridancollege.ca

</div>

April 9 2020

Mr. Suzyo Suman Bavi
The Centre for Student Success
1430 Trafalgar Road
Oakville ON
L6H 2L1
Re: Sheridan Research Ethics Board – **Amendment Approval**
       SREB No 2019-09-001-027

Dear Mr. Bavi,
The review process for the amendment to your research project **"Strategies to Support Post-Secondary Students with Autism in the Classroom: A Canadian Case Study"** has received chair delegated REB amendment approval. The delegated amendment approval is specific to changing the method of the research by replacing in person visits and interaction with remote options for meetings; recruitment; focus group interviews; check-in, consenting.
Of note, a third party may access the SREB office file. Should anyone, other than yourself and members of your research team be provided access to your files, you will be informed.
Upon conclusion of your project you are requested to complete the "Project Conclusion Form" found under the Submission Checklist on the REB website. You will receive a confirmation email once this form is received by REB.
Please contact me for any questions or clarification you may need.
Warmest Regards,

Dr. Kirsten Madsen, Chair
Faculty of Humanities and Social Sciences
Sheridan College
Phone: (905) 845 - 9430 x2795
Email: kirsten.madsen@sheridancollege.ca