

**ACADEMIC AND PERSONAL SUCCESS FOR STUDENTS WITH LEARNING  
DISABILITIES THROUGH INDIVIDUALIZED LEARNING SUPPORTS**

by

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## Abstract

Post-secondary students with learning disabilities often face challenges which can make their learning experiences less than ideal. It is important that students with learning disabilities have access to and are provided with the appropriate academic accommodations and/or learning supports they require for success. Individualized learning supports provide students with the resources and skills necessary to build upon and foster growth in self-determination, self-advocacy, self-confidence, and mental health and well-being. A literature review was conducted to explore the characteristics of individualized learning supports and their overall impact on the academic success of students with learning disabilities. Academic coaching is explored in detail and compared to other individualized learning supports. Using mixed methods research, the main goal of the study was to explore post-secondary students' involvement in and perceptions of individualized learning supports, as well as investigate which publicly funded post-secondary institutions in Ontario, Canada have academic coaching programs available to students. The study showed that the academic accommodations and individualized learning supports students participated in, overall had positive impacts on their learning experiences. Students shared negative experiences with access to learning supports or difficulties navigating learning resource centres' websites. The study brought to light that few Ontario colleges or universities have academic coaching as an individualized learning support available to students. The benefits of universal design for learning (UDL) and barriers to learning support services are discussed alongside suggestions for improving individualized learning supports within the post-secondary education setting.

*Keywords: learning disabilities, post-secondary, learning supports, self-advocacy, self-determination, self-confidence, mental health*

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## Table of Contents

|  |     |
|--|-----|
| Abstract   | i   |
| Acknowledgements   | ii  |
| Table of Contents  | iii |
| List of Tables   | v   |
| List of Appendices   | vi  |
| Chapter 1: Introduction  | 1   |
| Chapter 2: Literature Review   | 4   |
| 2.1 Meeting the Academic and Individual Needs of Students with Learning Disabilities     | 4   |
| 2.1.1 <i>Mental Health</i>   | 5   |
| 2.1.2 <i>Faculty Support</i>   | 6   |
| 2.1.3 <i>Individualized Education Plan (IEP)</i>   | 8   |
| 2.1.4 <i>Access to Post-Secondary Learning Supports</i>                                  | 10  |
| 2.2 The Power of Individualized Learning Supports to Students with Learning Disabilities | 14  |
| 2.2.1 <i>Self-determination/Self-efficacy</i>  | 16  |
| 2.2.2 <i>Self-advocacy</i>   | 19  |
| 2.2.3 <i>Self-confidence</i>   | 21  |
| 2.2.4 <i>Accountability and Organizational Skills</i>                                    | 22  |
| 2.3 The Role of Psychologists  | 23  |
| 2.4 Individualized Learning Supports: A Comparison                                       | 25  |
| 2.4.1 <i>Academic Advising</i>   | 26  |
| 2.4.2 <i>Mentorships</i>   | 28  |
|  | iii |

|                       |  |    |
|-----------------------|--|----|
| 2.4.3                 | <i>Counseling</i>  | 30 |
| 2.4.4                 | <i>Tutoring</i>  | 32 |
| 2.4.5                 | <i>Literacy and Numeracy Supports</i>  | 33 |
| 2.4.6                 | <i>Academic Coaching: A Newer Individualized Learning Support</i>                          | 35 |
| 2.5                   | The Importance of Universal Design for Learning (UDL)                                      | 38 |
| 2.6                   | Personal Barriers to Learning Support Services – Self-Disclosure, Stigma and Embarrassment | 40 |
| 2.7                   | Institutional Barriers to Learning Support Services  | 43 |
| 2.7.1                 | <i>Policies and Procedures</i>   | 44 |
| 2.7.2                 | <i>Costs</i>   | 45 |
| 2.8                   | Theoretical Framework  | 46 |
| Chapter 3: Methods    |  | 49 |
|                       | Research Design and Data Analysis  | 49 |
| Chapter 4: Results    |  | 54 |
| 4.1                   | Survey Results   | 54 |
| 4.2                   | Website Investigation  | 62 |
| Chapter 5: Discussion |  | 66 |
| 5.1                   | Connections to Previous Research   | 68 |
| 5.2                   | Study Limitations  | 70 |
| 5.3                   | Study Implications   | 72 |
| 5.4                   | Directions for Future Research   | 74 |
| 5.5                   | Conclusion   | 74 |
| References            |  | 76 |
| Appendices            |  | 85 |

## List of Tables

|          |  |    |
|----------|--|----|
| Table 1. | Academic Accommodations and/or Individualized Learning Supports Recommended to the Student by a Post-Secondary Institution     | 56 |
| Table 2. | Academic Accommodations and/or Individualized Learning Supports Used and their Reported Effects on Post-Secondary Students (%) | 57 |
| Table 3. | Helpfulness of Websites Associated with Learning Support Services and/or Accessibility Services (%)                            | 60 |
| Table 4. | Qualities of Academic Coaching found in other Individualized Learning Supports   | 62 |
| Table 5. | Post-secondary Institutions in Ontario, Canada with Academic Coaching Programs   | 64 |

## **List of Appendices**

|             |   |    |
|-------------|---|----|
| Appendix 1. | Letter of Information for Participants  | 85 |
| Appendix 2. | Online Consent Form                     | 89 |
| Appendix 3. | Online Survey Questions using Qualtrics | 90 |

## Chapter 1

### Introduction

Prevalent themes in the current research involving students with learning disabilities (LDs) are student confidence, self-determination and self-advocacy, and their direct relationship to student success and retention at the post-secondary level (Couzens et al., 2015; Farmer et al., 2015; Wilczenski et al., 2017; Zeng et al., 2018). Students with learning disabilities often choose not to disclose their learning disability for fear of experiencing discrimination from peers, faculty and staff (Tsagris & Muirhead, 2012). It is important that students with learning disabilities feel emotionally supported, encouraged, and are learning in an inclusive environment (Lipka, 2018).

The Learning Disabilities Association of Canada (LDAC) defines a learning disability as, “a number of disorders which may affect the acquisition, organization, retention, understanding or use of verbal or nonverbal information” (LDAC, 2021). According to the 2017 Canadian Survey on Disability (CSD), approximately 1,105,680 (3.9%) of the Canadian population aged 15 years and over reported identifying with a learning disability (Statistics Canada, 2017). From the same survey, the number of Canadians aged 15 years and over who identified with some type of disability equals approximately 22.3% of the population. Furthermore, the LDAC website highlights the prevalence of learning disabilities among Canadian adults and children as the per Statistics Canada 2017 Canadian Survey on Disability. The LDAC mentions that more children in Canada have a learning disability (59.8%) than all other types of disabilities combined; making learning disabilities one of the fastest growing types of disabilities in Canada that is not related to aging (LDAC, 2021). The National Educational Association of Disabled Students (NEADS) mentioned in their report, that the absolute number of students with disabilities



attending Canadian colleges and universities has increased tremendously in the past 30 years. This increase is driven by increases in the numbers of students with learning disabilities, mental health issues, chronic medical conditions and acquired brain injuries, or who are on the autism spectrum, while the numbers of students with physical or sensory disabilities have remained relatively constant (NEADS, 2018).

An extensive review of the literature was conducted to: 1) better understand the needs of students with learning disabilities at the post-secondary level and the learning supports available to these students; 2) examine the benefits of individualized learning supports for students with learning disabilities; and 3) investigate why academic coaching has shown to be a valuable individualized learning support to many post-secondary learners, not limited to those presenting with learning disabilities. This thesis will serve to highlight:

- What students with learning disabilities often require for academic success,
- Explain and differentiate between the various learning supports, including accommodations and individualized learning supports,
- Create awareness of the frequently occurring comorbidity with mental health issues that students with learning disabilities often face,
- Outline potential barriers to learning supports in post-secondary institutions, and
- Introduce academic coaching as the newest addition to individualized learning supports and why, like other individualized learning supports, academic coaching meets the personal and academic needs of students with learning disabilities.

Problems or difficulties students with learning disabilities often encounter were identified in the current research and include lack of support from faculty and peers, difficulty accessing various learning supports, mental health issues, institutional and cost barriers to

learning supports, not receiving an early diagnosis of their learning disability (prior to post-secondary studies), lack of involvement in their individual education plan (IEP) and limited confidence to self-advocate. The gap that this research study aims to address is evidently differentiating between traditional learning supports and individualized learning supports, and why individualized learning supports, such as academic coaching, are powerful learning supports to students with learning disabilities.

As a researcher, I was interested in this topic because I am a post-secondary educator and identified a gap in service early in my career. I work in the private sector of post-secondary education and realized academic accommodations are offered to students with learning disabilities, but individualized learning supports are either minimal or non-existent. Personal experience and research in this area of study has made me aware of the influence of individualized learning supports for students' academic and personal success. I have worked one-on-one with many students who require more than just time and a half on their tests and exams to achieve academic and personal success. Many of these students are hardworking and dedicated but struggle academically and personally because they often require additional support. I try my best to support, mentor and coach students through critical thinking and problem solving, as well as focus their attention on improving their organization and study skills. I aim to be someone they feel comfortable approaching and someone who will not judge them. Often, there is an inability to take on these multiple support roles while being an educator at the same time. Individualized learning supports are needed in post-secondary institutions for students with learning disabilities. I am passionate about contributing to positive changes within private post-secondary institutions moving forward.

## Chapter 2

### Literature Review

This chapter examines relevant literature with regards to post-secondary students with learning disabilities, and the difficulties and barriers these students often face. The importance of recognizing mental health as a co-morbidity to learning disabilities is discussed, as well as various avenues for academic and personal support. This chapter will also serve to highlight the benefits of, and compare individualized learning supports available to students.

#### **2.1 Meeting the Academic and Individual Needs of Students with Learning Disabilities**

This section of the literature review discusses mental health co-morbidities often associated with learning disabilities, the importance of faculty support, and the development of an individualized education plan with the involvement of the student. This section also discusses accessibility to available learning supports to best suit ones learning needs.

Learning disabilities can often be overlooked because they are not as obvious as physical disabilities and that is why learning disabilities are often referred to as “invisible disabilities.” Most disabilities are not visually apparent (Couzens et al., 2015; d’Erizans et al, 2019) and include, anxiety, depression, autism, learning disabilities, and metabolic and autoimmune disorders. With respect to learning disabilities, sometimes students will not ever receive the academic support they need, instead they will just try to get by in school (d’Erizans et al., 2019). Students who present with invisible disabilities can be forgotten about or not well acknowledged. This can, and mostly likely will, have a detrimental effect on their academic and personal successes. Negative stereotypes surrounding disability remain a significant life-long problem for people with learning disabilities (Goodwin, 2020). Students with invisible disabilities are

sometimes viewed negatively among their peers and faculty. It is critical that learning disabilities are treated equally to visible (physical) disabilities (NEADS, 2022), and a good place to start is by understanding the various types of disabilities and the impact they can have on one's life. Post-secondary faculty are likely to question the validity of a student's invisible disability and their rights to individualized learning supports (Mullins & Preyde, 2013).

### **2.1.1 Mental Health**

The Learning Disabilities Association of Canada (LDAC) stresses the importance of recognizing the relationship between learning disabilities and mental health issues. There are often mental health co-morbidities with learning disabilities, such as anxiety and depression (Aro et al., 2019; Jorgensen et al., 2018). The most prevalent disability among youth was mental health related (8%). (LDAC, 2021). It is important to acknowledge and recognize that students with learning disabilities may indeed be experiencing mental health related disabilities as well. It was recorded that 2,027,370 (7.2%) individuals in Canada who are 15 years and over reported having a mental health related disability (Statistics Canada, 2017). The Canadian Survey on Disability also mentions that learning disabilities and mental health related disabilities frequently co-occur. Nearly a quarter (25%) of all young adults aged 15-24 years presented with both learning and mental health related disabilities in combination. The prevalence of mental health related and/or learning disabilities is high among this age group, but it is even higher among those individuals who were neither in school nor employed. Nearly 9 in 10 (87%) of those who were neither in school nor employed had a mental health related disability, learning disability, or both (3 in 10 had both) (Canadian Survey on Disability, 2017). Moreover, young adult and adults with learning disabilities are more likely than individuals without learning disabilities to

report suicidal thoughts, depression, and stress, and to be unemployed or earning less of an income (Stegemann, 2016). These individuals are also less likely to complete post-secondary education or training. With that in mind, the difficulties of obtaining employment or earning a higher salary could be a root cause of the mental health struggles adult individuals with learning disabilities face (Stegemann, 2016). Because mental health disabilities and learning disabilities often co-exist among youth, these disabilities will most likely transition into early adulthood. Students with learning disabilities are at risk of experiencing academic difficulties and individuals of all ages are at least twice as likely to have mental health problems than their peers without learning disabilities (Piers & Duquette, 2016). Statistics Canada (2017) confirmed that these trends are applicable to adults with learning disabilities as well. Over 90% of young adults with learning disabilities reported mental health issues. Many adults did not pursue higher education (40%) because they reported feeling excluded or avoided (58%) during their past educational experiences, and many mentioned they did not receive the technological support they required. Taking these trends into consideration when supporting youth and young adults with learning disabilities is important as they transition into post-secondary education or the workforce, since specific accommodations may be required for persons with learning disabilities (Canadian Survey on Disability, 2017).

### ***2.1.2 Faculty Support***

A reoccurring theme among post-secondary faculty is their unpreparedness to accommodate and support this growing population of students with learning disabilities (Burgstahler, 2003; Cawthon & Cole, 2010; Goodwin, 2020; Hansen & Dawson, 2020; Jorgensen et al., 2018; Tsagris & Muirhead, 2012; Vogel et al., 2018). It is not that students do

not find faculty supportive or understanding of their learning disability and/or mental health related disabilities and how it impacts their learning; it is more so faculty are not well-prepared, informed or trained on how to accommodate students with learning disabilities in their classrooms. Two Canadian studies were recently conducted with similar findings related to faculty preparedness to support students with learning disabilities. Hansen and Dawson (2020), define preparedness as, “having the knowledge and attitudes needed to support students with learning disabilities in inclusive learning environments” (p. 310). Knowing that faculty attitudes and actions play an important role in the success of all students with disabilities, Hansen and Dawson surveyed full-time and part-time faculty from a large community college in central Canada to better understand their perceptions of their preparedness to teach students with learning disabilities. Throughout their research and interviews with faculty, they found only 25% of faculty felt they were prepared to support and accommodate students with learning disabilities, mainly because of their educational background and experiences; 25% of faculty stated they felt somewhat prepared; while 50% of the faculty interviewed said they felt they were unprepared to for the task (Hansen & Dawson, 2020). An interesting finding in this study was all faculty interviewed mentioned they have had to learn about accommodations for students with learning disabilities on the job, as they go. All faculty agreed proper training through professional development would be valuable. Post-secondary faculty who display a greater interest in knowledge about disabilities and a willingness to adapt their methods of instruction can have a positive impact on academic outcomes for students with learning disabilities and are also more willing to seek out and participate in professional development opportunities (Goodwin, 2020).

Similar findings to Hansen and Dawson's (2020) study were verbalized; however, this time, through the voices of students with invisible disabilities. Jorgensen et al. (2018) conducted a study interviewing Canadian post-secondary students with learning disabilities or mental health related disabilities. A comparison of these two studies showed that students with invisible disabilities have similar views and feelings as most faculty. The students from this study voiced they find most faculty members to be supportive of their disability, but they often do not know how to properly accommodate or support them (Jorgensen et al., 2018). Students also shared their fear of being stigmatized, and most students feel faculty do not necessarily need to know a student's full diagnosis; rather they should understand the relationship between the student's needs and the required accommodations. Improving faculty knowledge of learning disabilities can also improve attitudes and potentially mitigate the risk of faculty viewing students with learning disabilities as less capable than their peers, which may encourage students with learning disabilities to discuss their learning needs (Hansen & Dawson, 2020).

### ***2.1.3 Individualized Education Plan (IEP)***

For many students with a learning disability, an individualized education plan (IEP) would have been established at a young age and re-assessed throughout their school years. "An individualized education plan is a written plan describing the special education program and/or services required by a particular student, based on a thorough assessment of the student's strengths and needs that affect the student's ability to learn and demonstrate learning (Ministry of Education, 2022)." A well-written individualized learning plan will contain key components and strategies for success past high school, preparing the now adult learner for post-secondary

education. This is referred to as transition planning (Kemp, 2022) which is encouraged sooner than later so the student can be as prepared as possible for post-secondary studies and adult life. However, for some students, the disappointing reality is that they never received an individual learning plan, nor do some even know what one is (Nolan-Spohn, 2016). These are the students who have struggled their whole lives with a learning disability, because sometimes these learning disabilities are not properly identified. Many individuals are not identified as having a learning disability until well into adulthood (Lerma & Chen, 2020). Some learning disabilities are not identified until post-secondary when the individual is struggling academically and/or are not achieving passing grades. If these students even make it to post-secondary, the retention rates are lower than their peers without learning disabilities and this issue remains problematic (Lerma & Chen, 2020).

Despite their growing numbers in post-secondary, graduation rates of students with learning disabilities continues to lag behind those without learning disabilities (Jorgensen et al., 2018). “For success, individuals with learning disabilities require early identification and timely specialized assessments and interventions involving home, school, community and workplace settings (LDAC, 2021).” Learning disabilities need to be identified sooner than later, so students can receive the support they need to achieve academic success. This support would begin with an educational team and a psychological assessment to implement an IEP and involvement of the student as much as possible in the formation of their learning plan. According to Field et al. (2003), student involvement in their IEP is considered “best practice” beginning at the secondary level in preparation for post-secondary studies. The National Educational Association of Disabled Students (NEADS) identified a valid point in their report, as they mentioned the assessment process can be lengthy and costly to the student and/or family. “There is a need for a



Canada-wide standard for the diagnosis of learning disabilities (Gyenes & Siegel, 2014). This would reduce the need for costly psychological re-assessment and updates of the student throughout their life. Students would need only to demonstrate how their learning disability is currently having an impact on their academic performance (NEADS, 2018).” It could be possible that a student has not received an assessment or IEP, not because they or a family member did not identify their struggles, but because the process of obtaining an IEP was not explained to them or it is too costly to do so.

With a proper diagnosis and understanding of a student’s learning disability, that student is one step closer to receiving the academic and individual supports for future success. Couzens et al. (2015) conducted a study where they interviewed post-secondary students with learning disabilities and asked them about the accommodations and supports they accessed while in post-secondary and which ones they found helpful. There was a large majority of students who mentioned they did not know a learning resource existed until they were in their final year, for example, mentoring programs. Some students from this study also shared their appreciation for study groups and how they found study groups helpful for accountability and socialization (Couzens et al., 2015).

#### ***2.1.4 Access to Post-Secondary Learning Supports***

Post-secondary institutions are required to offer accommodations and learning supports to students with learning disabilities. The Accessible Canada Act is a federal law that aims to find, remove and prevent barriers facing people with disabilities, and recognizes both visible and invisible disabilities (ACA, 2022). These learning supports can be categorized into mandatory and voluntary supports (Richman, 2013). Mandatory or traditional supports are the required

accommodations offered to students with learning disabilities at the post-secondary level as per the Canadian Human Rights Commission, and voluntary supports are often the supplemental accommodations which not all post-secondary institutions offer. The most common and recognizable mandatory or traditional supports are, extended test time and other exam accommodations such as breaks and distraction-free test sites, reduced course loads, audio recorded classes and note takers; while the voluntary or individualized supports include assistive technology, learning strategy instruction, tutoring, support groups and academic coaching (NEADS, 2022; Richman, 2013). These accommodations are categorized into mandatory and voluntary supports to illustrate the differences; however, what really stands out during comparison is the depth of these accommodations and the impact these accommodations can have on a student's academic success.

Research was conducted by Troiano et al. (2010) who identified the differences in available learning supports offered to students, and how these supports can widely vary from institution to institution (Nugent & Smart, 2014; Troiano et al., 2010); ranging from compliance programs required by law to comprehensive programs which offer a high degree of structure and support. The number of students with learning disabilities entering post-secondary are steadily increasing from year to year; therefore, the need for more academic support programs is increasing as well (Fullarton & Duquette, 2016; Griful-Freixenet et al., 2017; Troiano et al., 2010, Vickers, 2010; Zeng et al., 2018). The research conducted by Troiano et al. (2010) emphasized that students with learning disabilities who consistently attended and engaged in learning supports through learning support centres were shown to have higher graduation rates and higher overall grades than those students with learning disabilities who did not attend or partake in the learning supports available them. The particular learning support centre that

Troiano et al. (2010) included in their study had various supports available to 262 students which included a learning specialist who met with students on an individualized basis, or in a group setting for a varying amount of time per week, depending on that student's needs. What the authors discovered was more than half of the students who participated in the supports offered by the learning support centre had higher overall grades and retention rates were higher as well. It is important to note that the students who showed academic success attended more than half of their scheduled sessions, with the majority of students attending more than 90% of their scheduled sessions. The results of this study demonstrated that students with learning disabilities who accessed learning supports had overall higher grades and retention rates; however, this study seems to be lacking attention with regards to diversity among available learning supports and why nearly half of the participants did not attend their scheduled learning support sessions. It could possibly be that the more conscientious students were the ones who participated in the available learning supports. Based on the current research surrounding academic accommodations versus individualized learning supports, an argument could be made that these students possibly did not feel they were gaining what they needed in terms of academic and/or individualized support. As Nugent and Smart (2014) discussed in their research, to help students with learning disabilities overcome the challenges of post-secondary education and to ensure they reach their academic potential, additional support and accommodations may be required depending on the individual. The authors, however, did mention much of the current literature acknowledges the importance of student engagement and human connection for academic and personal success (Kendall, 2016; Troiano, 2010; Zeng et al., 2018). It is plausible that many of the students in this study chose not to attend their scheduled sessions after their initial sessions because they may have felt that the supports offered to them were not sufficient enough to fulfill

their learning needs and that element of human connection was lacking. This poses questions as to the importance of human connection, as well as appropriate learning supports to many students presenting with learning disabilities; is what post-secondary institutions are currently offering to students enough to ensure their success? Even though students with learning disabilities are offered supports, how many students truly feel supported? Jorgensen et al. (2018) mention in their research that students may feel many of the services and accommodations offered do not fit the needs of their learning disability and/or mental-health related disability. For example, extended test time might not be helpful or relevant to that student's needs; therefore, other accommodations should be available and explored.

In more recent years, a greater number of students present with learning disabilities at the post-secondary level (Fullarton & Duquette, 2016; Griful-Freixenet et al., 2017; Troiano et al., 2010; Vickers, 2010; Zeng et al., 2018); therefore, learning supports for these students will be increasing in demand in post-secondary institutions. Even with post-secondary institutions offering a variety of traditional learning supports such as extended test time, distraction-free test sites, reduced course load, audio recorded classes and note takers, some students experience minimal benefits from these supports (Zeng et al., 2018). This is mainly due to a lack of self-disclosure (Cortiella & Horowitz, 2014; Costello & Stone, 2012; Farmer et al., 2015; Richman et al., 2015) which is influenced by psychological elements including fear and acceptance (Cole & Cawthon, 2015), as well as generalized 'one-size-fits-all' interventions being the norm (Kendall, 2016; Zeng et al., 2018), instead of individualized interventions. The individualized, student-centered approach emphasizes that students are active agents who acquire learning strategies and are able to perform those skills in a wider range of learning tasks without immediate and external assistance. Zeng et al. (2018), found in their research that the outcomes of individualized

learning supports were more effective than traditional learning supports. Post-secondary students who present with learning disabilities are more likely to have long-term academic success with individualized learning supports that focus on self-determination, and the student playing an active role in their learning (Wilczenski et al., 2017). Individualized learning supports seem to be more favourable, and students are appreciative of these services when available to them.

## **2.2 The Power of Individualized Learning Supports to Students with Learning Disabilities**

This section serves to highlight self-determination and self-efficacy, self-advocacy, self-confidence, and accountability and organizational skills as re-occurring themes within the current literature. The importance of these attributes to student success will be discussed and how they are directly related to individualized learning supports.

Individualized learning supports include, but are not limited to, the following academic supports: academic advising, mentorships, counseling, tutoring, numeracy and literacy supports and academic coaching. These academic supports differ from academic accommodations, such as extended test time and a quiet testing room, because these supports are personalized to the individual learner and provide the student with one-on-one support from trained staff and academic specialists (Lerma & Chen, 2020; Zeng et al., 2018).

According to the research involving the academic success of students with learning disabilities, many students require more than what the mandatory (traditional) supports have to offer. Re-occurring themes within the literature are self-determination, self-advocacy, self-regulation, goal setting, confidence, individual needs and support (d'Erizans et al., 2019; Farmer et al., Nolan-Spohn, 2016; Wilczenski et al., 2017; Zheng et al., 2014). Farmer et al. (2015)

stress that these elements are critical components of students with learning disabilities achieving personal and academic success. This model is also supported by Wilczenski et al. (2017) which will be further discussed in this literature review. When a student presents with a learning disability at the post-secondary level, it would be advantageous to their learning to have access to one or more individualized learning supports. Zeng et al. (2018) conducted a literature review to examine current interventions used to assist students with learning disabilities in post-secondary education. Four types of interventions were identified: assistive technology, direct assistance, strategy instruction, and comprehensive support programs; with the comprehensive support programs being the most effective. In comprehensive support programs, students can receive group instruction and individual support concurrently and are able to choose multiple types of interventions based on their needs. These individual interventions included individualized coaching and individual sessions with a learning specialist.

Troiano et al. (2010) investigated learning supports offered at a learning support centre, and studied the benefits of individualized learning supports through a learning specialist. The learning supports offered at this learning centre were placed into three categories based on type of learning support and weekly commitment by the student in hours; comprehensive, enhanced and entitled. The comprehensive and enhanced programs both involved weekly individualized and small group visits with a learning specialist, with the difference being 4 hours per week versus 2 hours per week, respectively. The entitled support program was designed for the student who may not require an individualized learning support or a learning specialist, so the visits were on an as-needed basis. When students receive individualized interventions, they are more involved in their learning, recognize their academic needs and learn to self-advocate.

Providing individualized support services which maximize students' efforts is an important approach to promoting academic success (Rath & Royer, 2002; Troiano et al., 2010).

Post-secondary students with learning disabilities are more likely to have long-term academic success with individualized supports which focuses on self-determination, and where the student is actively involved in their learning (Zeng et al., 2018). When trying to identify with a student who presents with a learning disability, it is imperative to understand that students with learning disabilities have individual needs and often a one-size-fits-all model is simply not enough for their success (McWilliams and Beam, 2013; Zeng et al., 2018). However, it is important to keep in mind that some students with learning disabilities do achieve academic success through traditional/mandatory supports. These are the students who do not require the one-on-one interaction individualized learning supports have to offer. Although these students have shown to be the minority (Learning Disabilities Association of Ontario, 2012), the extant literature emphasizes individualized interventions and learning supports for all learners, with or without a learning disability. Two primary outcomes of students in these studies were the improvement of academic skills and psychosocial constructs, such as self-awareness, self-efficacy, and self-advocacy (Farmer et al., 2015; Troiano et al., 2010; Zeng et al., 2018). Students who receive any intervention or support consistently and frequently demonstrate an ability to apply learning strategies to help overcome their academic difficulties, which in most cases has shown to increase GPAs (Troiano et al., 2010).

### ***2.2.1 Self-determination/Self-efficacy***

Self-determination is a combination of skills, knowledge and beliefs that enables a person to engage in goal-directed, self-regulated, autonomous behaviour (Field et al., 2003). Involving

post-secondary students with learning disabilities in their learning allows them to make their own decisions. This is critical to student success because building one's self-determination means enhancing their understanding of their disability while encouraging self-awareness, self-management and self-advocacy skills (Tsagris & Muirhead, 2012). As mentioned earlier, involving students in the development of their IEP is beneficial and supports the development of self-determination early on. The student would better understand their disability and why specific accommodations and/or learning supports are recommended. A student's self-determination is influenced by values, knowledge, skills and environmental factors (Field & Hoffman, 2007), and builds the student's confidence to make academic choices and personal decisions independently (Zheng et al., 2014). Lower levels of self-efficacy have been reported among students with learning disabilities, meaning these students typically demonstrate less effort, hope and overall moods tend to be lower than students without learning disabilities. Students with learning disabilities have been found to score lower on a study skills survey related to emotional intelligence, self-efficacy and selecting main ideas and use of test taking strategies (Goodwin, 2020). Through involvement, students are encouraged to make their own decisions and believe in themselves, which will benefit and support their individual learning needs long-term. Teaching decision making to promote self-determination has been highly recommended at the secondary and post-secondary levels and this can be achieved through post-secondary support services and helping students access them when needed (Wu & Molina, 2019). Post-secondary requires more diligence, self-control, self-evaluation, decision making and goal setting, which in short means more self-determination (Field et al., 2003). Expecting a student with a learning disability to achieve this level of self-determination on their own may take some



guidance. Self-determination and self-efficacy skills are strengthened through student support services and individualized learning supports.

The research conducted by Farmer et al. (2015) involved implementing an individualized program for post-secondary students with a learning disability and/or ADHD. The Personal Strengths Program (PSP) is an 8-week program designed to meet the needs of college students with LD/ADHD by combining research-based components related to self-determination, positive psychology, and effective practices for students with LD/ADHD (Farmer et al., 2015); which by definition is supported by Costello and Stone (2012), who emphasize how imperative it is to focus on one's positive psychology and strengthening self-efficacy and self-determination through individualized learning support programs for students with learning disabilities. What the researchers found for some of these students, was a positive correlation between increased self-determination and improved grades throughout the semester. Research published by Field et al. (2013) studied self-determination as a key to success for students with learning disabilities and found that much of the increase was partly due to an increase in overall confidence. As Costello and Stone (2012) mention in their research, self-efficacy is directly related to self-confidence, and students with low self-efficacy often doubt their capabilities and often avoid circumstances where they believe they will fail.

Farmer et al. (2015) showed that their individualized support program was indeed beneficial to the majority of students. What their research showed was conducting a program like the Personal Strengths Program provided a level of individualized and personal support to the student. This program incorporates a learning specialist who is there to support the student week by week, help the student to set learning goals and hold them accountable; and most importantly, someone to be there for encouragement and confidence building. With these close

relationships, the student is receiving learning supports specific to their individual and academic needs (Wilczenski et al., 2017), often with multiple professionals monitoring their academic success and goals.

### **2.2.2 *Self-advocacy***

Self-advocacy is not simply a behaviour; it is a set of skills that all students need (d'Erizans et al., 2019). When a student can self-advocate, they are effectively able to communicate their academic needs. Self-determination and self-advocacy are often discussed synchronously. First, a student must fully understand their learning disability, then they can begin working on self-determination and self-advocacy. Once a student is an active participant in their learning and making their own decisions, they will find themselves advocating for their individual needs and rights. Effective advocates have a keen awareness of their own abilities and needs, so it is not surprising that self-advocacy can be paralyzing for students with learning disabilities (d'Erizans et al., 2019), because this skill can be difficult even for students without learning disabilities. According to Jacques and Abel (2020), there are a few elements which can hinder a student's ability to effectively self-advocate: overinvolved parents and poor structure of special education programs in elementary and secondary schools. In both examples, the student has not had the opportunity, nor have they been taught, to build and strengthen their self-advocacy skills for success in post-secondary.

Building self-advocacy skills takes time and patience; all students need to feel supported and a sense of belonging. The ability to self-advocate inside and outside the classroom shapes a student's sense of belonging (Vaccaro et al., 2015). Students will have better success with self-

advocacy if they have access to individual learning supports that fulfill their academic and emotional needs.

A study conducted by Vaccaro et al. (2015) interviewed post-secondary students with learning disabilities to identify their level of self-advocacy and sense of belonging. All students from this study explained how self-advocacy was rooted in the self-awareness of their disability and corresponding needs. The students also identified this included the ability to act in ways that fulfilled their needs (Vaccaro et al., 2015). Students in this study expressed that a key component to building their self-advocacy skills was recognizing the importance of accessing the learning centre, utilizing the individualized learning supports available to them, such as tutoring and counseling, and building relationships with faculty based on proper communication. Jacques and Abel (2020) had similar findings when they observed first-year students who voluntarily sought out counselors as soon as they entered post-secondary. These students expressed feelings of gratitude because in most cases, their counselors were able to help them better understand their learning disability, formulate a learning plan and goals, suggest strategies for dealing with mental health difficulties and connect them with other learning specialists so they receive the individualized learning supports, like counseling, best suited for their needs. Over time, the students proved they were able to better advocate for the accommodations and learning supports they felt were most appropriate (Jacques & Abel, 2020). For the students in both studies, being able to self-advocate resulted in an increased sense of belonging and confidence. Building one's self-advocacy skills is possible through individualized learning supports, where a student does not have to attempt this daunting skill alone.

### **2.2.3 *Self-confidence***

Self-efficacy is directly related to self-confidence as it refers to a person's confidence in their ability to be successful (Kim & Kutscher, 2020). Academic and intellectual self-confidence are often lower for students with learning disabilities as they arise from past experiences of self-doubt. Kim and Kutscher conducted a literature review which showed students with disabilities often do struggle with self-confidence. Their research suggests there are ways to increase a student's academic and intellectual self-confidence, through student support and engagement. It is important for post-secondary institutions to recognize students with learning disabilities' self-confidence greatly benefits from positive experiences, such as interaction with and encouragement from faculty and peers (Kim & Kutscher, 2020; Russak & Hellwing, 2015). A qualitative research study conducted by Russak and Hellwing also mentions interpersonal relationships and their significant contribution to student success. These interpersonal relationships are reported as relationships with peers, faculty and mentors who specifically went out of their way to help the student. All the students in this qualitative study reported using learning support centers and commented on the positive experiences they had with individualized learning supports, such as tutoring, mentoring, counseling and academic advising. These academic learning supports assisted in building their confidence, setting and achieving attainable goals and achieving academic success.

Students with learning disabilities feel a sense of accomplishment and pride when they are doing well in their studies because they often feel academically less than their peers without learning disabilities (Lightfoot et al., 2018). When students experience success, their self-confidence increases. The difficulty for many students, however, is they may find achieving

success on their own difficult, and therefore individualized learning supports can be considered a key factor in student success; a supportive and accepting network (Russak & Hellwing, 2019). If a student is given the opportunity to engage with faculty and peers, they will more likely feel supported and experience success. Students who have higher levels of engagement show greater benefit from their post-secondary experiences and in turn develop more confidence in themselves and their academic abilities (Kim & Kutscher, 2020). Institutions of higher education have a responsibility to support the development of all students (Evans et al., 2017) and post-secondary institutions must take the necessary steps to ensure opportunities for engagement and academic support are accessible (Kim & Kutscher, 2020). These academic supports will open the doors to supportive and encouraging relationships with faculty and peers, which over time results in confidence building for the student. Learning supports contribute to the personal growth and development of the student by increasing awareness, self-efficacy and self-acceptance (Russak & Hellwing, 2015).

#### ***2.2.4 Accountability and Organizational Skills***

The transition from secondary to post-secondary can be challenging for students with learning disabilities because college and university requires students to be accountable for their learning and to be organized (Couzens et al., 2015; DuPaul et al., 2017; Lerma & Chen, 2020; Lightner et al., 2012; Newman et al., 2016). Success in higher education is reliant on an ability to juggle multiple assignments from multiple courses, simultaneously; as well as to keep course and examination deadlines; along with the ability to manage time, and organize study materials efficiently (Russak & Hellwing, 2015). Russak and Hellwing's study examined the perspectives of post-secondary graduates with learning disabilities on learning supports and why they found

certain learning supports to be beneficial. Students in this study reported they found the learning supports that enhanced their organizational and management skills to be one of the most beneficial. Students with learning disabilities often have cognitive difficulties related to memory, organization, multi-tasking, processing efficiency and speed, and persistence (Lerma & Chen, 2020; Russak & Hellwing, 2015). Individualized learning supports can provide students with the one-on-one help they may require to better organize and prioritize their course content, exams, and deadlines. Learning supports offered at the post-secondary level can help focus the student on the organization and management of both time and learning materials to strengthen academic efficiency (Russak & Hellwing, 2015).

Zeng et al. (2018) identified the student-centred approach as an important characteristic of current academic interventions for students with learning disabilities in post-secondary education. Among their research findings, Zeng et al. mention individual learning supports and accommodations, along with instruction on organizational skills in their services, not just focusing on assistance with the student's course content. Organizational skills, accountability, and time management skills are all essential skills to the academic success of students with learning disabilities. Individualized learning supports not only assist students with the academic material, but also help to prioritize functional skills, like problem-solving and organizational skills (Zeng et al. 2018).

### **2.3 The Role of Psychologists**

This section of the literature review will introduce the reader to psychologists as an individualized support for students and the positive effect they can have in building a student's self-determination, self-confidence, and self-advocacy.

Psychologists being active participants in students' academic and personal successes has proven to be beneficial (Farmer et al., 2015; Wilczenski et al., 2017). Psychologists not only conduct the initial neuropsychological evaluations to diagnose a learning difficulty or disability, but they also work with students and encourage them to engage in learning supports, as well as consult with mental health providers on campus (Schwitzer & Vaughn, 2017). The research conducted by Wilczenski et al. (2017) shows implementing a program aimed to strengthen a student's self-determination and positive psychology will have a direct effect on a student's overall success and mental health. A program like this demonstrates that having a professional there to help a student with a learning disability set realistic goals within a realistic time frame will result in an improvement in self-determination, self-advocacy, and confidence, which has shown to result in higher grades and retention rates.

Psychologists have conducted research alongside post-secondary educators to identify the positive correlation between individualized academic interventions and academic success rates. Wilczenski et al. (2017) conducted a literature review to assess the role of psychologists within post-secondary institutions. The various authors cited within the literature review discuss the difficulties many students face when transitioning to post-secondary education. From the information gathered from their research, Wilczenski et al. (2017) termed what they refer to as, the Inclusive Individual Support Model, which discusses the role of psychologists in post-secondary institutions as a means of academic support to students with learning disabilities or intellectual disabilities. Post-secondary psychologists can help promote the development of self-determination among students with learning disabilities and can develop students' self-determination skills through interventions that focus on empowerment, autonomy, and decision-making (Wilczenski et al., 2017). Ensuring post-secondary students with learning disabilities are

encouraged to fully participate in their academic decision-making is integral to the development of their self-determination and academic success (Shogren & Plotner, 2012). Post-secondary psychologists are a supplemental resource for students in need of accessing individual learning supports, but they can also double as an informative resource to educators as well. Psychologists can collaborate with educators to provide and promote inclusive, individualized learning for students. The importance of full participation can also be communicated to teachers as an inclusive educational practice to promote self-determination (Cook et al., 2015). Wilczenski et al. (2017) also mentioned education coaches in their research, and how they are a valuable addition to post-secondary learning support services as they can assist students with learning disabilities to reach their individualized goals through inclusive practices (Hart & Grigal, 2010).

#### **2.4 Individualized Learning Supports: A Comparison**

This section of the literature review provides a comparison of the various individualized learning supports and defines and introduces academic coaching as a more recent individualized learning support. It is critical to be able to differentiate academic coaching from academic advising, counseling, and mentoring; terms which are often referred to interchangeably because there is a lack of understanding of the uniqueness of each of them (McWilliams & Beam, 2013).

As the needs of students in higher education have evolved, so have developmental and learning strategies, including advising, mentoring, counseling, tutoring and coaching (Deiorio et al., 2016; DuPaul et al., 2017; McWilliams & Beam, 2013; Russak & Hellwing, 2015; Zeng et al., 2018;). McWilliams and Beam (2013) explain in detail four learning strategies, namely, Advising, Counseling, Coaching, and Mentoring. Through comparison and contrast, one can identify the strengths and weaknesses within each learning support and gain a better



understanding as to why one support may be more beneficial or advantageous to a student's specific learning needs. DuPaul et al. (2017) conducted a study where they provided each student presenting with a learning disability with an academic advisor, academic coach and tutoring session during each semester of their program. They concluded students with learning disabilities who actively participated in weekly academic advising, academic coaching, and tutoring throughout the semester, and attended all course lectures, saw the highest increase in their overall GPA (DuPaul et al., 2017). It is not uncommon for learning support centres or student accessibility services to offer a variety or all these services to students. Often, these supports can be mistaken for another, what the support offers is not exactly clear, or these supports vary from one institution to another. The scope and intensity of learning support services can vary from institution to institution based on differences in budget, policy, staffing and nature of each academic institution (Russak & Hellwing, 2015).

#### **2.4.1 Academic Advising**

McWilliams and Beam (2013) observed that academic advising has expanded over the years from its limited focus on academics and course selection alone. According to the National Academic Advising Association (NACADA), academic advising emphasizes modes of thinking, learning, and decision-making; the selection of academic programs and courses; the development of life and career goals; campus/community resources, policies, and procedures; and the transferability of skills and knowledge (NACADA, 2019). The late Dr. Virginia N. Gordon of Ohio State University, a highly regarded pioneer in the field of academic and career advising noted, that advisors can help students with identifying the elements of the problem and clarify the issues involved (Gordon, 1998). Academic advising is career exploration, aiding in the

declaration of a major, and building self-knowledge, which focuses on the students' interests, aptitudes, values and goal setting (McDonald, 2019). Academic advising focuses heavily on academics and career paths through problem solving. Academic advisors will make possible career suggestions based on academic strengths and weaknesses, plan and research specific courses and programs, and advise the student on what specific careers entail (Deiorio, 2017). It is also worth noting that it is not uncommon for institutions to offer peer advising support services in addition to professional academic advisors who are employed through the institution. The fundamentals of peer advising involve pairing an upper year student with their younger counterpart within the same major or discipline. Responsibilities of the peer advisor often include assisting fellow students with course selection, transitioning into student life, time management and potential career choices (Diambra & Cole-Zakrzewski, 2002; McWilliams & Beam, 2013). The benefits of incorporating peer advising into an institution's academic advising support services are reducing stress and pressure among faculty and providing a more approachable resource for some students (Diambra & Cole-Zakrzewski, 2002). Often experienced at larger institutions, there are added stressors placed upon advisors due to the fact that there simply are not enough academic advisors available to those students in need. Peer advisors can help to alleviate some of this stress and pressure by working with many of these students in need of advising supports. Peer advisors may be the preferred choice by some students. In certain cases, a student in need of advising may feel more comfortable building a relationship with a peer instead of a faculty member. Whether academic advisors or peer advisors; academic advising learning supports focuses on students' decision-making, academic and career choices, and problem-solving strategies (Soria & Stebleton, 2013).

Academic advising provides students with the opportunity to reflect on their academic progress which might include, assignments completed or not yet completed and assessment results. Advisors assist students in setting long-term goals and connecting students with additional individualized learning supports. Advisors also form a critical central link for students by remaining in contact with their faculty and providing and monitoring student progress for signs of trouble (DuPaul et al., 2017). All of these aspects of academic advising have proven helpful to students with learning disabilities because they are receiving an individualized learning support which is building on their self-determination and organizational skills.

#### **2.4.2 *Mentorships***

Mentoring programs, especially peer mentoring, are often implemented in post-secondary campuses to enhance first year college or university experiences and increase student retention (Holt & Fifer, 2016). Shook and Keup (2012) mentioned that students who participate in peer leadership programs can develop a greater sense of community, social and academic networks, as well as a develop a variety of resources for academic success. Peer groups have the power to influence a student's views and impact their academic and personal experiences (Astin, 1993; Renn & Arnold, 2003). An earlier literature review on mentoring and undergraduate success was conducted by Maryann Jacobi from the University of California. Jacobi (1991) conclusively found that peer mentorship programs are successful retention and enrichment strategies at the post-secondary level. There is a psychosocial element to peer mentoring which incorporates various levels of role modeling, friendship, acceptance, guidance, and support (Allen, McManus & Russell, 1999). More recently, Susan Gershenfeld from the University of Illinois, conducted a review of 20 published studies on undergraduate mentorship programs from 2008-2012.

Gershenfeld (2014) concluded that mentorship programs have indeed made an impact on student retention and enrichment strategies; however, there is inconclusive evidence connecting peer mentoring to academic success. There is a socialization element to a mentorship through conversation and relationship building. The mentor serves as a role model and friend to their mentee, with less of a focus on the academic material. “Mentor roles are often less formalized and are specific to a learner’s needs but are predicated on the mentor’s knowledge and expertise of a shared vocational field or desired experience (Deiorio, 2017).” The mentor will practice effective mentoring by asking their mentee thought-provoking questions and to reflect on key learning moments, practice active listening, provide objective feedback and guidance, and model effective behaviours (McWilliams & Beam, 2013). While mentoring uses many self-assessment tools, these tools focus on the growth and development of the mentee. Within a peer mentorship, the mentee is heightening their level of psychosocial well-being, which in turn can lead to strengthening their academic confidence and success (McWilliams & Beam, 2013). Successful peer mentoring relationships are created when the characteristics of the mentor are determined to best suit the needs of the mentee (Terrion & Leonard, 2007).

The difficult transition from high school to post-secondary for students with learning disabilities is repeatedly mentioned throughout the literature (Connor, 2012; Couzens et al., 2015; Goodwin, 2020; Hansen & Dawson, 2020; Tsagris & Muirhead, 2012). Students with learning disabilities are particularly vulnerable in making the transition to post-secondary because of the need to navigate a variety of challenges and expectations that include academic demands, social expectations and emotional/personal growth (Connor, 2012). Some students are apprehensive in disclosing their learning disability to faculty for fear of stigmatization and embarrassment (Hansen & Dawson, 2020; Tsagris & Muirhead, 2012). Peer mentoring can be a

safe or more comfortable choice for students who might feel nervous about disclosing their learning disability. Peer mentoring provides students with a connection to another student, which in turn builds on interpersonal skills (Russak & Hellwing, 2015), as well as trust, self-determination, and self-confidence. Peer mentoring gives students someone to talk to, an empathetic ear, and makes them feel more comfortable asking for help (Russak & Hellwing, 2015). The social interactions and support gained through peer mentoring increase self-confidence, maintains personal worth, provides encouragement and understanding of one's disability needs, and impacts the likelihood of seeking learning support services (Lightfoot et al., 2018).

### **2.4.3 Counseling**

The American Counseling Association (ACA) defines counseling as a professional relationship that empowers diverse individuals, families and groups to accomplish mental health, wellness, education, and career goals (ACA, 2022). Counselors in post-secondary institutions work individually and with other educators to meet the developmental needs of all students, including those with learning disabilities (Reis & Colbert, 2004). Students with learning disabilities often carry emotional pain from past educational experiences. Many feel not as intelligent, have been embarrassed in the past, and feel less than their peers without learning disabilities. Just like their learning disability, these negative emotions do not just disappear over time; often, the student carries these emotions like a heavy weight, damaging their self-confidence and mental health. Reis and Colbert (2004) conducted a qualitative case study analysis to examine post-secondary student's perspectives of their elementary and secondary experiences and how counseling was a beneficial support to them. "The results of this study

showed that all the participants had negative experiences which affected their social and emotional development; these negative experiences included, problems with their teachers and peers, as well as internal problems, such as low self-confidence and low self-esteem.” A school counselor who is aware of a student’s needs can help identify these needs and make recommendations for how to address their academic and personal development within the context of a comprehensive counseling program (Reis & Colbert, 2004).

Still relatively new to post-secondary institutions, the Stepped Care Model (SCM) has recently been utilized within post-secondary counseling programs to build students with learning disabilities’ self-confidence and self-advocacy by empowering them with choice and equipping them with the skills needed to self-advocate (Jacques & Abel, 2020). The use of the SCM allows students to practice skills needed for critical thinking, building an argument, and advocating for themselves in a safe, secure, non-judgemental environment with their counselor. Because students with learning disabilities are more likely to suffer from mental health related disabilities (Piers & Duquette, 2016), post-secondary counselors are beneficial to a student’s social and emotional well-being. Alongside extended testing time and a quiet room to write examinations, students with learning disabilities have indicated counseling as being an effective support (Cawthon & Cole, 2010); because whether for personal or academic, counseling fosters self-advocacy and self-awareness skills that are critical for success and can be applied outside of the counseling setting (Jacques & Abel, 2020).

#### **2.4.4 Tutoring**

Tutoring is a well-known, essential and widely used academic learning support in post-secondary settings for students with learning disabilities (DuPaul, 2017; Michael, 2016; Sorrentino, 2018). Students can participate in tutoring with faculty, or they may engage in group tutoring or peer tutoring, where a student in need of academic assistance is paired with an upper year student for one-on-one support. When utilized, tutoring can be a strategic tool for academic support and development, and student retention (FitzGerald, 2014; Ghenghesh, 2018). Ghenghesh (2018) mentions the three key aims of personal tutoring are to enable students to better understand their own learning; to better manage their educational and career goals; and to offer support to students at risk. Grey and Osborne (2020) agree that tutors hold quite a bit of responsibility and need to be committed to student success; “tutors must support students in their personal, professional, and academic development and help them to transition into effective study in higher education.”

Peer tutoring involves similar elements as peer mentoring, such as companionship, genuine caring and support, and the provision of enrichment activities; however, it should be noted that mentoring focuses on life skills, while tutoring focuses on academic learning (Michael, 2016). Michael (2016) examined the relationship between tutors and tutees, academic success and self-efficacy. Participants in that study reported relatively low levels of difficulty during tutoring and high levels of success with tutoring. Tutees also stated, that tutoring had the greatest positive impact on their academic success and increased their self-efficacy. Many students with learning disabilities are not prepared for the demands and stresses of post-secondary education, including the amount of academic work and self-study they need to do,

which is one of the reasons these students drop out (Sorrentino, 2018). Tutors not only help students academically, but also with the transition to post-secondary studies, settling in and letting them know that support is available to them.

As previously mentioned, DuPaul et al. (2017) examined the effectiveness of academic advising, coaching and tutoring on students with learning disabilities' overall academic success, as measured by increases in GPA. Their study showed tutoring was associated with a statistically significant increase in a student's overall GPA compared to a student with a learning disability who did not utilize tutoring as a learning support. Tutoring is useful for all students, especially students with learning disabilities. Tutoring addresses knowledge and academic skill weaknesses that are the primary areas of challenge (DuPaul et al., 2017).

#### ***2.4.5 Literacy and Numeracy Supports***

Students with learning disabilities often experience stress and anxiety because they have difficulties with reading and writing, which can include understanding complex text, taking lecture notes, writing essays, and synthesizing course material (Couzens et al., 2015). A learning disability in reading (dyslexia) occurs when there is difficulty understanding the relationship between sounds, letters and words. Reading comprehension problems occur when there is an inability to grasp the meaning of words, phrases and paragraphs (Lerma & Chen, 2020).

Students with dyslexia make up the largest subgroup among the identified learning disabilities (Richardson, 2021). Richardson (2021) conducted a study to explore the challenges students with dyslexia face and the approaches they used to succeed in post-secondary. The challenge students mentioned the most often was reading, and sometimes having to re-read content four to five times before they can comprehend it; followed by being easily distracted and reversing



letters in a word or sentence. These students will often request and receive individualized learning supports, such as a reader, translator or note-taker (Richardson, 2021). If these students participate in an assessment by a neuropsychologist, extra time on tests, and/or a quiet room will most likely be listed as required accommodations on their IEP (Individualized Educational Plan).

A learning disability in writing (dysgraphia) can involve the physical act of writing or the mental activity of comprehending and synthesizing information. Basic writing disorder refers to physical difficulty forming words and letters, while a written expression disability indicates a struggle to organize thoughts and words on paper (Lerma & Chen, 2020). Students with difficulties with writing are encouraged to seek out literacy supports for one-on-one help with writing, editing and proofreading/spelling of essays and reports. These students are also encouraged to inquire about note-takers, because it may be difficult for students with writing disabilities to keep up with note-taking in class, organizing notes effectively, and creating studying resources.

Learning disabilities in mathematics (dyscalculia) or working with numbers are affected by a visual disorder or a difficulty with sequencing, organization, or memory. Students with mathematics learning disorders might also have trouble with counting principles (such as counting by twos or counting by fives) or have difficulty telling time (Lerma & Chen, 2020). Students with difficulties in mathematics will mostly likely avoid taking mathematics-based courses or programs; however, for some post-secondary programs, the student may be required to take a first year mathematics, physics, or economics course. In these cases, the student is highly encouraged to participate in numeracy supports. Students with learning disabilities in STEM (Science, Technology, Engineering, Mathematics) programs often identify as having a learning difficulty in reading and/or writing or identify as having ADHD (attention deficit

hyperactivity disorder). In these cases, students process information differently in their brains and may take longer to come up with the correct mathematical equation or answer (Pfeifer et al., 2021). Students may also experience difficulties with writing lab reports. Academic accommodations are available to these students (extended test time, quiet room), as well as individualized literacy and numeracy learning supports. According to Russak and Hellwing (2015), the academic support accessed most by students with learning disabilities was literacy supports, followed by organization and management skills. Strong support services in these areas are essential to academic success.

#### ***2.4.6 Academic Coaching: A Newer Individualized Learning Support***

An academic coach is a person assigned to support learners in achieving their fullest potential. Coaches work with learners by evaluating their performance via review of objective assessments; assisting the learner to identify needs and creating a plan to achieve these; and helping the learner to be accountable (Deiorio, 2017). Unlike tutoring or even mentoring, the academic coach may or may not be well-versed in the student's area of study. "Coaching allows for a consistent, longitudinal, and open relationship that is neither supervisory, nor evaluative, but offers structured opportunities for students to discuss personalized goals and action plans as they progress through their post-secondary education (Deiorio, 2017)." The framework for academic coaching was derived from other realms of coaching such as life coaching or athletic coaching. Coaches help with perfecting skills, achieving set goals, and maximizing one's full potential.

Academic coaching differentiates itself from other academic support programs such as academic advising, tutoring, counseling, and mentoring in that the academic coach serves as a

liaison to those listed individualized learning supports while collaboratively working with the student on their academic development (Capstick et al., 2019). Coaches work with students to encourage and support goal setting, self-learning, and behavioural changes. Singley (2017) conducted research to examine the effects of academic coaching in comparison to other individualized learning supports offered to students with learning disabilities. This study investigated whether weekly one-on-one meetings with an academic coach were beneficial to the student's academic success and well-being. The majority of students in this study reported their academic accommodations and learning supports, such as extended test time, assistive technology, mentoring, tutoring, counseling and advising, to be critical to their academic success; however, the statistics showed academic coaching to be helpful in use and knowledge of learning and study strategies, academic engagement, self-confidence, self-efficacy, and academic achievement (Singley, 2017). When used in combination with other individualized learning supports and/or academic accommodations, academic coaching proved to help increase students with learning disabilities' overall GPA. Barkley (2011) states that academic coaching builds on self-regulation; therefore, utilizing academic coaching alongside other individualized learning supports will have the greatest results.

A few studies on academic coaching have been conducted by Parker et. al (2009, 2011, 2013) to examine students' perspectives of academic coaching and how it compared to other individualized learning supports they have had experience with. Students reported that coaching focused primarily on supporting their emerging autonomy, helping them develop and manage their executive functioning skills, and promoting their self-efficacy and confidence about future success (Parker & Boutelle, 2009). Students felt these qualities set academic coaching apart from other individualized learning supports, such as academic advising, counseling, and tutoring.

Students described academic coaching as providing information, offering options for strategies and skills, and asking questions that prompted them to create their own solutions and take responsibility for their actions, or in some cases, their lack of action (Parker & Boutelle, 2009). Students in this study commented on how much they enjoyed the relationship they built over time with their coach. Their coach was someone they felt comfortable with, and at times, this helped immensely with reducing stress and anxiety. Coaches were not judgmental of a student's learning disability but rather recognized their abilities to achieve their goals, which increased students' confidence, self-determination, and self-regulation (Field et al., 2013). Individualized learning supports, academic advising, counseling, mentoring, and tutoring, are all unique and beneficial in their own ways, as described throughout this paper, but there is something truly special about having a coach in your corner.

Academic coaching is a learning support where anyone can identify themselves as a coach (International Coaching Federation, 2022); however, to become a professional or certified academic coach, one must have the proper training and credentials. The International Coaching Federation (ICF) is a global organization providing certification and networking for trained professional coaches. This is worth mentioning because "true" academic coaching is not like mentoring or tutoring, where a student or peer can take on this role. Post-secondary institutions may mention or advertise that they offer academic coaching, but the program itself does not actually have certified academic coaches on staff. This was discovered through research conducted for the purpose of this thesis and will be further discussed in more detail.

## **2.5 The Importance of Universal Design for Learning (UDL)**

This section of the literature will discuss the importance of Universal Design for Learning (UDL) in terms of inclusiveness and adapting teaching methods to accommodate all learning styles. Universal Design for Learning (UDL) is a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn (Centre for Applied Special Technology, 2022). Three main guidelines have been developed by the CAST which can be applied to ensure that all learners can access and participate in meaningful, challenging learning opportunities. These three guidelines include Engagement, Representation, and Action and Expression. Engagement is designed for purposeful and motivational learners which stimulates interest and motivation for learning; Representation is for resourceful, knowledgeable learners who presents information and knowledge in different ways; and Action and Expression is for the strategic, goal-directed learners which allow students to express what they know (CAST, 2022). “A universally designed post-secondary education environment recognizes that space, learning and the human environment must all be accessible and inclusive (NEADS, 2018). Universal design in the setting of education is a framework of instruction that aims to be inclusive of different learning preferences and learners and helps to reduce barriers for students with disabilities (Black et al., 2015).” Students with learning disabilities are expected to follow a process which includes, full disclosure of their learning disability, providing the required documentation, seeking out accommodations, and waiting for these adjustments to be implemented (Griful-Freixenet et al., 2017). The problem here is not the accommodations the students are provided with, but rather the step-by-step process the students must navigate through to receive the help they require for success. Instead of separating a student with a learning

disability from the rest of the class, Universal Design for Learning supports inclusive learning within the classroom setting before the student accesses their accommodations or learning supports. There is an urgent need to design effective instructional methods that ensure equal access to education for all students who struggle to succeed in the traditional model based on the ‘one-size-fits-all’ curriculum approach (Griful-Freixenet et al., 2017). The Universal Design for Learning model requires instructors to consider the wide variety and diversity of learners in their classroom. This could be a barrier, as many instructors will have to have an open mind with respect to UDL and students with learning disabilities. Instructors will also have to adapt and modify their teaching strategies to meet the needs of all learners.

A variety of qualitative studies have been conducted to investigate the perspectives and experiences of students with learning disabilities in post-secondary education and whether their experiences aligned with the Universal Design for Learning model. Black et al. (2015) found students with learning disabilities expressed difficulties with accessing accommodations and fear of stigmatization. Many of these students expressed that receiving class notes or slides ahead of time was helpful in preparing for a lecture. Also, some mentioned including diverse in-class learning exercises and encouraging group discussions was helpful for retention of the material and increasing motivation. Students in this study expressed having approachable instructors who are understanding of various learning needs and diversity can relieve a lot of stress and anxiety. Seok et al. (2018) conducted a systematic literature review to analyze the findings and perspectives associated with UDL. This review indicated that many of the findings aligned with the findings of Black et al. (2015). Seok et al. indicated the importance of considering students’ needs when providing instruction and accommodations. Students in this study mentioned the use of recorded lecture notes were helpful in reviewing the content after class, and they appreciated

the use of synchronous and asynchronous learning within the classroom. Seok et al. stressed the importance of revisions and modifications to lesson plans as indicated, training instructors to enhance learning outcomes and interaction, use of technology and developing a learning community. Recognizing every student is a unique learner with unique learning needs is the foundation for Universal Design for Learning. A universally designed human environment within post-secondary education considers the principles of flexibility, dynamism, collaboration, positive relationships, essential requirements, and the many aspects of student life (NEADS, 2018), which will result in fewer barriers faced by students with learning disabilities and foster an inclusive learning environment.

## **2.6 Personal Barriers to Learning Support Services – Self-Disclosure, Stigma and Embarrassment**

This section will serve to highlight personal barriers students with learning disabilities often face, which in turn, can deter these students from accessing the learning supports they require for academic and personal success in post-secondary education. Due to a measurable increase in learning support services and accommodations available to students at the post-secondary level, there has been an increase in the enrolment of students who self-identify with a learning disability (Cortiella & Horowitz, 2014; Fullarton & Duquette, 2016). Trends in the current literature discuss the barriers students with learning disabilities often encounter during their post-secondary experiences, and why self-disclosure is so important in accessing the accommodations and services available at the post-secondary level. “Accommodations have been identified by some researchers as important determinants of the academic performance of students with learning disabilities” (Lombardi et al., 2012). Research shows that when post-secondary institutions accept the fact that students with learning disabilities have different

learning needs, and work with these students to access the appropriate accommodations, overall positive experiences were had (Madaus et al., 2003). These feelings and the stigma of being labelled and fear of lower expectations by professors sometimes results in a reluctance to disclose their disabilities and request academic accommodations (Hansen & Dawson, 2020; Kim & Kutscher, 2021; Lightner et al., 2015; Tsagris & Muirhead, 2012). Disability stigma can undermine students' belief in their academic abilities, as students with disabilities tend to compare themselves to their peers without learning disabilities (Kim & Kutscher, 2021). Students with learning disabilities who reported a high level of stigmatization often felt their disability was a weakness which defined their academic success or potential (Troiano, 2003).

Kendall (2016) conducted small-scale, qualitative research to hear students' perspectives with regard to their learning disabilities and how supported they feel on campus; the findings were not overly positive. Even though this research is small in nature, it was found to be powerful and honest. A few of the students were reluctant to even share that they have a learning disability because they are afraid of the stigma associated with their disability. Kendall (2016) stresses the importance of removing this stigma as a barrier, so students feel they are in a safe environment and will then be able to receive specific learning accommodations for their academic success. "For support to be put in place, there is an expectation that students will disclose their disability before they commence their studies and higher education institutions will encourage early disclosure (Cortiella & Horowitz, 2014; Jacklin, 2011; Zeng et al., 2018)." Lightner et al. (2015) reported the main reason students did not self-disclose during their first year was not only because of stigma but, because lack of time. Students felt overwhelmed in their first year with readings and academic requirements, they felt they could not keep up, so registering for accommodations and/or learning supports was not a top priority. This study



mentions the importance of early transition planning, prior to post-secondary beginning, so student's accommodations and learning supports are organized ahead of time.

Not only is non-disclosure a barrier for students with learning disabilities, but often if the student does disclose, they face physical barriers such as being able to access support programs which fit their individual needs, and emotional barriers which include lack of inclusiveness among faculty, staff, and peers (Kendall, 2016). The students in the study reported by Kendall (2016) mentioned how they appreciated the learning support plans which are available to them; however, they often felt there is a general "one-size-fits-all" approach to these supports. Every student's developmental and experiential pathway differs and issues faced by individual students vary. Over time, students develop their own mechanisms for understanding the impact of their disability on their learning, approaching tasks, advocating for and accessing support, and regulating their behaviour in different contexts (Couzens et al., 2015).

A small, qualitative study was conducted by Fullarton and Duquette (2016) examining the educational experiences of students with learning disabilities to further comprehend individual capacities, social supports, and institutional supports. The students within this study expressed they did not experience many individual barriers or institutional barriers but are aware of what these barriers could entail. Students in this study demonstrated high levels of self-determination and self-advocacy (Fullarton & Duquette, 2016) because they chose to self-disclose, were involved in individualized support programs with their institutions, and felt as though their professors supported their special accommodations. This small study demonstrates that students with learning disabilities can in fact perform well academically if they are comfortable enough to self-disclose and are provided with the proper learning interventions to fit their needs, and they will most likely show an increase in confidence levels. Qualitative research

focusing on students' perspectives is critical to comprehending any struggles or barriers students with learning disabilities at the post-secondary level may encounter. Fullarton and Duquette (2016) shared their qualitative research which showed students felt supported and reported on positive experiences with their learning supports. These students demonstrate that increased levels of self-determination and confidence are likely directly associated with feeling supported through individualized learning supports. Cole and Cawthon (2015) conducted research that also investigated disclosure versus non-disclosure at the post-secondary level. The researchers divided the participants into two groups – students who chose to disclose and students who chose not to disclose their learning disability. Students who did not disclose their learning disability showed lower levels of self-determination, did not access learning supports available to them, verbalized negative views of their disability, and chose not to disclose to maintain a “typical” identity and to avoid negative comments/reactions from peers and professors (Cole & Cawthon, 2015). The students who chose to self-disclose reported similar perspectives to those students described in similar research; greater self-determination (Fullarton & Duquette, 2016), and better academic performance (Lightner et al., 2012) because they disclosed their learning disability and accessed learning supports to meet their individual needs.

## **2.7 Institutional Barriers to Learning Support Services**

This section of the literature review will provide the reader with insight into barriers students may encounter at the post-secondary level when attempting to access learning supports. Post-secondary institutions have policies and procedures students must adhere to when seeking out accommodations or learning supports. Learning support services can be at an extra cost to

the post-secondary institution, and there are often financial concerns on the student's end associated with the documentation needed to access learning supports.

### ***2.7.1 Policies and Procedures***

Institutional policies and procedures can be potential barriers to academic success, as some post-secondary institutions have limited learning supports for students with learning disabilities and/or students experience difficulties with accessibility of these academic supports (Cawthon & Cole, 2010; Kim & Kutscher, 2021; Lambert & Dryer, 2018; Richardson, 2021). Prospective students with learning disabilities will sometimes discover through their own research that there is a lack of support among certain post-secondary institutions and may end up choosing a larger, publicly funded institution to ensure accessibility to the learning resources they require (Kim & Kutscher, 2021). Some of the barriers mentioned in the literature include discontinuity, a non-nurturing environment, a lack of presence and a lack of resources (Lambert & Dryer, 2018). Students have reported barriers to their learning because professors have been unsure of or unwilling to accommodate them, while other students have mentioned the accommodations provided to them were unsubstantial or did not fit their needs (Cawthon & Cole, 2010). Some institutions do not make their learning supports or accommodations well-known, as some students report not knowing that specific accommodations were available to them (Richardson, 2021). It is important for post-secondary institutions to do the best they can to provide a variety of accommodations and individualized learning supports to students with learning disabilities. Cortiella and Horowitz (2014) explain there is a lack of consistency across post-secondary institutions when it comes to the services and supports provided. This can make it difficult for students to identify which institutions will provide the appropriate services. Post-

secondary institutions need to continually be aware that students with these invisible disabilities often get overlooked either because the student has not self-disclosed or because their disability is not a physical one. In order to help with learning challenges, institutions need to support positive changes to policies, procedures, and curriculum design (Grimes et al., 2019).

### **2.7.2 Costs**

The financial aspects of individualized learning supports can be a barrier for students. As Kendall (2016) mentioned, there is a cost for individualized learning that post-secondary institutions will have to cover. This could be a reason why some post-secondary institutions do not offer any individualized learning supports, or very few. Providing these learning supports can be costly as they require additional faculty or staff members to run the programs and the learning support centres. Costs to the student can also be a barrier to the accommodations or learning supports they require. Students have expressed concerns about the costs associated with neuropsychological testing and the documentation needed to obtain learning supports at post-secondary institutions (Cortiella & Horowitz, 2014; Lightner et al., 2012), and how the requirements seem to be quite different and more extensive than when they attended high school (Cortiella & Horowitz, 2014). Research has shown that socioeconomic status affects post-secondary participation rates among students with disabilities (Kim & Kutscher, 2021), and students with learning disabilities requiring accommodations are more likely to come from wealthy to upper middle-class brackets (Goodwin, 2020; McGregor et al., 2016). These financial concerns can not only be a barrier to learning supports, but also a reason why students may decide to discontinue their studies at a post-secondary institution.

Learning disabilities are sometimes referred to as “invisible disabilities” because they are not as easily recognized as physical disabilities. Many students with learning disabilities struggle academically, as well as personally because they are negatively stereotyped and/or are stigmatized by faculty or peers, which can also lead to feelings of embarrassment. It is important to be aware of the mental health co-morbidities alongside learning disabilities, such as anxiety and depression (Aro et al., 2019; Jorgensen et al., 2018). Not only do educators need to be more aware of, accepting and supportive of students with learning disabilities within their classrooms (Jorgensen et al., 2018), but they need to be able to adapt their teaching methods accordingly by applying Universal Design for Learning educational frameworks (Gritful-Freixenet et al., 2017). Students with learning disabilities have a right to feel accepted and supported by their faculty and peers; they also have a right to access academic accommodations and learning supports as needed. Individualized learning supports such as, academic advising, mentorships, counseling, tutoring, literacy and numeracy supports and academic coaching have proven to be beneficial to students learning with learning disabilities (Lerma & Chen, 2020; Zeng et al., 2018) because they help improve upon a student’s self-determination and self-efficacy, self-advocacy, self-confidence, accountability and organizational skills.

## **2.8 Theoretical Framework**

This section will serve as a foundational review of existing theories within the literature, suggest relationships between them and discuss relevant theories which support the research conducted for the purpose of this thesis. Richman (2013) states that academic supports can be categorized into mandatory or traditional (accommodations), and voluntary or individualized learning supports. The most common mandatory or traditional learning supports are extended

test time, breaks during testing, distraction-free test sites, reduced course loads, note takers and audio recorded lectures, while the more well-known individualized learning supports are assistive technology, learning strategies instruction, tutoring, support groups and academic coaching (Richman, 2013). Troiano et al. (2010) identified that there is indeed a difference in the available learning supports from institution to institution. Jorgensen et al. (2018) furthered this statement by mentioning students with learning disabilities sometimes feel the services and accommodations offered to them at their post-secondary institution do not fit their academic needs. Students with learning disabilities have reported long-term academic success with individualized learning supports primarily because these supports focus on self-determination (Wilczenski et al., 2017). Further research by Zeng et al. (2018) indicated the outcomes of individualized learning supports are more effective than traditional learning supports for students with learning disabilities. Research shows that academic advising (DuPaul et al., 2017), counseling (Reis & Colbert, 2004), and tutoring (DuPaul et al., 2017; Michael, 2016; Sorrentino, 2018) was reported as beneficial to academic and personal development. Michael (2016) noted that participants in their study reported high levels of success with tutoring. Academic advising, academic coaching and tutoring are all regarded as beneficial individualized learning supports; however, students with learning disabilities have reported higher GPAs with the help of tutoring services (DuPaul et al., 2017).

With regards to academic coaching, Singley (2017) found this newer individualized learning support to be beneficial because it helps students with learning and studying strategies, academic engagement, self-confidence, self-efficacy and overall academic achievement. Parker and Boutelle (2009) noted in their research that academic coaching also encourages students to take responsibility for their actions.

The research conducted for the purpose of this thesis was designed to further investigate the usefulness of various individualized learning supports to students with learning disabilities. The researcher gained a heightened interest in academic coaching throughout this process and aimed to investigate it further in hopes of creating more awareness around academic coaching as a valuable learning support. Furthermore, the researcher extended her research by investigating which, if any, colleges and universities in Ontario, Canada offer academic coaching as an individualized learning support. The research conducted for this thesis contributes to the current research by further exploring the academic and personal successes achieved by students with learning disabilities through individualized learning supports.

## **Chapter 3**

### **Methods**

This chapter examines the quantitative and qualitative research methods used to collect data from an online survey distributed to post-secondary students with disabilities through the National Educational Association of Disabled Students (NEADS). Qualtrics was the research tool used to create the online survey and interpret the results. NEADS was chosen as the research setting for the online survey because of their Nation-wide database including past and present post-secondary students with disabilities. In addition to the wide range of access to a variety of students, the researcher also supports and admires the many efforts NEADS puts forth for students with disabilities, such as student experiences while in class and on campus, and student and graduate employment. “The National Educational Association of Disabled Students (NEADS), has had the mandate to support full access to education and employment for post-secondary students and graduates with disabilities across Canada.” (NEADS, 2022).

As a second means of data collection, the researcher explored Ontario publicly funded colleges and universities to investigate whether these institutions offer certified academic coaching as an individualized learning support.

### **Research Design and Data Analysis**

The purpose of this study was:

1. To explore which academic accommodations and/or individualized learning supports students with learning disabilities have utilized at the post-secondary level and have found to be the most beneficial.



2. To determine whether students with learning disabilities are familiar with academic coaching and to increase awareness around academic coaching as an individualized learning support.
3. To investigate which publicly funded Ontario, Canada colleges and universities have academic coaching programs with certified academic coaches.

For this study, upon obtaining ethical approval, an online survey was distributed via the National Educational Association of Disabled Students (NEADS). In addition, the websites for publicly funded colleges and universities in Ontario, Canada were examined to determine whether the institutions offer academic coaching programs with a trained and certified academic coach. Private schools were not included in this study in an effort to narrow and define the study sample.

The online survey was created using the current approved survey tool for Memorial University. Qualtrics is available to active students with faculty supervisor approval to conduct surveys for research purposes. The study utilized a descriptive quantitative and qualitative design (mixed methods) as the primary source of data. Quantitative research establishes statistically significant conclusions about a population by studying a representative sample of the population (Creswell, 2003). Descriptive research measures the sample at that moment in time and simply describes the sample's demography (Lowhorn, 2007). A mixed methods design was chosen so the researcher could not only see the numerical data, but also hear the participants of the study. The researcher felt incorporating qualitative data into this research was important because the voices of this demographic of post-secondary students are not often heard. This could be because some faculty or peers cannot relate well to students with learning disabilities as they do not fully comprehend learning disabilities, or students with learning disabilities are not

advocating for themselves. With each being plausible, the researcher thought students might feel comfortable sharing their thoughts and opinions via the online survey.

Participants in the study were recruited through the National Educational Association of Disabled Students (NEADS). The research survey was made available and distributed via email to current post-secondary students (undergraduate or graduate) identifying with learning disabilities, as well as recent graduates of post-secondary programs. Participation in this anonymous study was completely voluntary and the study was made available to potential respondents for one month. The Interdisciplinary Committee on Ethics in Human Research (ICEHR) at Memorial University and the administration of the National Educational Association of Disabled Students (NEADS) approved the research study. The research was conducted in compliance with Memorial University's ethics policy for research involving human participants. The online survey included a detailed and comprehensive informed consent process (Appendix 1) in which information such as purpose of study, length of time, right to withdraw from the study, possible benefits and risks, confidentiality and anonymity information was provided.

The survey asked participants about their involvement in, and perceptions of individualized learning supports they were currently utilizing or have utilized in the past. Students were asked whether they found these individualized learning supports to be beneficial to their overall academic success, self-confidence, self-determination, self-advocacy, accountability, and mental health. The survey also investigated the student's familiarity with academic coaching as an individualized learning support and whether this was a learning support they had utilized. The survey included 14 questions and used a variety of question formats such as multiple choice, Likert-type scale, matrix, and open-ended questions. Survey completion required 15 to 20 minutes of each participant's time. After one month had passed, the researcher

closed the survey, and the data was verified as complete. The quantitative data was analyzed descriptively, by gathering the responses to the questions and summarizing the results using a frequency analysis. Mean scores and standard deviations were calculated for each survey through Qualtrics and a default report was generated. Thematic coding of the qualitative data allowed for broad themes to emerge (Creswell, 2015). The following steps are recommended during the coding process, initially read through the data, divide the text into segments of information, label the segments of information with codes, reduce overlap and redundancy of codes, and collapse codes into themes (Creswell, 2015). The qualitative data was analyzed, and the following codes were generated, lack of support, helpfulness, faculty resistance, self-advocacy, difficult websites, higher expectations in graduate studies and accessibility. Themes emerged from the coding; many of the codes being themes themselves. These themes were lack of support, accessibility, self-advocacy, and difficult websites.

Additional research for the purpose of this thesis was conducted by the researcher to investigate which publicly funded colleges and universities in Ontario offered academic coaching as an individualized learning support to students. Furthermore, if academic coaching programs did exist at a particular college or university, the researcher sought out whether certified academic coaches were employed, or if the program included peer coaches only, like what one might experience with a peer mentor program. The websites of 46 Ontario colleges and universities were explored. Relevant information could typically be found within the learning resource or academic support web pages which are divisions of the Centre for Accessible Learning or Student Learning Centre. As the researcher discovered the information they needed pertaining to that college or university, the data was compiled in a Microsoft Word document, in the form of a table. This table included the names of the post-secondary

institutions, the names of the learning centres and their websites, whether peer mentoring, tutoring or academic coaching was offered at a post-secondary institution, as well as additional notes or comments for the research to elaborate on any relevant details. There were some post-secondary institutions where the researcher found the websites lacked information. In these few cases, the researcher was able to obtain the sought after information via email from an employee of the learning centre.

## **Chapter 4**

### **Results**

This study was conducted to assess which academic accommodations and individualized learning supports students with learning disabilities participated in while in post-secondary programs, and which supports they found the most helpful or useful. The study also aimed to assess the amount of exposure, if any, students had to academic coaching, or if they were at all familiar with academic coaching as an individualized learning support. As previously mentioned, additional research was conducted to determine which publicly funded colleges and universities in Ontario offer academic coaching with certified academic coaches. This chapter provides a summary of the results from the survey and the online investigation of the post-secondary institutions.

#### **4.1 Survey Results**

Ten students (n=10) participated in this research study. The participants were asked to disclose which disability (or disabilities) they identified with. A total of 20 responses were received for this question because often there will be comorbidity with learning disabilities or other disabilities and mental health related disabilities. A quarter (25%, n=5) of the responses indicated students identified with a learning disability, and 25% (n=5) of the responses indicated students identified with a mental illness or psychiatric disability. Most (90%, n=9) participants indicated they were currently enrolled in a post-secondary program, and 10% (n=1) indicated they were a graduate of a post-secondary program. The majority of the students indicated they were working toward or recently awarded a Bachelor's degree (40%, n=4) or a Master's degree

(30%, n=3), while 20% (n=2) of the participants chose a college diploma or certificate program and 10% (n=1) indicated “other”.

The results presented in Table 1 suggest academic accommodations were recommended to students more often than individualized learning supports.

**Table 1. Academic Accommodations and/or Individualized Learning Supports Recommended to the Student by a Post-Secondary Institution.**

| Items                          | %     | N |
|--------------------------------|-------|---|
| Note takers                    | 12.5  | 4 |
| Reduced course load            | 9.38  | 3 |
| Extended testing time          | 18.75 | 6 |
| Assistive technology           | 12.5  | 4 |
| Private testing accommodations | 18.75 | 6 |
| Academic advising              | 9.38  | 3 |
| Counseling                     | 6.25  | 2 |
| Tutoring                       | 3.13  | 1 |
| Peer mentoring                 | 0.0   | 0 |
| Academic coaching              | 6.25  | 2 |
| Writing supports               | 0.0   | 0 |
| Numeracy supports              | 0.0   | 0 |
| Other                          | 3.13  | 1 |

The participants reported on which academic accommodations and/or individualized learning supports they had used in the past and from their experiences, which they found to be the most helpful with respect to increasing or enhancing their self-determination, self-advocacy, accountability, and improved mental health. The results presented in Table 2 show participants who responded to this question reported assistive technology as having the greatest effect on self-confidence (75%, n=3), academic advising helped to improve self-determination (25%, n=1), counseling improved self-advocacy (33.33%, n=1), and the academic accommodations helped to improve student's overall mental health. Academic accommodations consisted of reduced course load (40%, n=2), extended testing time (50%, n=3), and private test accommodations (40%, n=2). Accountability was not mentioned for any of the academic accommodations or individualized learning supports students have used, and it is also worth mentioning that for some participants, note takers were mentioned as not helpful (14.2%, n=1), nor were private testing accommodations (20%, n=1).

**Table 2. Academic Accommodations and/or Individualized Learning Supports Used and their Reported Effects on Post-Secondary Students (%)**

| Items                                 | Did not use | N | Self-confidence | N | Self-determination | N | Self-advocacy | N | Accountability | N | Improved mental health | N | Was not helpful | N | Total |
|---------------------------------------|-------------|---|-----------------|---|--------------------|---|---------------|---|----------------|---|------------------------|---|-----------------|---|-------|
| <b>Note takers</b>                    | 42.86       | 3 | 0.0             | 0 | 0.0                | 0 | 28.57         | 2 | 0.0            | 0 | 14.29                  | 1 | 14.2            | 1 | 7     |
| <b>Reduced course load</b>            | 20.0        | 1 | 20              | 1 | 20                 | 1 | 0.0           | 0 | 0.0            | 0 | 40                     | 2 | 0.0             | 0 | 5     |
| <b>Extended testing time</b>          | 0.0         | 0 | 33.33           | 2 | 16.67              | 1 | 0.0           | 0 | 0.0            | 0 | 50                     | 3 | 0.0             | 0 | 6     |
| <b>Assistive technology</b>           | 25.0        | 1 | 75              | 3 | 0.0                | 0 | 0.0           | 0 | 0.0            | 0 | 0.0                    | 0 | 0.0             | 0 | 4     |
| <b>Private testing accommodations</b> | 0.0         | 0 | 20              | 1 | 20                 | 1 | 0.0           | 0 | 0.0            | 0 | 40.0                   | 2 | 20.0            | 1 | 5     |
| <b>Academic advising</b>              | 50.0        | 2 | 0.0             | 0 | 25.0               | 1 | 0.0           | 0 | 0.0            | 0 | 25.0                   | 1 | 0.0             | 0 | 4     |
| <b>Counseling</b>                     | 33.33       | 1 | 0.0             | 0 | 0.0                | 0 | 33.33         | 1 | 0.0            | 0 | 33.33                  | 1 | 0.0             | 0 | 3     |
| <b>Tutoring</b>                       | 66.67       | 2 | 0.0             | 0 | 0.0                | 0 | 0.0           | 0 | 0.0            | 0 | 33.33                  | 1 | 0.0             | 0 | 3     |
| <b>Peer mentoring</b>                 | 66.67       | 2 | 0.0             | 0 | 0.0                | 0 | 0.0           | 0 | 0.0            | 0 | 33.33                  | 1 | 0.0             | 0 | 3     |
| <b>Academic coaching</b>              | 33.33       | 1 | 66.67           | 2 | 0.0                | 0 | 0.0           | 0 | 0.0            | 0 | 0.0                    | 0 | 0.0             | 0 | 3     |
| <b>Writing support services</b>       | 33.33       | 1 | 33.33           | 1 | 0.0                | 0 | 0.0           | 0 | 0.0            | 0 | 33.33                  | 1 | 0.0             | 0 | 3     |
| <b>Numeracy support services</b>      | 66.67       | 2 | 0.0             | 0 | 0.0                | 0 | 0.0           | 0 | 0.0            | 0 | 33.33                  | 1 | 0.0             | 0 | 3     |
| <b>Other</b>                          | 100         | 1 | 0.0             | 0 | 0.0                | 0 | 0.0           | 0 | 0.0            | 0 | 0.0                    | 0 | 0.0             | 0 | 1     |



Participants in this survey reported the individualized learning supports they had utilized had an overall positive experience on their learning experiences. Using a Likert scale, 66.67% (n=4) reported slightly positive experiences, 16.67% (n=1) reported a moderately positive experience, and 16.67% (n=1) reported an extremely positive experience. Participants were asked to share any negative or positive experiences they had encountered with individualized learning supports. One student commented, *“I have extended timelines which have been very helpful; however, I’ve run into a lot of resistance by profs and had to engage the accessibility office more often in my master’s degree than my undergrad.”* Another comment received was, *“They seem to differ from graduate and undergraduate study. Some faculty are much less receptive in graduate school and are generally unfamiliar with the process which makes self-advocacy a more taxing process.”* These comments overlap with trends in the literature indicating a barrier student’s often face is a lack of support from faculty (Cawthon & Cole, 2010; Jorgensen et al., 2018, Kendall, 2016).

Information was gathered to assess how participants felt about the learning support centres and associated websites at the post-secondary institution they attend or attended. Qualitative data was gathered for these questions. One student commented, *“I am really unsure of the support via distance and it has been a nightmare trying to contact anyone.”* It is important to remember that this survey was distributed during the COVID-19 pandemic and students were not as easily able to access the one-on-one help they needed. Faculty and staff may not have been on campus and appointments and meetings would have been set up virtually. A positive comment regarding ease of accessibility was shared by a student, *“The accessibility and academic advisory centers are combined, so one person handles both which I find effective and reduces barriers.”* Students were also asked to share any recommendations for

improvements to the learning centres' websites. One student commented, "*The intake page shouldn't be 22 pages long. The actual forms are also incredibly hard to find.*" Another student mentioned navigating the website to be a challenge, "*More straight forward links to pages that work.*"

The survey included questions to assess the helpfulness of the post-secondary institution's learning centre websites. A Likert scale was used to assess the website's helpfulness in terms of organization of information, accessibility, navigation, booking of appointments, and available resources. The results for Table 3 are presented below. Overall, students reported the organization of information to be slightly helpful (36.36%, n=4), accessibility to be helpful (36.36%, n=4), navigation to be slightly helpful (30%, n=3), booking of appointments to be not helpful at all (30%, n=3), and available resources to be slightly helpful (50%, n=5). Unfortunately, there were minimal scores on the learning centres' websites being very helpful.

**Table 3. Helpfulness of Websites Associated with Learning Support Services and/or Accessibility Services (%)**

| <b>Items</b>                       | <b>Not at all helpful</b> | <b>N</b> | <b>Not helpful</b> | <b>N</b> | <b>Slightly helpful</b> | <b>N</b> | <b>Helpful</b> | <b>N</b> | <b>Very helpful</b> | <b>N</b> | <b>No opinion</b> | <b>N</b> | <b>Total</b> |
|------------------------------------|---------------------------|----------|--------------------|----------|-------------------------|----------|----------------|----------|---------------------|----------|-------------------|----------|--------------|
| <b>Organization of information</b> | 18.18                     | 2        | 18.18              | 2        | 36.36                   | 4        | 18.18          | 2        | 0.0                 | 0        | 9.09              | 1        | 11           |
| <b>Accessibility</b>               | 18.18                     | 2        | 0.0                | 0        | 27.27                   | 3        | 36.36          | 4        | 0.0                 | 0        | 18.18             | 2        | 11           |
| <b>Navigation</b>                  | 10.0                      | 1        | 20.0               | 2        | 30.0                    | 3        | 20.0           | 2        | 10.0                | 1        | 10.0              | 1        | 10           |
| <b>Booking appointments</b>        | 30.0                      | 3        | 10.0               | 1        | 10.0                    | 1        | 20.0           | 2        | 10.0                | 1        | 20.0              | 2        | 10           |
| <b>Available resources</b>         | 10.0                      | 1        | 10.0               | 1        | 50.0                    | 5        | 20.0           | 2        | 10.0                | 1        | 0.0               | 0        | 10           |

Participants were given a definition of academic coaching and asked to take a moment to reflect on the individualized learning supports they had used or are currently using, and whether they felt these learning supports were similar to academic coaching. The following definition for academic coaching was provided:

Academic coaching uses a coaching style relationship based on trust to enhance student learning and to reach the student's highest learning potential. Academic coaches encourage self-reflection and provide feedback, clarification and support. Students often meet weekly with their academic coach to create goals, identify strategies and develop plans to improve academic performance, address challenges and discuss time management and study skills (definition provided in the survey based on Barkley, 2019; Deiorio, 2017; McWilliams & Beam, 2013).

The results are presented below in Table 4. The results suggest that students find some qualities to be similar to academic coaching, but not many.

**Table 4. Qualities of Academic Coaching found in other Individualized Learning Supports.**

| Items   | %     | N  |
|---|-------|----|
| <b>Coaching style relationship</b>  | 15.38 | 2  |
| <b>Encouraging self-reflection</b>  | 7.69  | 1  |
| <b>Providing feedback and support</b>   | 15.38 | 2  |
| <b>Weekly meetings</b>  | 0.0   | 0  |
| <b>Creating goals</b>   | 7.69  | 1  |
| <b>Identifying and developing strategies for success</b>                            | 15.38 | 2  |
| <b>Addressing challenges</b>  | 15.38 | 2  |
| <b>Improving time management skills</b>   | 7.69  | 1  |
| <b>Discussing studying skills</b>   | 7.69  | 1  |
| <b>The learning supports I have used have not been similar to academic coaching</b> | 7.69  | 1  |
| <b>Total</b>  | 100%  | 13 |

#### 4.2 Website Investigation

The websites of 46 Ontario publicly funded colleges and universities were investigated by the researcher. The goal was to obtain detailed information on academic coaching at these post-secondary institutions. What the researcher was seeking to find was: (1) if the institution offered academic coaching as an individualized learning support, and (2) if yes, did the academic coaching program have certified academic coaches on staff. There were limitations to this website investigation which included unorganized or missing information and websites that were not considered to be user friendly. This meant searching for the required information was difficult through some institution's websites. The results of this extensive website investigation showed that 21.7% (n=10) of the institutions offered an academic coaching program of some kind, while only 4.3% (n=2) of these institutions had certified academic coaches. The institutions that did offer academic coaching programs without certified academic coaches were

peer coaching programs, similar to peer advising or peer mentoring programs. The information is presented below in Table 5.

**Table 5. Post-secondary Institutions in Ontario, Canada with Academic Coaching Programs.**

| Items                             | %    | N  |
|-----------------------------------|------|----|
| <b>Academic coaching program</b>  | 21.7 | 10 |
| <b>Certified academic coaches</b> | 4.3  | 2  |
| <b>Institutions surveyed</b>      |      | 46 |
| Algoma University                 |      |    |
| Algonquin College                 |      |    |
| Brock University                  |      |    |
| Cambrian College                  |      |    |
| Canadore College                  |      |    |
| Carleton University               |      |    |
| Centennial College                |      |    |
| College Boreal                    |      |    |
| Conestoga College                 |      |    |
| Confederation College             |      |    |
| Durham College                    |      |    |
| Fanshawe College                  |      |    |
| Fleming College                   |      |    |
| George Brown College              |      |    |
| Georgian College                  |      |    |
| Humber College                    |      |    |
| King's University College         |      |    |
| Lakehead University               |      |    |
| Lambton College                   |      |    |
| Laurentian University             |      |    |
| Loyalist College                  |      |    |
| McMaster University               |      |    |
| Mohawk College                    |      |    |
| Niagara College                   |      |    |
| Nipissing University              |      |    |
| Northern College                  |      |    |
| OCAD University                   |      |    |
| Ontario Tech University           |      |    |
| Queen's University                |      |    |
| Royal Military College            |      |    |
| St. Clair College                 |      |    |
| St. Lawrence College              |      |    |
| Sault College                     |      |    |
| Seneca College                    |      |    |
| Sheridan College                  |      |    |

Toronto Metropolitan University  
Trent University  
University of Guelph  
University of Hearst  
University of Ottawa  
University of Toronto  
University of Waterloo  
University of Windsor  
Western University  
Wilfred Laurier University  
York University

During the website investigation, it was found that every institution offered academic advisors and peer tutoring, which are among the more common individualized learning supports. Many institutions seemed to have learning strategists and assistive technologists as well. Based on the results of this institutional survey, it can be concluded that academic coaching is not widely used at Ontario colleges and universities.



## **Chapter 5**

### **Discussion**

This chapter will summarize the results and discuss the implications of the research study. The research findings will be linked to previously conducted research and any study limitations, as well as directions for further research, will be discussed.

The purpose of this study was to gain a better understanding of individualized learning supports available to post-secondary students with disabilities and their overall helpfulness with regards to self-determination, self-advocacy, self-confidence, accountability, and improved mental health. The study also aimed to investigate students' familiarity with academic coaching as an individualized learning support and identify which publicly funded post-secondary institutions in Ontario offers academic coaching programs with certified academic coaches. This research provides supporting evidence that academic accommodations are more widely recommended to students with disabilities by their post-secondary institutions over individualized learning supports. The findings from this study demonstrate that very few publicly funded post-secondary institutions in Ontario have academic coaching programs with certified academic coaches on staff, or academic coaching is not offered at all.

Despite the limited sample size (10 respondents), there are three key findings in the present research. First, as mentioned, academic accommodations such as extended testing time, note takers, reduced course load, assistive technology and private testing accommodations are recommended most often; however, of the individualized learning supports, academic advising is recommended most often. Second, there is a relationship between increased self-confidence and improved mental health with the use of academic accommodations and individualized learning supports in post-secondary institutions. Third, there is a lack of familiarity with academic

coaching as an individualized learning support in terms of what academic coaching entails and what it has to offer.

The results of the research study imply that students with disabilities do indeed find academic accommodations and individualized learning supports to be helpful; however, academic accommodations are more widely used and recommended by post-secondary institutions. These findings are interesting because individualized learning supports such as academic advising, counseling, tutoring, peer mentoring and academic coaching provide students with one-on-one interaction, support and encouragement from another person, whereas academic accommodations do not to the same degree. Individualized learning supports foster relationship building, increases trust and self-confidence, and provides the necessary avenues for improving self-determination and self-advocacy skills. This finding is further supported by improved mental health being a prevalent theme. Whether a student is accessing and utilizing academic accommodations and/or individualized learning supports, both play an important role in helping with the management of mental health issues. It is worth mentioning that students with disabilities may choose not to access individualized learning supports because they might have fears of being judged by others or stigmatizations. Whereas with academic accommodations, there is less one-on-one interaction with another person, so that fear is removed.

Finally, the research study obtained evidence that academic coaching is not often found as an individualized learning support among Ontario post-secondary institutions. This finding may be explained by the idea that academic coaching is still considered a newer learning support, so therefore, it is not yet well known. Academic coaching has been described as “fundamentally different” (Parker & Boutelle, 2009) than other learning supports because students are asked to critically think and problem solve differently than with the more common or traditional learning

supports, such as academic advising, counseling, tutoring, and peer mentoring. It is also relevant to consider that academic coaching may not be utilized by post-secondary institutions due to financial reasons. Supplementary learning supports, such as academic coaching, would be at an additional cost to colleges and universities, and extra financial resources for education are finite.

## **5.1 Connections to Previous Research**

Academic advising is perceived by students in this study as having the greatest effect on their self-determination which is supported by previous research (Field et al., 2003; Soria & Stebleton, 2013). “Self-determination is a combination of skills, knowledge and beliefs that enables a person to engage in goal-directed, self-regulated, autonomous behaviour” (Field et al., 2003). Previous research by Soria and Stebleton (2013) mentions academic advising learning supports focus on students’ decision-making, academic and career choices, and problem-solving strategies, which builds students’ self-determination and enhances their sense of belonging. Furthermore, the results of this study are consistent with the claim that academic advisors form a critical central link for students by remaining in contact with their faculty and providing and monitoring student progress (DuPaul et al., 2017). The role of the academic advisor is an important one as they are essentially the student’s liaison. This relationship promotes self-determination skills through active participation in decision-making.

Results of this study indicate that counseling as an individualized learning support has the greatest effect on a student’s self-advocacy. These findings are supported by previous research. Counseling programs build students with learning disabilities’ self-confidence and self-advocacy by empowering them with choice and equipping them with the skills needed to self-advocate (Jacques & Abel, 2020). This pattern of results is consistent with the previous literature.

Cawthon and Cole (2010) mentioned in their study that students with learning disabilities have indicated counseling as being an effective support, and this statement is supported by Jacques and Abel (2020) when they mentioned, counseling fosters self-advocacy and self-awareness skills that are critical for academic and personal success.

Participants in this study mention that the academic accommodations they receive have the greatest positive effect on their overall mental health. Piers and Duquette (2016) support this finding in their research where post-secondary students with learning disabilities were examined with respect to their academic challenges and mental health struggles. The students in Piers and Duquette's (2016) study parallel the participants of this study by identifying the connection between academic accommodations and their mental health, and the importance of learning to self-advocate for these accommodations.

The findings of this research study suggest that academic accommodations are recommended more often than individualized learning supports at the post-secondary education level. This has been found to be consistent with previous research. Nugent and Smart (2014) mentioned additional supports may be required depending on the individual. In most cases, academic accommodations are recommended and granted, but some students would greatly benefit from individualized learning supports as well. Students may express that some of the services and accommodations offered do not fit the needs of their learning disability and/or mental-health related disability (Jorgensen et al., 2018); therefore, individualized learning supports should also be recommended and explored.

The present results are consistent with Farmer et al. (2015), Troiano et al. (2010), Wilczenski et al. (2017), and Zeng et al.'s (2015) work that deals with positive student experiences from individualized learning supports. Their research mentioned increased self-

determination, self-advocacy, self-confidence, and goal setting as reported positives associated with individualized learning supports, learning specialists, and comprehensive support programs. The participants in the focus study mention an overall positive experience with individualized learning supports. However, it is important to remember that some negative experiences have also been reported by post-secondary students with learning disabilities, which is also consistent with previous research. Participants of this study did indicate that negative experiences with accommodations and/or learning supports were directly related to faculty resistance or unfamiliarity with the process of accommodations or learning supports for students with learning disabilities. Students have reported in previous research that they have not felt properly accommodated or supported (Jorgensen et al., 2018) or that their professors have been unwilling to support them (Cawthon & Cole, 2010). Other negative experiences shared within previous research have included a lack of inclusiveness among faculty, staff and peers (Kendall, 2016), and even negative comments directed toward the student with the learning disability (Cole & Cawthon, 2015). Faculty admitted in a previous survey that they felt unprepared to support students with learning disabilities (Hanson & Dawson, 2020).

## **5.2 Study Limitations**

There are at least four potential limitations concerning the results of this study. A first limitation concerns the size of the sample of participants. The number of students who participated in the research survey was small (n=10). The researcher was hopeful for more participants because the online survey was distributed through the National Educational Association for Disabled Students (NEADS). It is possible the low level of participation was due to the survey being distributed during the COVID-19 pandemic. Second, the design of the online

survey was anonymous. It was impossible to determine which student identified with which disability(s) because a number was not assigned to each participant. It was also impossible to determine or track which student(s) answered which questions. Third, the recruitment strategy was a limitation as well. As mentioned, the online survey was distributed through NEADS, and this was done by administrative personnel with access to the NEADS email database. Even though this was greatly appreciated, the researcher feels more could have been done with regard to distribution, such as placing a QR code to the online survey in post-secondary learning resource centres for students. This may have attracted more interest in the online research survey as it would have been visible and easy to access. Fourth, the researcher feels more qualitative data in this research study would have been beneficial. If a similar study were to be conducted in the future, the researcher would include interviews with as many participants as possible. Even though qualitative, open-ended questions were included in the online survey, the researcher feels additional qualitative data would have added more of a voice to students' experiences with individualized learning supports in post-secondary. A limitation also worth mentioning is that the online survey was available to students for approximately one month. Ideally, if the researcher were to conduct this study again, they would continue with the weekly reminders via email; however, the availability of the online survey would be for longer than one month, in hopes to obtain more participants. The online survey was also distributed during the COVID-19 pandemic which could have affected the number of participants because many students did not have access to learning supports at all, or not to the same capacity, due to post-secondary campuses being closed for an unknown duration of time. The researcher feels the limitations of this study could be addressed in future research.

Potential research bias is another limitation of this research study. The researcher is employed in the private post-secondary education sector and therefore brings preconceived notions forward. Therefore, the researcher decided to omit private post-secondary institutions from their internet search which investigated those institutions that offered academic coaching. Students of private post-secondary institutions were invited to participate in the online survey because the research questions were structured in such a way to minimize any potential biases. If the website investigation included private post-secondary institutions, this would have increased the likelihood of confirmation bias for the researcher with regards to learning supports, or lack of learning supports, available to post-secondary students attending private institutions. The researcher approached this research topic with confidence that most private post-secondary institutions in Ontario do not offer individualized learning supports for students with learning disabilities. The researcher is aware that private post-secondary institutions offer the minimum required learning supports, such as increased testing time or a private room for tests and exams. Individualized learning supports are not normally offered at private post-secondary institutions due to lack of resources, including faculty, staff and/or costs to the organization.

### **5.3 Study Implications**

Despite these limitations, the results of this research study suggest several implications for individualized learning supports at post-secondary institutions. Individualized learning supports are not only for students with learning disabilities; all post-secondary students can benefit. Individualized learning supports are an effective way to reduce or better manage mental health issues like stress, anxiety, and depression, while improving upon the skills proven to

positively influence academic success, such as self-determination, self-confidence, self-advocacy, accountability, and time management.

With academic advising being the most recommended individualized learning support, it should be discussed with academic advisors that since they might be the first person that a student interacts with in the learning centre that they continue to work closely to identify a student's academic and personal needs. Academic advisors can be the front line of intraprofessional collaboration among all the individualized learning supports and academic accommodations. A student's path toward academic success should be viewed as a student-specific plan; some students may only require one learning support, while others may need a few learning supports. Academic learning supports should never be one-size-fits all.

The research also suggests that individualized learning supports not only benefits the student, but also the institution. Therefore, if post-secondary institutions currently do not have all the discussed individualized learning supports, the institution should consider implementing them. However, with additional individualized learning supports comes an increased cost to the institution which was discussed in this thesis. The institution would have to assess whether improving their learning supports is feasible or not while keeping in mind that the benefits will outweigh the risks. If students are achieving higher academic success because of the learning supports available to them, then retention rates at the respective post-secondary institutions have the potential to be higher.

The researcher hopes the results of this study will shed new light on the importance of individualized learning supports, especially academic coaching since it is the newest of the learning supports; and post-secondary institutions (publicly funded and private) will take the



initiative to learn more about academic coaching and take the necessary steps to implement an academic coaching program with certified academic coaches.

#### **5.4 Directions for Future Research**

In terms of future research, there are several avenues that may be helpful in contributing to the research on academic accommodations, individualized learning supports, and academic coaching. First, the research field could be broadened by including private post-secondary institutions to see how they might compare to publicly funded post-secondary institutions in terms of the individualized learning supports they offer to their students and the student's perceptions of these learning supports. Second, if additional resources were available, the research study could be broadened to include a larger sample size that includes representation across the Canadian provinces and the post-secondary sector. This would allow for a comparison across the provinces. Third, the research field could also be broadened by cross-referencing post-secondary institutions in the United States, United Kingdom, and Australia to investigate how they compare to post-secondary institutions in Canada. Finally, through conducting the current research, the researcher has identified that more investigation around assistive technology as a learning support would be beneficial to this area of study.

#### **5.5 Conclusion**

This study was conducted to gain insight into post-secondary students' involvement in and perspectives of individualized learning supports. Academic coaching as an individualized learning support was emphasized as it is a newer learning support and has proven to be valuable to students' overall academic success. The findings of the study suggest that individualized learning supports have a positive impact on students' self-determination, self-advocacy, self-

confidence and mental health. The findings also suggest that academic coaching is not yet a familiar learning support and therefore, not well-utilized among Ontario's publicly funded post-secondary institutions. This study also highlights that each learner is unique in their own way and academic accommodations and individualized learning supports should be available and customized to the learner's needs. Students with learning disabilities often struggle throughout their post-secondary studies if they are not supported. It is our responsibility as post-secondary educators to support the learning and development of all our students, even when students identifying with learning disabilities need more of our support and guidance.

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## Appendix 1

### Letter of Information for Participants

**Title:** *Post-secondary Students Involvement in and Perceptions of Individualized Learning Supports.*

#### Primary Researcher

Christine Crawford, Master's Candidate, Faculty of Education

#### Supervisors

Gabrielle Young, PhD, Associate Professor, Faculty of Education  
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#### Invitation to Participate

Hello, my name is Christine Crawford, and I am a Master's student at Memorial University. I would like to invite you to participate in my research study titled, *Post-secondary Students Involvement in and Perceptions of Individualized Learning Supports*. This research study is part of my Master's thesis and is under the supervision of Dr. Gabrielle Young and Dr. Christine Arnold.

I am hoping you will take the time to participate in this online survey because this is a chance for your voice to be heard! Many students at the post-secondary level seek academic accommodations and/or learning support services. This online survey will allow me to better understand which academic accommodations and/or learning support services you found helpful; and if any were not helpful, what recommendations would you give to improve these learning support services?

The online survey will consist of questions about:

- Which academic accommodations and individualized learning supports are students currently using?
- Which academic accommodations and individualized learning supports have students used in the past, or would like to use in the future?
- Which academic accommodations and individualized learning supports have students found helpful, and why?
- How have individualized learning supports impacted post-secondary students learning experiences?

I am really looking forward to this study because I am passionate about *all students* receiving the support they deserve to achieve academic and personal success!

As a post-secondary educator, I have witnessed students who have struggled with the transition to post-secondary education, academic pressures, heavy course loads and sometimes overwhelming expectations; as well as stress, anxiety and depression. It is important to me that students have access to, and engage in learning support services that truly make them feel supported throughout their academic journeys.

This letter is to provide you with information about this study to help you decide if you would like to participate. If you do not want to participate, or you begin to participate and then decide you do not want to participate anymore, there will not be any negative consequences. Before you decide, you should know what the study is about. Please carefully read this document for information about this study. If you have any questions or need further explanation, please do not hesitate to ask.

### **Purpose of the Study**

This study will examine: 1) which academic learning supports are being utilized by post-secondary students; 2) students experiences with individualized learning supports; and 3) which of these academic learning supports students have found to be most beneficial, and why.

### **What You Will Do in this Study**

- You will be invited to participate in an *online survey*.

### **Length of Time**

The online survey will take approximately 10-15 minutes of your time to complete and contains 14 questions. The online survey will be available to access for one month. Once you have completed the online survey, your survey will be submitted to directly to the researchers.

### **Withdrawal from the Study**

You can stop filling out the online survey at any point, without giving any reason. There are no consequences for withdrawal from the study. You can simply exit or close the online survey and your incomplete survey will be discarded. However, if you do submit the online survey, then the responses will be included in the research study. You may choose to respond to some survey questions, but not others, or withdraw from the study. You understand that this data is being collected anonymously and therefore your data **cannot** be removed once you submit this survey.

### **Possible Benefits**

Participating in this study will allow you share your personal *views, opinions and experiences* with learning supports you have used on campus. There are many learning supports available to students and I would like to know which of these supports you find most useful and which supports you do not find useful. The results from this online survey may have implications for learning supports/services that are offered at post-secondary institutions.

### **Possible Risks**

There may be minor social and psychological risks involved when answering questions about your past experiences. If you begin to feel upset, please feel free to skip any questions you do not wish to answer. If you need to speak to someone about how you are feeling, please reach out to an appropriate resource, such as your educational institution's wellness or counselling centres.

### **Confidentiality and Anonymity**

Anonymity refers to protecting participants' identifying characteristics, such as name or description of physical appearance. The online survey data will be anonymous. While the data from this research project will be published in a research thesis paper, it will not be possible to identify individuals. It will not be possible to associate a name with any given set of responses. Each participant will be assigned a participant number.

The ethical duty of confidentiality includes safeguarding participants' identities, personal information, and data from unauthorized access, use, or disclosure. Your identity and personal information *will not* be collected. This online survey *does not* ask you to fill in your name or any other personal information.

Submitting the online survey implies consent and signifies that you have read and understand this supplemental information. All information obtained from the online surveys will remain confidential and anonymous.

Please note: *This research study is not a requirement of any services or programs provided by NEADS. All information is kept private and confidential; therefore, NEADS will not know who chooses to participate, and who does not participate in this research study. NEADS will not be involved in any part of this research project, other than for distribution purposes only.*

### **Recording and Storage of Data**

Results from this study will be stored on a password-protected computer via *Qualtrics XM* software. Data will be kept for a minimum of five years, as required by Memorial University's policy on Integrity in Scholarly Research. Only the researchers involved in the project will have access to the data. When the data has been stored for 5 years and is no longer required, all data will be appropriately deleted.

### **Third-Party Data Collection and/or Storage**

Data collected from you as part of your participation in this project will be hosted and/or stored electronically by *Qualtrics XM* and is subject to their privacy policy, and to any relevant laws of the country in which their servers are located. Therefore, anonymity and confidentiality of data may not be guaranteed in the rare instance, for example, that government agencies obtain a court order compelling the provider to grant access to specific data stored on their servers. If you have questions or concerns about how your data will be collected or stored, please contact the researcher and/or visit the provider's website for more information before participating. The

privacy and security policy of the third-party hosting data collection and/or storing data can be found at: <https://www.qualtrics.com/privacy-statement/>

### **Reporting of Results**

Data from this study will be shared between the primary researcher, Christine Crawford, and her supervisors, Dr. Gabrielle Young and Dr. Christine Arnold, and will be used exclusively for a Master's thesis research paper. If you agree to participate, the online survey data will be summarized and direct quotations surrounding your perceptions of individualized learning supports will be used.

Upon completion, my thesis will be available at Memorial University's Queen Elizabeth II library, and can be accessed online at: <http://collections.mun.ca/cdm/search/collection/theses>.

### **Sharing of Results with Participants**

A summary report of the online survey results will be available to you via email through the National Educational Association of Disabled Students (NEADS).

### **Questions**

You are welcome to ask questions before, during, or after your participation in this research. If you would like more information about this study, please contact: Dr. Gabrielle Young ([gabrielle.young@mun.ca](mailto:gabrielle.young@mun.ca)), Dr. Christine Arnold ([christinearnold@mun.ca](mailto:christinearnold@mun.ca)) or Christine Crawford ([cjcrawford@mun.ca](mailto:cjcrawford@mun.ca)).

*The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research, such as the way you have been treated or your rights as a participant, you may contact the Chairperson of the ICEHR at [icehr@mun.ca](mailto:icehr@mun.ca) or by telephone at 709-864-2861.*

## Appendix 2

### Online Consent Form

#### **Consent:**

By completing this online survey, you agree that:

- You have read the information about the research.
- You have been advised that you may ask questions about this study and receive answers prior to continuing.
- You are satisfied that any questions you had have been addressed.
- You understand what the study is about and what you will be doing.
- You understand that you are free to withdraw participation from the study by closing your browser window or navigating away from this page, without having to give a reason and that doing so will not affect you now or in the future.
- You understand that you are able to skip any questions in this online survey that you do not wish to answer.

#### ***Regarding withdrawal after data collection:***

- You understand that this data is being collected anonymously and therefore your data **cannot** be removed once you submit this survey.

By consenting to this online survey, you do not give up your legal rights and do not release the researchers from their professional responsibilities.

Please retain a copy of this consent information for your records.

A PDF copy of this consent form will be made available to you through the National Educational Association of Disabled Students (NEADS).

**Reminder:** You may skip any questions you do not wish to answer or exit the survey at any time.

The survey can be accessed at the following link:

[https://mun.az1.qualtrics.com/jfe/form/SV\\_7QjuRXHkVCDm5j7](https://mun.az1.qualtrics.com/jfe/form/SV_7QjuRXHkVCDm5j7)



### Appendix 3

#### Online Survey Questions using Qualtrics

1. The National Educational Association of Disabled Students (NEADS) recognizes that students with disabilities attending post-secondary education may identify with one or more of the following disabilities (NEADS, 2020).

Please choose which of the following disability (or disabilities) you identify with:

**Physical disability:** A physical disability is one that affects a person's mobility or dexterity, such as Paraplegia, Quadriplegia, Multiple sclerosis (MS), Hemiplegia, Cerebral palsy, Absent limb/reduced limb function, Dystrophy, Polio.

**Intellectual disability:** People with an intellectual, learning, or cognitive disability have a reduced capacity to learn tasks or process information.

**Learning disability:** A learning disability may make it difficult for a person to take in information and communicate what they know. Learning difficulties can cause difficulties in reading, writing, or mathematics.

**Mental illness or psychiatric disability:** A psychiatric disability or mental illness can develop at any age and is often not apparent to other people. These disabilities can include stress-related conditions, major depression, bipolar disorder (formally called manic-depressive illness), anxiety, and schizophrenia.

**Visual impairment:** Visual impairment is defined as a decreased ability to see to a degree that causes problems not fixable by usual means, such as glasses or medication. Visual impairment can be due to disease, trauma, or congenital or degenerative conditions.

**Hearing impairment:** Partial or total inability to hear. A hearing impairment or hearing loss is a full or partial decrease in the ability to detect or understand sounds. Caused by a wide range of biological and environmental factors, loss of hearing can happen to any organism that perceives sound.

**Neurological disability:** A neurological disability is associated with damage to the nervous system that results in the loss of some physical or mental functions. A neurological disability may affect a person's capacity to move or manipulate things or the way they act or express their feelings.

2. Are you a current student or have you recently graduated? Please select one.

- Current student
- Recently graduated

3.

a) In which province/territory do you currently or have you most recently attended post-secondary education?

b) Please indicate which post-secondary institution you currently attended or have most recently attended. Example: University of Toronto, Niagara College.

4. Please indicate which academic program you currently or most recently were associated with. Example: Biology, Early Childhood Education.

5. What credential are you working toward or were recently awarded? Please select one.

- Certificate
- Diploma
- Bachelor's degree
- Post-graduate certificate
- Post-graduate diploma
- Master's degree
- Other

6. What percentage of your program have you completed to date? Please select one:

- <25%
- 25 – 50%
- >50%
- 75 – 100%

7. Please select the *top 3* reasons you chose to attend this post-secondary institution.

- For a specific program
- Financial reasons
- Close to home
- Friend/family member currently attends this institution
- Scholarships/bursaries
- Athletics
- Institution's reputation/ranking
- Courses offered online through distance learning

8.

a) If you choose this post-secondary institution because of the individualized learning supports offered, please select the ones that apply.

- Academic advising
- Counseling
- Tutoring
- Peer mentoring
- Academic coaching
- Writing support services
- Math support services
- Other: \_\_\_\_\_

b) Please explain why these individualized learning supports were of interest to you.

9.

a) Each post-secondary institution has websites associated with their Learning Support Centre and/or Accessibility Services.

For the post-secondary institution you attend or attended, how would you rank the overall *helpfulness* of these websites:

|                                    | Not at all helpful | Not Helpful | Slightly Helpful | Helpful | Very Helpful | No opinion |
|------------------------------------|--------------------|-------------|------------------|---------|--------------|------------|
|                                    | 1                  | 2           | 3                | 4       | 5            |            |
| <b>Organization of information</b> |                    |             |                  |         |              |            |
| <b>Accessibility</b>               |                    |             |                  |         |              |            |
| <b>Navigation</b>                  |                    |             |                  |         |              |            |
| <b>Booking appointments</b>        |                    |             |                  |         |              |            |
| <b>Available resources</b>         |                    |             |                  |         |              |            |

b) If you would recommend any improvements to these websites, please explain:

10.

a) Please select the academic accommodations and/or individualized learning supports that were **recommended to you** by your post-secondary institution.

| <b>Academic Accommodations</b>   |  |
|--|--|
| <b>Notetakers</b>  |  |
| <b>Reduced Course Load</b>   |  |
| <b>Extended Testing Time</b>   |  |
| <b>Assistive Technology</b>  |  |
| <b>Private Testing Accommodations</b>  |  |
|  |  |
| <b>Individualized Learning Supports</b>  |  |
| <b>Academic Advising</b>   |  |
| <b>Counseling</b>  |  |
| <b>Tutoring</b>  |  |
| <b>Peer Mentoring</b>  |  |
| <b>Academic Coaching<br/>(scheduled one-on-one time with a coach)</b>                      |  |
| <b>Writing Support Services<br/>(essays, referencing and citing, reports,<br/>resumes)</b> |  |
| <b>Math Support Services (statistics, calculus,<br/>algebra)</b>                           |  |
|  |  |
| <b>Other:</b>  |  |

11.

a) For any of the academic accommodations and/or individualized learning supports you **Have Used**, and please indicate which ones you found to be the most helpful with regards to:

*Self-confidence* = increased confidence in yourself

*Self-determination* = goal setting, problem-solving, decision-making

*Self-advocacy* = speaking up for yourself and things that are important to you

*Accountability* = taking responsibility for your actions

*Improved mental health* = less feelings of stress, anxiety, depression etc.

b) Please select any academic accommodations and/or individualized learning supports you are interested in using in your current or future post-secondary education.

|   | Have used | Improved Grades | Organizational Skills | Self-Confidence | Self-Determination | Self-Advocacy | Accountability | Mental Health | Not Helpful | Would like to use moving forward |
|---|-----------|-----------------|-----------------------|-----------------|--------------------|---------------|----------------|---------------|-------------|----------------------------------|
| <b>Academic Accommodations</b>  |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Notetakers  |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Reduced Course Load   |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Extended Testing Time   |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Assistive Technology  |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Private Testing Accommodations  |           |                 |                       |                 |                    |               |                |               |             |                                  |
| <b>Individualized Learning Supports</b>                                     |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Academic Advising   |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Counseling  |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Tutoring  |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Peer Mentoring  |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Academic Coaching (scheduled one-on-one time with a coach)                  |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Writing Support Services (essays, referencing and citing, reports, resumes) |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Math Support Services (statistics, calculus, algebra)                       |           |                 |                       |                 |                    |               |                |               |             |                                  |
| Other:  |           |                 |                       |                 |                    |               |                |               |             |                                  |

12.

a) *Academic Coaching* uses a coaching style relationship based on trust to enhance student learning and to reach the student's highest learning potential. Academic coaches encourage self-reflection and provide feedback, clarification, and support. Students often meet weekly with their academic coach to: create goals, identify strategies and develop plans to improve academic performance, address challenges and discuss time management and study skills. (Barkley, 2019; Deiorio et al., 2017; McWilliams and Beam, 2013).

Take a moment to think about the individualized learning supports you **Have Used** and the above definition for academic coaching.

Do you feel any of the individualized learning supports you **Have Used** were similar to academic coaching in any of the following ways? Please select any that apply.

- Coaching style relationship
- Encouraging self-reflection
- Providing feedback and support
- Weekly meetings
- Creating goals
- Identifying and developing strategies for success
- Addressing challenges
- Improving time management skills
- Discussing study skills
- The learning supports I have used have not been similar to academic coaching

13.

a) Please rate the impact these individualized learning supports have had on your overall learning experiences.

- Extremely positive
- Moderately positive
- Slightly positive
- Neither positive nor negative
- Slightly negative
- Moderately negative
- Extremely negative

b) Please share any positive or negative experiences you have encountered with individualized learning supports.

14. Please share anything else about your involvement in, or perceptions of individualized learning supports at the post-secondary level.