

**Left Out: Challenges Faced by Students with Learning Disabilities
in Post-secondary Education at Ontarian Institutions**

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Abstract

By identifying the perceived challenges and successes of students with LDs, the study aimed to understand how these students make sense of their challenges in post-secondary education at Ontarian institutions. Considering the epistemology of constructivism, the study utilized qualitative methodology guided by an interpretivist theoretical perspective rooted in the phenomenological paradigm.

Ten (10) students with LDs from Ontarian post-secondary institutions were recruited to contribute to this study to understand the essence of students' experiences, including factors that contribute to overcoming their challenges. Five (5) faculty members from Ontarian post-secondary institutions were also recruited to contribute their experiences dealing with the challenges of these students, including their result-based factors that effectively contributed to their academic successes.

The data analyses yielded two key themes - themes related to challenges and themes related to successes – with several corresponding nested themes. Themes related to challenges indicated that students with LDs had to comply with their respective institutions' psycho-educational assessments to receive accommodations. They experienced concerns about being labeled and stigmatized and found it necessary to conceal their learning disability, which reduced their chances of receiving academic accommodation on time. Their challenges become compounded when they need to deal with preconceptions of parents, peers, and faculty members to become more independent as they adapt to higher education.

Themes related to success indicated that positive interactions with faculty, peers, and service providers are significant in the academic success of students with LDs. The positive impact of their support on these students makes the faculty, peers, and service providers feel the

meaning of their role in the student's success. While each student's academic journey was different, there were shared threads of resilience and success. The experiences of challenges of post-secondary students with LDs and their resilience to overcome the challenges presented in this study would contribute to the existing literature that enlightens hope for their potential success.

Keywords: learning disabilities; post-secondary education; challenges and successes

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Dedication

In memory of my beloved mother, Momtaz Begum, who inspired and motivated me to become a doctorate since I started elementary education in the late 1970s. She used to write “Doctor” beginning of my name on my books and school supplies. My elementary teachers and neighbors were smiling to see this; however, I didn’t understand their reactions as I was only five (5) then. I am deeply grateful to my mom for her heartiest intention, and finally, I am pursuing a doctoral degree. My mom may be happy if she was in this world.

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Introduction

The number of students with disabilities, particularly those with learning disabilities (LDs), has increased in post-secondary education in Canadian institutions (Statistics Canada, 2023). It reflects significant progress in broadening access of students with LDs to higher education institutions across Canada. Accommodating these students, particularly those with learning disabilities, necessitates a deeper understanding of how they could learn most effectively towards their successes. For this reason, students with LDs need to be more represented and prepared to access and advocate for services in post-secondary education (Gyenes & Siegel, 2014; Hadley, 2016; Lindsay et al., 2018; Russak & Daniel, 2015). Nevertheless, the number of students with LDs attending post-secondary institutions has progressively increased from 24.7% in 2017 to 27.7% in 2022 (Furrie, 2017; Hadley, 2016; Hollins & Foley, 2013; Statistics Canada, 2023).

Several studies have shown that the prevailing needs of students with LDs regarding the state of access to services included are "timely, accessible formatting for learning materials, equipment or socializing with peers," which have been provided in many post-secondary educational institutions across Canada (NEADS, 2018, p. 112). This report by the National Educational Association of Disabled Students (2018) further contends that many post-secondary education institutions regularly provide accessible learning materials and equipment to students and create opportunities for social engagement. These efforts include promoting students' participation in off-campus activities that support personal networking and development, attracting many students with LDs to pursue higher education.

The increased enrollment in post-secondary education is due to many other factors, including an increasing demand for higher education qualifications in the employment market

and an increasing awareness of the benefits of higher education among students, their families, and communities (Butler et al., 2016; Kirby, 2023). Furthermore, the Canadian government has made significant investments in post-secondary education, including increasing extra funding for students with permanent disabilities, which is also a contributory factor in the increased enrollment to pursue higher education.

The *Canada Student Grant for Students with Permanent Disabilities* provides up to \$2,800 each academic year for post-secondary students who have qualified for a Canada Student Loan. This \$2,000 maximum amount has been temporarily doubled to \$4,000 in response to the COVID-19 pandemic and is expected to continue until the end of the 2022-23 academic year (Public Health Agency of Canada, 2023; Employment and Social Development Canada, 2024).

Besides, when students with disabilities require exceptional services or equipment to support their education, they may be eligible to receive the *Canada Student Grant for Services and Equipment for Students with Permanent Disabilities*, allowing students to access services and equipment such as note-takers, tutors, interpreters, and/or assistive technology. With this grant, students with disabilities could receive up to \$20,000 per school year (August 1 to July 31) for each year of studies (including undergraduate and graduate levels) as long as they still qualify (Public Health Agency of Canada, 2023).

Canada has become increasingly dependent on the new knowledge-based economy, where Canadians with disabilities can have an unprecedented opportunity to participate in this economy. These opportunities emerge in an environment where valuable commodities are not physical goods and services but information and knowledge. As the current "knowledge-based economy" requires advanced education and training, more Canadians seek post-secondary

education to meet these requirements and advance their careers (Fichten et al., 2003; Kirby, 2023; NEADS, 2018). In order to meet the challenges of the current knowledge-based economy, individuals' higher educational attainments remain a crucial vehicle to integrate themselves into this new workplace and motivate an increased number of students with and without disabilities to attend post-secondary education.

It is important to note that differentiating between the overall increase among post-secondary students and, specifically, students with LDs in enrollment is challenging due to data availability. Nevertheless, the increased number of students with LDs among students with disabilities in enrollment has been discussed in many studies (Bizier et al., 2014; Furrie, 2017; May & Stone, 2010; NEADS, 2018; Statistics Canada, 2022, 2023).

Analysis of data from these studies asserts that among students with disabilities enrolled in post-secondary education, the number of students with LDs enrolled increased by 3.0 percentage points from 2017 (Statistics Canada, 2023). Several authors have argued that the improved disability services, including recommendations for appropriate accommodation to students provided in many post-secondary institutions throughout Canada and promising employment opportunities in a knowledge-based economy, have motivated many students with LDs to pursue higher education (D'Intino, 2017b; Hadley, 2016; Lightfoot et al., 2018).

Research shows that academic and related accommodations enable students with disabilities to engage in activities at the same level as their peers without a disability (Cawthon & Cole, 2010; Condra et al., 2015; Erten, 2011; Lindsay et al., 2018). Black et al. (2015) indicate that for students with disabilities, academic and related accommodation encompasses "acquisition or modification of equipment or devices; appropriate adjustments of or alterations to examinations, training materials or policies; and provision of qualified readers or interpreters for

students" (p. 2). McGregor et al. (2016) note that academic and related accommodation improves grades and persistence to achieve a degree. The interrelationship between academic success and the availability of necessary support and accommodations for students with disabilities is documented elsewhere (McKenzie, 2015). Therefore, accommodation for students with LDs relative to the individual student's unique needs and circumstances is significant to their success.

Studies show that suggested accommodations for post-secondary students with LDs are often recommended without considering each student's unique limitations in specific academic contexts, their history of learning disability, current level of functioning, and lived experience in specific academic contexts (Black et al., 2015; Hollins & Foley, 2013; Weis et al., 2016).

Besides, the study of Cawthon and Cole (2010) further specifies that students entered post-secondary institutions without understanding the difference between high school and college in terms of class size, instructional time, teaching, and examination methods. They did not understand their strengths and weaknesses and the specific accommodation they needed. Their earlier disability assessments often lacked adequate documentation for securing specific academic and related accommodations at post-secondary levels.

NEADS (2018) defined accommodations for students with disabilities as the "tasks and functions that a student with a disability cannot fully perform without some type of accommodation" in the context of their academic program (p. 152). For students with disabilities who intend to receive accommodations, they must follow a standard procedure that involves registering with the Disability Services Office (DSO) through an intake process. This process requires students to self-identify their disability and request relevant accommodations with appropriate documentation. Cawthon and Cole (2010) note that students' accommodations are often assigned based on the type of disability rather than a comprehensive understanding of the

student's specific challenges and practical needs for academic inclusion. This inconsistency often led to students receiving accommodations that do not directly address their areas of limitation. So, they need help to support their academic performance effectively.

For instance, a student with a reading disability may require additional time on exams but receive a broad range of inappropriate accommodations for their specific needs (Weis et al., 2016). This disparity underscores the necessity for individually selected accommodations to match each student's unique needs and academic contexts. Arguably, providing accommodations to students with LDs based on their challenges rather than general disability categories can significantly enhance the effectiveness of support services. This approach addresses students' specific limitations and supports them for better academic outcomes and personal growth.

The following literature review outlines the historical context of learning disabilities and the evolution of their definition in the Canadian context. The definition of learning disabilities in the Canadian context will be further reviewed, focusing on the history of learning disabilities in Canada and the approach of provincial and territorial initiatives to create and implement policies that reasonably fit its specific multicultural, linguistic, and socio-economic conditions (Wiener & Siegel, 1992b). The resource reference used among qualified professionals for LD diagnosis, the more comprehensive definition of learning disabilities, as outlined in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* in 2013, is also reviewed. Specifically, the diagnostic criteria for learning disabilities diagnosis to measure an individual's intellectual potential and academic functioning have been thoroughly discussed in several other documents in the past (DSM-5, 2013). These documents are instrumental in selecting research participants, which have been given much attention.

The literature highlights what we already know about post-secondary students with LDs and their challenges, specifically in the Canadian context, from the Learning Disabilities Association of Canada (LDAC, 2015b). The qualitative research focusing on post-secondary students with LDs that describes what challenges mean to these students is limited. Therefore, more recent research is warranted to highlight the challenges of students with LDs experience in post-secondary institutions.

The purpose of this study is to investigate how students with LDs navigate their experiences of academic challenges and achievements within post-secondary Ontario institutions. In light of the epistemology of constructivism, the study utilized qualitative methodology guided by an interpretivist theoretical perspective grounded in the phenomenological paradigm. This comprehensive study aims to provide a deeper understanding of the challenges faced by students with LDs concentrating on how they perceive and interpret their post-secondary level academic and related challenges. In order to comprehend insights into the broader implications of students with LDs experiences of challenges, several secondary research questions have been included in this study. These questions further examine how students with LDs are resilient, adapt, and succeed academically. Despite this study explores valuable insights that could better inform policy and practices to support post-secondary students with LDs.

This study comprises five distinct chapters, with Chapter 1 introducing the research problem, including the rationale and significance of the study, the research questions to be addressed, and definitions of terms used. Chapter 2 reviews the literature, offering a broad overview of the history of Canadian higher education, explaining the definition of learning difficulties and learning disabilities, co-occurrence of LDs with other disorders, service provision

in post-secondary education institutions, reviewing issues concerning the experiences of students with and without learning disabilities in post-secondary settings, and bringing to light the social construction and awareness of disability. This chapter also discusses a range of theories and models to explore how higher education institutions influence students' learning. Chapter 3 describes the methodology used in this research study, encompassing epistemology, paradigm assumptions, theoretical perspective, phenomenological analysis, positionality statement, and ethical consideration sought in the research study. This chapter also includes data collection procedures focusing on participant selection and research instruments used. Chapter 4 represents the emergent themes of the study, which are organized into two main categories: challenges faced by post-secondary students with learning disabilities and factors that students with learning disabilities attribute to their academic success. Chapter 5 synthesizes the importance of the leading research findings and discusses the study's implications for future administrative practice and research. The conclusion of this thesis is presented at the end.

Chapter 1: Background of the Study

Recent data on disability in Canada shows that in 2022, 27.0% of Canadians aged 15 years and over, or 8.0 million people, had at least one disability. This represents an increase of 4.7 percentage points from 2017 (Statistics Canada, 2023). There is also an increasing trend of the types of disability varied by age group. For example, among youth with disabilities aged 15 to 24 years, pain-related (61.8%) was the most common type of disability in 2022, followed by mental health-related (38.6 %) and learning (20.7%) (Statistics Canada, 2023). The prevalence of learning disability, specifically among Canadians aged 15 years and older, in 2017 was 17.7 percent, and in 2022, it reached 20.7 percent (Statistics Canada, 2023).

Table 1

Prevalence of post-secondary students with disabilities among those aged 15 years and older, 2017 and 2022, %

Type of Disability	Post-secondary Students with Disabilities				
	Prevalence		Prevalence		Change in prevalence rate
	2017	2022	2017	2022	Percentage points, 2017 - 2022
Pain-related	65.0	61.8	66.9	70.1	+3.2
Flexibility	44.7	40.3	44.3	39.9	-4.4
Mobility	42.8	39.2	35.6	32.0	-3.6
Mental health-related	32.5	38.6	39.7	45.8	+6.1
Seeing	24.3	27.4	18.7	21.8	+3.1
Learning	17.7	20.7	24.7	27.7	+3.0
Hearing	21.4	20.7	19.5	18.8	-0.7
Dexterity	20.4	18.4	19.7	21.7	+2.0
Memory	16.8	18.2	19.1	20.5	+1.4
Developmental	5.1	5.7	7.0	7.6	+0.6
Unknown	2.5	2.8	2.2	2.5	+0.3

Note. Adapted from *Statistics Canada* (2023), *Furrie* (2017), and *NEADS* (2018).

Importantly, different types of disability also frequently co-occurred—nearly over a quarter (25%) of all youth with disabilities had both mental health-related and learning disabilities in combination. In fact, over fifty percent (59.3%) of all youth with disabilities had a

mental health-related disability and a learning disability (Statistics Canada, 2023). As it may have implications for the types of challenges faced by youth with disabilities, and the types of accommodations they need to transition successfully into post-secondary education or employment.

Table 1 shows that the prevalence of post-secondary students with LDs has increased by 3.0 percentage points since 2017 (Furrie, 2017; NEADS, 2018; Statistics Canada, 2023). These studies also indicate that the prevalence of post-secondary students with LDs has increased from 24.7% in 2017 to 27.7% in 2022. This percentage, when combined with the co-occurrence of learning disabilities with one or two other mental-health-related disabilities, significantly amplifies the percentage of students with LDs in post-secondary Canadian institutions. As individuals age, the likelihood of experiencing a higher number of co-occurring disabilities increases, further complicating the situation. An individual's multiple disabilities lead to more accessibility and learning challenges that require to be addressed.

Several studies have noted that students with LDs are the most significant and fastest-growing subgroup of students with disabilities in post-secondary education (Ames et al., 2016; Arscott, 2013; Condra et al., 2015; Hansen et al., 2017). Their increasing enrollment does not mean they are not facing challenges; they are underrepresented and considered at risk due to their significantly lower graduation rates compared to their peers, particularly at the post-secondary level (Fullarton, 2016; Kendall, 2016; NEADS, 2018; Wray & Houghton, 2019). They face significant difficulties accessing appropriate academic and related accommodations, including frequently encountering labeling and stigmatization held by others on campus. They are commonly misunderstood as challenging to talk to, slow learners, lazy, and responsible for their condition (Crisp et al., 2000; Hansen & Dawson, 2020; Wood et al., 2014a). Hansen and

Dawson (2020) assert that students with LDs face academic and related challenges held by others on campus, for example, from their peers, educators, and service providers when pursuing their higher education. For these reasons, academic outcomes for this group remain lower regarding achievement and graduation rates (Grimes et al., 2017).

Several other authors have specified that students with LDs are treated as “dumb,” “lazy,” or “slow” even by their educators, and they often report concerns of being seen as “getting special treatment,” or being fragile or burdensome” (Akin & Huang, 2019, p. 23; Hansen & Dawson, 2020). Scior and Werner (2015) point out that misunderstandings about students with LDs and their learning challenges include confusion about the definition and terminology and misconceptions about the abilities of students with LDs. These misunderstandings among educators, school administrators, and the public resulted in identifying learning disabilities as challenging for a long time.

Despite efforts to improve awareness of learning disabilities among a cross-section of people in society, there is still a common misconception about what learning disability means, including the types of supports and related accommodations that are best suited for individuals with learning disabilities, more specifically related to their educational success. For example, one study by Hansen and Dawson (2020) contends that “considerable misconceptions about learning disabilities at all levels of educators, school administrators, and the public” are widespread (p. 316). So, there is a need to develop mass awareness among cross sections of society, specifically among educators, disability service providers, and school administrators, when the issue remains closely related to education and learning.

In this respect, Zhang et al. (2010) specifically mentioned that although some progress has been made in overall awareness of educators' perception of learning disabilities, there is still

much to be done in terms of improving educators' understanding of the definition, characteristics, causes, and potential of students with LDs. Improving awareness of misconception about learning disabilities among educators, school administrators, and the public is indispensable. Notably, the educator's beliefs directly influence the provision of reasonable accommodations, knowledge of legal responsibilities, and perceived institutional support influence their personal beliefs (Hansen & Dawson, 2020; Zhang et al., 2010). So, it is crucial to take considerable measures and put in more effort to bridge the existing gaps in knowledge and provide a better learning experience for students with LDs.

Furthermore, stigmatization by non-disabled peers towards students with LDs declined their preference to involve themselves in peer groups. Research shows that students with LDs, in general, experience a variety of negative perceptions by their non-disabled peers (Akin & Huang, 2019; Kendall, 2016). They even doubt the fairness of academic accommodations for their peers with disabilities (Akin & Huang, 2019). Such perceptions emerge as numerous challenges for students with LDs. For example, for a student with LDs to accept the label of "disabled" is a double-edged sword; they have to accept the stigma attached to the label (e.g., "disabled") to access positive institutional supports and accommodations. It is critical to understand that evaluating students with learning disabilities (LDs) based on their ability to overcome educational challenges through the provision of appropriate accommodations overlooks the broader support they may need. This understanding can exacerbate the issue, allowing students with LDs to function the same as other students in the future. Therefore, it is crucial to have a culture in post-secondary institutions that makes it simpler for students with LDs to seek the support they need both at the institutional level and from individual faculty members and service

providers. Students need to feel comfortable and supported in advocating for any accommodations they need for their successful learning.

Several studies explore insights into and highlight access issues specific to students with LDs, potentially affecting post-secondary students with LDs success in education (Reed et al., 2006; Cawthon & Cole, 2010; Lindsay et al., 2018). Cawthon and Cole (2010) insist that students with LDs face unique challenges when entering post-secondary education after high school. One of the most significant challenges is obtaining the necessary disability services to succeed in their post-secondary education program. In this respect, Reed et al. (2006) noted:

Students experienced difficulties accessing post-secondary education and services, assessment guidelines, and accommodations. In addition, students described experiences that indicated that access to education is further impeded by lack of preparation for post-secondary education, teaching staff attitudes, inability to advocate for their own needs, and poor communication with service providers. (Reed et al., 2006, pp. 59-60)

This statement asserts that students faced challenges accessing services at post-secondary institutions, assessment guidelines, and accommodations. Additionally, they report that their access could be improved by adequate preparation for higher education, disadvantageous attitudes from teaching staff, difficulties in self-advocacy, and poor communication with service providers. Their reported challenges can be understood from the perspectives of different stakeholders in post-secondary education settings.

For example, service providers view students with LDs as lacking self-advocacy skills, enrolling in the post-secondary program without an understanding of the difference between high school and college in terms of class size, instructional time, teaching and examination methods, and not understanding their strengths and weaknesses, including the specific accommodations

that they need to be successful (Cawthon & Cole, 2010). Faculty members believe they hold positive attitudes and willingness to accommodate students with LDs. However, students frequently feel unsupported and struggle to access academic information due to inadequate faculty knowledge of reasonable accommodations, reluctance to provide specific support, or insufficient institutional accommodations (Hansen & Dawson, 2020). It shows that there remains a gap between faculty member's understanding of the unique needs and priorities of students with LDs and these students' perceptions of faculty support, leading to emerging challenges that hinder the success of students with LDs.

Additionally, the rapid advancement of information technology that encourages the development of advanced-level computer-based educational materials, including educational institutions' interest in employing virtual platforms for instructions, added new challenges for students with LDs. Averett (2021) notes that students without LDs may find online courses to be particularly attractive because they mitigate the effects of specific accessibility issues, the potential benefits are not always realized due to the difficulties of navigating online platforms, inaccessible course design, a lack of accommodations, and unwillingness on the part of students to disclose a disability to their instructors. So, in the case of virtual platforms, some students with disabilities may adapt well to online learning, but those with learning disabilities often struggle with this mode of learning. Lambert and Dryer (2018) state that the struggles of students with LDs with online courses have been found to affect their quality of life negatively, increasing their stress and anxiety and lowering their self-esteem. Their study further explained the challenges students experienced with online platforms and noted:

In particular, many participants [students with LDs] reported that in order to try and ameliorate their difficulties with reading, writing, and expression, they were continually

trying to find extra time to invest in their studies. However, this increased investment in time and effort had a noticeable impact on their levels of energy, with participants reporting that they felt 'tired' and 'exhausted', which participants reported contributed to increased stress and anxiety levels. (Lambert & Dryer, 2018)

The study by Lambert and Dryer (2018) highlights the struggles faced by students with LDs in their online academic endeavors. Students with LDs reported that they need to invest extra time to overcome reading, writing, and expression challenges while in their remote learning mode. However, their additional effort in fulfilling the remote learning requirements resulted in feelings of tiredness and exhaustion. These physical and mental challenges contributed to heightened stress and anxiety levels. It underscores the significant barriers students with LDs experience while trying to bridge the learning gap, which, in turn, negatively impacts their overall well-being and academic performance.

Students with LDs often rely on the structure and routine provided by their educational institutions, which is disrupted when learning moves to a predominantly online environment (Li et al., 2023). Although many students with disabilities are comfortable in an online learning environment, some experience challenges, especially for those who are reluctant to disclose their disabilities and apply for accommodations (Francis & Chiu, 2020; Hsiao et al., 2019). So, the change remains particularly challenging for students with LDs to cope with remote learning platforms. This is not because of their difficulties in reading, writing, and mathematics; their learning challenges are exacerbated when many of these students have comorbid conditions with other disabilities such as ADHD, Central Auditory Processing Disorder, and Non-verbal Learning Disability. Additionally, students with LDs often face challenges using advanced computer-based online learning (Goegan & Daniels, 2022). They described difficulties with

online learning, such as navigating online learning platforms, reducing their accommodations, and increasing distractions (Burgstahler, 2015; Fichten et al., 2009; Hollins & Foley, 2013).

The study by Ko and Petty (2022) indicates that freshly enrolled post-secondary students with disabilities are less likely to be aware of the various assistive technologies available or understand how these technologies may help them. Thus, they may not have the knowledge to ask for this assistance. This appears to be more prevalent in students with "invisible" disabilities, such as mental health disabilities like generalized anxiety disorder, obsessive-compulsive disorder, and bipolar disorder (Ko & Petty, 2022).

Specifically, students with LDs may need to work harder than their non-disabled peers to keep up with their coursework and assignments, so they have little time to effectively pinpoint the guidelines for using their assistive technology for their remote learning. This is often the case when learning new technologies. Currently, post-secondary institutions offer more courses remotely than ever before, and in this respect, many new assistive technologies have been developed to meet the course demand. However, Malcolm and Roll (2017) indicate that students with LDs could invest little time independently in learning new assistive technology associated with online platforms, as many new technology guidelines are not user-friendly for them to follow.

McNicholl et al. (2021) note that these advanced technologies, in many situations, work differently than expected. For example, text-to-speech software often delivers text-to-speech or speech-to-text translation errors, poor quality audio recordings, and difficulty with audio or video segment playback. Frequently, these technologies may not be compatible with specific post-secondary institutions or need institutional authorization. So, continuing post-secondary education that is highly text-based remains challenging for students with LDs. Students often

become frustrated with their lack of understanding of and accessing and using new technologies. However, they need to catch up in using them and continue to face challenges in keeping up with their higher studies.

Arguably, addressing challenges related to website accessibility, online exams, digital content, and advanced technologies for remote/online learning explicitly for students with LDs is crucial. Mitigating technical difficulties and enhancing educators' e-learning proficiency is vital for creating a more inclusive and effective e-learning environment that promotes improved learning experiences for students, including those with disabilities. Therefore, it is imperative to understand these challenges, including other academic and related challenges, from the perspectives of students with LDs, and how they overcome them is also crucial to comprehend.

Several authors argue that academic accommodations and learning strategies could help students with learning disabilities cope more effectively with their disabilities and achieve a higher level of success in education than would otherwise be possible (Condra et al., 2015; Fullarton, 2016; Weis et al., 2016). In this case, students and educators must have an in-depth understanding of learning disabilities to develop appropriate accommodations and interventions to help students with LDs reach their full academic potential.

This study explores these challenging issues, including other issues such as the accessibility of academic accommodations, the continuing stigma and negative attitudes towards LDs, barriers to expected academic performance, the indiscriminate nature of disability assessments, and the transition challenges both in the shift from high school to post-secondary institutions, including the adaptation to online learning platforms. This study aims to foster a meaningful understanding of these challenges faced by post-secondary students with LDs that

inform effective strategies and interventions, thereby contributing to a more inclusive and supportive educational environment for all in post-secondary settings.

Several studies have found that that students with LDs are less likely to pursue post-secondary education than their non-disabled peers (Banks, 2014; Michalski et al., 2017; Salter & Akagi, 2020). This trend has been changing in recent years, and the percentage of students with LDs at the post-secondary level has rapidly increased (Furrie, 2017; Hadley, 2016; Hollins & Foley, 2013; NEADS, 2018; Statistics Canada, 2023). The recent report from the Higher Education Quality Council of Ontario (HEQCO) states that over the past decade, the demand for accommodations and accessibility supports in post-secondary education has grown, particularly for disabilities that require ongoing intervention (Sophie Lanthier & Colyar, 2023). Authors further noted:

In the college and university sectors combined, registrations through Offices for Students with Disabilities (OSDs) increased by nearly 80% between 2013-14 and 2020-21. In the university sector, mental health and Attention-Deficit Hyperactivity Disorder (ADHD) registrations increased by 76% and 107%, respectively, since 2016. (Lanthier et al., 2023, p. 6).

The study by NEADS in 2018 notes that this increase is driven by huge increases in the numbers of students with LDs, 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 (sight/hearing loss) disabilities have remained relatively constant. One study by Furrie (2017) involving a significant number of post-secondary students with disabilities revealed insights into the prevalence of learning disabilities among this population. The findings of this study, along with the Canadian Survey on Disability (CSD) in 2022, highlight a significant

increase in the percentage of post-secondary students reporting learning disabilities, from 24.7% in 2017 to 27.7% in 2022 (Furrie, 2017; NEADS, 2018; Statistics Canada, 2023). The increasing number of post-secondary students with LDs could be a positive trend, as it promotes greater diversity, improved accommodations, more inclusive admission procedures, and a significant decrease in the stigma around disclosing LDs. Nonetheless, the changing demographics in the post-secondary student population highlight the need for enhanced academic accommodations and expanded access to learning disability diagnostic services universally acceptable to higher education institutions nationwide.

The variability and inconsistency in definitions and diagnostic practices across Canada influence the reported increase in students identified with LDs (D'Intino, 2017b). For instance, changes in the criteria for identifying LDs, such as broadening the definition to include more cases, can affect who is identified as having a learning disability. If definitions or diagnostic criteria become broader in this way, more students may be identified as having learning disabilities, potentially leading to an observed increase in prevalence rates (Furrie, 2017; NEADS, 2018).

Arguably, based on the identified variability and lack of consistency, the assertion that changes in definitions or diagnoses led to the observed increase in the prevalence of learning disabilities cannot be conclusively proven without specific quantitative data (NEADS, 2018). The importance of detailed longitudinal studies or specific statistical analyses that can speak to the causality between these factors cannot be overstated. Therefore, comprehensive research, exceptionally detailed longitudinal studies, is not just necessary but reassuring in its thoroughness to determine the direct cause of the increase in the prevalence of learning disabilities. While reviewing government documents, articles, and studies highlights the potential

impact of varying definitions and diagnostic criteria on LD prevalence rates, it does not provide explicit quantitative evidence to confirm a direct causal relationship between changes in definitions/diagnoses and the observed increase in learning disabilities. This underscores the urgency of the issue and the need for further research.

Nonetheless, this increasing trend of post-secondary students with LDs across Canada demands a better understanding of the challenges post-secondary students with LDs face, the meaning of these challenges from their perspectives, and educational interventions that positively contribute to their success in education can support them along the path to academic success in their post-secondary education.

Definition of Learning Disability

The study focused on the experiences of students with LDs in post-secondary institutions. Therefore, it is of utmost importance to outline the meaning of learning disabilities. The Learning Disabilities Association of Canada (LDAC) in 2015 revised a national definition of LDs and stated:

Learning Disabilities refer to a number of disorders that may affect the acquisition, organization, retention, understanding, or use of verbal or nonverbal information. These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking and/or reasoning. As such, learning disabilities are distinct from global intellectual deficiency. (LDAC, 2015a)

This revised definition is developed from a more researcher-based understanding of LDs perspective to give people the foundation for a shared understanding of LDs based on empirical knowledge, helping to dispel commonly held myths about individuals with learning disabilities (LDAC, 2015a). The purpose of this definition is to prevent students with LDs from being

excluded from adequate support and accommodations. Nevertheless, there needs to be evidence in LDAC's reports and related documents that school boards across Canada have adopted the revised definition. Studies instead indicate that Canadian definitions of learning disabilities traditionally have varied interprovincially; there are inconsistencies in defining LDs in provincial school boards (Kozey & Siegel, 2008a; LDAC, 2015a).

The Canadian experience with the development and definition of LDs has been and continues to be distinct from the US (Kozey & Siegel, 2008a). The definition of LDs in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* in the USA is more comprehensive and somewhat comparable to the LDs description created by the LDAC (LDAC, 2015; DSM-5, 2013). The core of the *DSM-5* definition outlined several criteria for LD diagnosis to measure an individual's intellectual potential and academic functioning. In doing so, *DSM-5* breaks reading (accuracy, speed, or comprehension), writing (sentence structure, putting thoughts into written form), and mathematics (calculation or reasoning) into separate learning disorders (DSM-5, 2013; George, 2020). Although these areas are distinct, the *DSM-5* consolidates them into an overarching diagnosis, with an emphasis on reading disabilities (dyslexia) as the central focus.

Difficulties with these skills cause problems in reading, writing, and math and impact the everyday activities of students with LDs (DoH, 2015; DSM-5, 2013; Penney, 2018; Podsiadlik, 2021). Regarding reading, students with reading specific learning disabilities do not read as well as their non-disabled peers. Because of the high volume of reading required in higher education, students with LDs remain at a distant disadvantage (Richards et al., 2015; Weis et al., 2016). In mathematics, they experience difficulties in basic computations and application to more complex

and abstract mathematics such as algebra and geometry (Bugden & Ansari, 2016). Written expression is one of the most pervasive problems for students with LDs (Richards et al., 2015).

It is important to note that the category of learning disabilities is commonly used in Canada (Waterfield & Whelan, 2017). There is no precise operational definition of learning disabilities widely accepted across provinces (LDAC, 2015b). For example, some Canadian sources consider attention deficit-hyperactivity disorder (ADHD) a form of learning disability, but other sources consider ADHD a distinct but related category. Several other Canadian sources entirely exclude ADHD from discussions about learning disabilities (Waterfield & Whelan, 2017).

An individual's learning disability primarily affects specific skills related to learning, such as reading, writing, or math, and impacts particular cognitive processes necessary for these skills (Gyenes & Siegel, 2014b; Hansen & Dawson, 2020; Penney, 2018; Snowling et al., 2020). In contrast, ADHD affects broader executive functions, including the ability to focus, control emotions, and manage impulsive behavior (Parker et al., 2022). Both conditions can make learning challenging, but the symptoms of ADHD, such as inattentiveness, hyperactivity, and impulsivity, have a more pervasive impact on overall functioning and the ability to engage in tasks requiring sustained focus (Parker et al., 2022; Villalta-Gil et al., 2006). This overlap in symptoms can sometimes make it difficult to distinguish between the two, highlighting the need for early intervention and support.

The 2006 Participation and Activity Limitation Survey and the 2012 Canadian Survey on Disability define learning disability that includes "attention deficit disorder (ADD), attention-deficit/hyperactivity disorder (ADHD), dyslexia, and other developmental disabilities affecting scholastic skills" as a type of learning disability (D'Intino, 2017, p. 228). In contrast, the

Learning Disabilities Association of Canada (LDAC) does not "share the exact definition and makes no explicit mention of ADHD and ADD in their explanations of LD" (D'Intino, 2017, p. 228). The unified definition that includes ADHD and ADD within the concept of learning disability could significantly impact national prevalence rates. This is because individuals with ADHD and ADD often receive different treatments and services, which vary significantly from those with learning disabilities.

The Canadian federal government does not have any documentation that clearly explains the meaning of learning disabilities, nor does it outline services for individuals with learning disabilities. So, the definition of learning disabilities in Canada largely depends on the respective provincial government of their "own working definitions, key terms, and policies concerning the matter" (D'Intino, 2017a, p. 229).

In the province of Ontario, the Policy and Program Memorandum 8 (PPM8) of the Ministry of Education in 2014 revised criteria for the identification of students with LDs as a learning exceptionality and defined learning disability as neurodevelopmental disorders that persistently and significantly have an impact on the ability to learn and use academic and other skills (Ministry of Education, 2023; Ontario Psychological Association, 2018). The changes to revised criteria for identifying students with LDs as learning exceptionally in PPM8 ensued when DSM-5 was updated in 2013. It is important to note that the PPM8 does not establish specific diagnostic criteria for LDs in schools but aligns the Ministry's definition of LDs more closely with diagnostic standards (Ontario Psychological Association, 2018).

In addition, the Ontario Psychological Association (2018) clarifies that there has been an increasing difference between assessments of a learning disability based on identification criteria for students in elementary and secondary education levels and diagnostic assessment based on

the criteria set in *DSM-5*. However, at the post-secondary education level, neither an educational identification nor a *DSM* diagnosis of learning disability plays any role in granting academic accommodation. Since "access to accommodations at the post-secondary levels is reserved for individuals demonstrating a disability" (p. 6).

Statement of the Problem

Several studies have noted that an increasing percentage of students with LDs attend post-secondary institutions; however, the exact incidence figures are complex to ascertain because post-secondary institutions are not required to identify and serve these students (Furrie, 2017; NEADS, 2018; Statistics Canada, 2022, 2023). May and Stone (2010) note that the qualitative studies of adults with learning disabilities suggest that concerns about encountering prejudicial reactions influence decisions about whether to reveal their condition or advocate for themselves. They further specify that there is limited evidence regarding the specific content and accuracy of stereotypes about individuals with learning disabilities. They again specify that "the evidence about stereotypes regarding LD is both dated and largely restricted to the school-age years" (May & Stone, 2010, p. 483). Although the data are limited, the study of McGregor et al. (2016) posits that there is increasing evidence that only a minority of post-secondary students with LDs disclose their disability.

Studies show that students with LDs decide not to disclose their academic needs due to their fear of being stigmatized by others (Hansen et al., 2017; Hollins & Foley, 2013; Mullins & Preyde, 2013). They may also feel uncomfortable discussing their disabilities with their faculty (Black et al., 2015). Their hesitation to disclose their learning disabilities may stem from fear of being misunderstood or misjudged by their faculty (Hansen et al., 2017). Students with LDs sometimes think that faculty members may question the validity of their invisible disability and

their rights to individualized support for learning (Mullins & Preyde, 2013). They also perceive such a notion in the case of disability service providers, administrators, and peers without a disability. Regarding these concerns, students with LDs state that the fear of being stigmatized because of their disability is the main factor in their decision to disclose their accommodation needs to others (Black et al., 2015; Hansen et al., 2017; Hollins & Foley, 2013). For this reason, numerous challenges emerge for faculty, administrators, and service providers to recommend appropriate accommodations for students with LDs on time (Trimmis & Bessas, 2016).

In addition, students with disabilities experience a variety of negative perceptions from their non-disabled peers (Akin & Huang, 2019; Kendall, 2016). In some instances, many non-disabled peers even doubt the fairness of academic accommodations for students with disabilities (Akin & Huang, 2019). Some of them perceive students with LDs as challenging to talk to, lazy, responsible for their condition, and dangerous (Wood et al., 2014a). These perceptions create numerous challenges for students with LDs. So, for a student to accept the label of "disabled" as a double-edged sword, they must either deal with or fight against the stigma or accept the stigma attached to the label (e.g., "disabled") to access institutional support and accommodations.

Moreover, students with LDs often experience negative self-perceptions, which can have a negative impact on their academic performance because faculty, peers, and service providers often misunderstand them, viewing accommodations as a marker of weakness, privilege, or excuse (Black et al., 2015; Gow et al., 2020; Kendall, 2016; Lightfoot et al., 2018). This misperception drives students with LDs to avoid disclosing their disabilities, which further complicates their educational journey and delays receiving academic and related accommodations support. Dilemmas such as this reinforce many inherent challenges for students with LDs in participating fully in post-secondary education.

The prerequisite cognitive and academic skills required for success in higher education are similar for all students, regardless of variations in their academic preparedness (Foley, 2006; Reed et al., 2011). Students with LDs attending post-secondary level are found to express difficulties in reading, mathematics, and writing due to their learning disabilities. However, not all students with LDs experience difficulties in all three academic areas (Abreu-Ellis et al., 2009). Nonetheless, students with LDs arrive at post-secondary institutions with slightly different characteristics than their peers without learning disabilities.

Abreu-Ellis et al. (2009) note that “students with LDs are characterized as having higher levels of anxiety, taking less responsibility for their learning, and having a lesser repertoire of learning and study strategies” (p. 28). One study by Carroll and Iles (2006) compared 16 college students with dyslexia with 16 college students with no history of learning disabilities in anxiety associated with a timed reading test and found that students with dyslexia have anxiety levels well above their peers without dyslexia. Although a small amount of anxiety is a motivator to enhance a student's performance, the anxiety experienced at higher levels can become detrimental to academic performance (Abreu-Ellis et al., 2009). Reed et al. (2011) contend that the anxiety of students with LDs stems from their feelings of lower self-efficacy, perceived levels of competence, and actual achievements. So, effectively dealing with these students' anxiety will benefit academic performance and retention to a greater extent.

Students with LDs, specifically with poor reading, writing, and spelling difficulties in high school, continue to be challenged in their later educational careers (Fullarton, 2016). This is very concerning, given that higher education's information, evaluations, and learning materials are highly text-based (Hollins & Foley, 2013). Difficulties in reading emerge because higher education involves a high volume of reading materials. Students also need help to correctly

interpret the significance of text-based materials due to reading miscues, which negatively impact their academic performance.

Several studies have indicated that early identification of LDs is essential to students' success in post-secondary education. A later diagnosis causes a delay in receiving services that impact students' academic performance. For example, students require the skills necessary to decode information, remember the learning materials, and communicate these materials in an organized and coherent manner during assessment (Abreu-Ellis et al., 2009). In their study comparing the early LDs identification group and the late LDs identification group related to test-preparation and test-taking strategies, Abreu-Ellis et al. (2009) found that students who were diagnosed later would not have access to the same opportunities in the form of test preparation and test-taking strategies as their peers with a documented LDs from their high schools. Therefore, students with LDs who are diagnosed later with their learning disabilities, specifically after high school, are required to arrange an “appropriate and evidence-based assessment for their access to academic accommodations” (Gyenes & Siegel, 2014a, p. 279).

Gyenes and Siegel (2014) further note that academic accommodations for students with LDs are granted when an “acceptable” psycho-educational assessment provides a learning disabilities diagnosis, but “what “acceptable” means appears very inconsistent across settings” (p. 281). Their study further ascertained that “there is no commonly accepted and empirical procedure for the assessment of learning disabilities” (p. 281). In this respect, one study by NEADS (2018) noted:

At some institutions, an operational definition of Learning Disability is used, meaning they expect a psycho-educational report and assessment protocol to meet the LD

diagnostic criteria (this includes the *Diagnostic and Statistical Manual of Mental Disorders* or guidelines developed by their respective province). (NEADS, 2018, p. 49)

NEADS (2018) study further explains that across Canadian post-secondary institutions, “students with LDs are subjected to dissimilar diagnostic criteria, and lack of consistency creates potentially unequal opportunity to acquire accommodations for students who identify with a learning disability” (p. 48). For example, at many post-secondary institutions across Canada, learning disability diagnoses are based on some discrepancy in scores, such as the discrepancy between IQ and achievement scores and/or a discrepancy between IQ and information processing scores (Gyenes & Siegel, 2014b). The inconsistency in documentation criteria poses many challenges for students with LDs, impacting their initial enrollments, access to appropriate and consistent academic accommodations, and their entire educational journey (Gyenes & Siegel, 2014a; NEADS, 2018).

Lindsay et al. (2018) found in their study that “post-secondary accommodations provided were often inconsistent, incomplete or delivered inappropriately” (p. 546). Some other studies noted that post-secondary institutions often recommend accommodations based on the student's disability rather than understanding what students with LDs would practically need (Hollins & Foley, 2013). Recommending appropriate accommodations allows students to access learning better towards their academic success. For example, a student with a visual impairment may have little chance of understanding instruction presented in a typical manner, and a student with a reading disability may have similarly little chance of demonstrating their knowledge on a science test without having the items read to them (Lovett & Harrison, 2021). Despite these helpful features, accommodation does not directly increase students' skill levels. In contrast, effective interventions do increase skills. Therefore, as a general rule, interventions are preferred to

accommodations when both are potential responses to a student's disability-related deficits (Lovett & Harrison, 2021).

Although providing consistent and appropriate accommodation for students with disabilities is crucial, it is essential to note that student's high dependency exclusively on accommodations may lead to "negative reinforcement" (Lebowitz, 2019, p. 121). Lebowitz (2019) further notes that many students granted extended time accommodation for exams tend to use them even for assessments they can complete within the standard time limit. Lovett and Leja (2013) argue that students with and without disabilities perceive accommodations as beneficial, so regardless of whether the accommodations are needed or appropriate, the accommodations tend to reduce their discomfort.

In the case of students with LDs, they often receive instruction and complete tests under altered conditions that are mandated by formal accommodation plans of the respective institutions. Lovett and Harrison (2021) argue that on many occasions, this high accommodation rate may reflect something other than genuine student needs or effective interventions. Authors further note that "a wide variety of research suggests that accommodations are provided excessively and indiscriminately" in many higher education institutions across Canada (p. 117). As accommodations can impede skill development and provide unfair advantages, they should only be used when "(a) a student has clear disability-related deficits, (b) effective interventions are unavailable or insufficient, and (c) the accommodation does not compromise the integrity of the instruction or assessment" (Lovett & Harrison, 2021, p. 116).

Appropriate and consistent accommodation recommendations are vital for the academic success of students with disabilities in post-secondary settings. However, these accommodations, on many occasions, remain "complex, multilayered, and highly correlated to the climate and

disability environment on campus, as well as to personal factors related to motivation, which vary from student to student” (Marshak et al., 2010 p. 152). Besides, post-secondary students with disabilities must navigate a complex system to access these supports (Mullins & Preyde, 2013). It remains challenging for first-year students with LDs to navigate this complex system because individualized resources based on their needs and priorities are not immediately accessible or available in many post-secondary settings across Canada (NEADS, 2018).

Furthermore, definitions of learning disability and diagnosis criteria significantly vary across post-secondary institutions, making disability services more complex and inaccessible to many students with LDs (Waterfield & Whelan, 2017). Therefore, graduating secondary school students with LDs are beginning a journey that includes unique challenges in developing compensatory skills, maintaining motivational drive, and developing and maintaining effective social relationships (Abed & Shackelford, 2020). This means that students with LDs transitioning into post-secondary institutions from secondary levels face a multilayered challenge affecting their personal, social, and academic lives. Fullarton (2016) emphasizes that the existing understanding of these challenges faced by post-secondary students with learning disabilities is noteworthy. However, more profound insights into these experiences from the perspectives of students with LDs require a more constructive understanding.

This qualitative research, grounded in constructivism, aims to examine the students' experiences of challenges from their perspectives. It is important to note that carefully considering the perspectives of students with LDs can reveal insights into their unique challenges, fostering adapted support strategies. It could improve policies and practices addressing the personal, social, and academic needs of students with LDs, accelerating their academic progress toward success. This approach would reduce their transition challenges,

enhance their engagement in education and learning, and increase success rates in post-secondary education.

Apart from these challenges, the literature has referred to many factors, such as family and peer support, faculty members' positive attributes, and appropriate accommodation that may positively contribute to the success of post-secondary students with LDs (Banks, 2014; Erten, 2011; Fullarton, 2016; Gow et al., 2020). These factors are not confined to the services provided by the educational institutions, but other critical external factors are also found effective for post-secondary students with LDs. Notably, students with LD self-determination, perseverance, and a desire for a better future are found to be most critical for success (Zheng et al., 2014).

Critical Factors Cited in Literature for Student's Success

Navigating academic resources and access to accommodations for students with LDs presents challenges, yet acknowledging the key factors that facilitate success is crucial. Understanding and addressing these factors empowers post-secondary students with LDs to overcome challenges and thrive academically.

One crucial factor is the role of faculty members in addressing the specific needs of students with LDs (Erten, 2011). As highlighted by Trimmis and Bessas (2016), post-secondary institutions need to create opportunities to develop faculty awareness of these students' unique needs and priorities. This includes providing accommodation, such as extended time on exams and alternate exam formats, which significantly address their learning needs (Banks, 2014; Duquette, 2016; Erten, 2011). Moreover, faculty members may adopt a student-centered approach, being more sensitive toward disability issues and dealing with disabled students' learning needs from their perspectives (Zeng et al., 2018).

Students with LDs themselves play a pivotal role in their academic success. Research shows that having a strong drive to succeed, a positive attitude toward learning, and a strong belief in their abilities are crucial to overcoming the challenges of students with LDs (Lightfoot et al., 2018). This aligns with the findings of Gow et al. (2020), who emphasize the importance of students' self-reliance, self-determination, knowledge of their disability, and pertinent needs as critical factors to their academic success. Some other studies have also pointed out the significance of positive attributes of students with LDs, such as strong determination to succeed, perseverance, and a desire for a better future, as integral to their academic successes (Gow et al., 2020; Zheng et al., 2014).

The support system for students with LDs, particularly their families and peers, is vital to their academic success. For example, families have been identified as a significant determinant of students' positive academic identity and serve as many success factors (Gow et al., 2020). While family support is beneficial, lacking it only sometimes results in decreased functioning (Fullarton, 2016). In some cases, students may feel more comfortable seeking support from their peer group, as they may express discomfort in discussing their needs with family and even with faculty members (Duquette, 2016; Fullarton, 2016; Quinlan et al., 2012).

Providing academic accommodation is critical to supporting students with LDs towards success. Several studies argue that post-secondary institutions should extend accommodations when students self-identify their disabilities (Couzens et al., 2015a; Ko & Petty, 2022; May & Stone, 2010). Besides, promoting the student-centered approach within post-secondary environments, which follows an individualized education plan designed to overcome academic barriers, has proven practical and effective for these students (Baeten et al., 2016; Zeng et al., 2018). Notably, the accommodation should be designed for each student's specific challenges, as

the needs of students with different types of learning disabilities may vary considerably.

Specifically, when students with LDs experience comorbid conditions rather than their learning disabilities.

Arguably, a combination of factors influences the success of post-secondary students with LDs. These include the support and awareness of faculty members towards the unique challenges of students with LDs, the essential attributes and determination of the students with LDs themselves, the support from their families and peers, and the provision of adequate academic accommodations. While recognizing and addressing these factors, post-secondary education institutions can create an inclusive and empowering environment that promotes the academic success of students with LDs.

Significance of the Study

Post-secondary education in Canada has significantly transformed in the last 30 years, with a considerable increase in academic access for students with disabilities, including those with learning disabilities (Bizier et al., 2014; Furrie, 2017; Hadley, 2016; NEADS, 2018). Undeniably, this positive transformation creates extended higher education opportunities for students with disabilities, particularly for students with LDs. Nevertheless, students with LDs still experience numerous challenges related to educational interventions or academic accommodations necessary to continue their studies toward success at post-secondary institutions (Hansen & Dawson, 2020).

This study aims to illuminate the challenges faced by a sample of students with LDs in post-secondary Ontarian institutions. It explores a number of significant questions that have broader implications for higher education. The research questions outlined in this study play a crucial role in shaping the scope and depth of the investigation.

The first research question aims to explore the nature of challenges faced by students with LDs during their post-secondary education. It investigates a comprehensive examination of the multiple areas where these students face challenges, including academic performance, interactions with peers, families, faculty members, and disability service providers, and navigating academic and related accommodation services at post-secondary institutions (Black et al., 2015; Hollins & Foley, 2013; McGregor et al., 2016). Through investigating the nature of these challenges, the study seeks to identify insights that can inform educators, policymakers, and institutions about the specific challenges faced by students with LDs to academic success. Addressing these challenges would be crucial in developing effective educational interventions and academic accommodations that promote a more favorable post-secondary education environment for all.

The second research question explores the subjective experiences of post-secondary students with LDs. It recognizes the importance of understanding the unique perspectives and interpretations of those challenges directly affected by students with LDs. The question seeks to uncover in-depth insights into their challenges, successes, and coping mechanisms. This qualitative dimension contributes to an innate understanding of the meaning of these challenges from the perspectives of students with LDs.

The third research question focuses on identifying factors for possible solutions and interventions that may impact educational success for students with LDs. This question aligns with the broader aim of the study to identify challenges and propose strategies promoting a supportive and congenial post-secondary educational environment that advances students with LDs toward success. By exploring the factors that students with LDs identify as instrumental to

their success, this study aims to inform the academic accommodations and related support services best suited for their continued success in post-secondary education.

The significance of this research extends beyond the context of post-secondary education for students with LDs. Highlighting the challenges faced by a sample of students with LDs, this study supports a more comprehensive understanding of the diverse learning needs of this population. This understanding is crucial for dismantling challenges and promoting an educational system that accepts all students' diverse strengths and abilities. As institutions aim to create inclusive environments, evidence-based insights from this study would inform the development of policies that address the specific needs of students with LDs. So, policymakers can leverage the findings to implement targeted interventions, allocate resources effectively, and shape a more equitable post-secondary education setting. Besides, educators can enhance their teaching methods, assessments, and support systems by understanding the challenges faced by students with LDs. They can learn from the insights provided by this study and incorporate them into professional development programs, which will equip educators with the knowledge required to create inclusive and supportive learning environments.

The research contributes to the academic discourse on learning disabilities, enriching the existing knowledge with context-specific insights from post-secondary education in Canada. This academic contribution has the potential to encourage further research, creating a positive effect that heightens our collective understanding of learning disabilities and their implications for education.

The study is focused on answering research inquiries and shedding light on the challenges faced by students with LDs, with a particular emphasis on their lived experiences. Additionally, the study reveals factors associated with educational interventions and

accommodations that may facilitate continued success for post-secondary students with LDs. The broad implication of this research goes beyond academia. It can benefit policymakers, educators, and society by promoting a more inclusive and equitable education for all students, including those with learning disabilities.

Research Gaps

Students with LDs attending post-secondary Canadian institutions continue to experience challenges in learning (Arscott, 2013; Grimes et al., 2019; Gyenes & Siegel, 2014a; Madriaga et al., 2010; Van Hees et al., 2015). Several authors have explained these challenges in greater detail. Black et al. (2015) note that students with LDs often do not receive learning materials in an accessible format, and they also do not receive accommodations that enable them "to demonstrate what they know" (p. 2). The authors further note that there are also "other types of barriers unintentionally created by post-secondary institutions, such as academic accommodations that are inappropriate or delays in creating alternate format textbooks" (p. 2).

Studies show that existing literature has shed light on the most common challenges faced by this population, deficiencies in evidence that comprehensively understanding the nature and meaning of these challenges from the perspectives of the students with LDs themselves is limited (Brewer & Movahedazarhouli, 2019; Cawthon & Cole, 2010; Erten, 2011; Lightfoot et al., 2018; M. J. Reed et al., 2006). This is the area in which this study focuses.

Notably, many of the challenges faced by post-secondary students with LDs have been studied employing quantitative research methods; though some studies employ qualitative methods, the data and information of these studies are mostly based on secondary sources (De Los Santos et al., 2019; Hansen & Dawson, 2020). The use of qualitative research to make sense of socially constructed phenomena is surfaced in many literatures; the qualitative research within

constructivism that encourages contextual dialogue between researchers and participants, and in the process, multiple realities that emerge from interactions with participants are limited (McInnes et al., 2017). This study, therefore, seeks to bridge this research gap by employing qualitative research grounded within a constructivist paradigm to understand the phenomenon meaningfully within the post-secondary setting.

While several recent research studies have focused on various challenges faced by students with LDs in post-secondary education; a gap exists in exploring the relationship between the academic, social, and emotional challenges of this population (Carroll & Iles, 2006; Narváez-Olmedo et al., 2021). Although current literature provides a broad overview of these challenges, there is a critical need for a more detailed examination of how these challenges manifest in different academic settings (e.g., college and university), social contexts, and administrative processes. There is also a need for a more in-depth analysis that examines the unique aspects of these challenges, including considering the comorbid conditions of students with LDs in many cases and their impact on academic performance towards success.

Additionally, the existing literature prioritizes quantitative data over qualitative insights, leaving gaps in understanding the subjective experiences of students with LDs (Lipka et al., 2019). So, a comprehensive exploration of the lived experiences of students with LDs, incorporating tools of qualitative methodologies, such as in-depth interviews, focus group discussions, observations, open-ended surveys, and questionnaires, can offer a more holistic understanding of the challenges faced by students with LDs.

The recent body of literature often adopts an external perspective, depending on researchers' interpretations of the phenomenon (e.g., challenges of students with LDs) rather than directly engaging with the narratives of students with LDs. So, a significant research gap exists

in the absence of extensive qualitative investigations that provide a platform for students with LDs to describe their experiences, perceptions, and factors that may impact their academic success. This gap limits the richness of individual narratives, hindering the appropriate recommendations of accommodations and related support services that align with the unique needs of post-secondary students with LDs. This study, based on qualitative research methods involving a series of interviews including in-depth interviews of research participants, can bridge this gap and empower students to contribute actively to the meaning of their challenges. Because understanding the perspectives of students with LDs on their challenges from their perspectives is crucial for recommending academic and related support services that resonate with their unique academic needs.

Although several literature acknowledge the importance of academic accommodations, a research gap exists in examining the factors influencing the effectiveness of these accommodations from the perspective of students with LDs (Black et al., 2015; McGregor et al., 2016; McKenzie, 2015). More exploration of the preferences of students with LDs is needed regarding the types of accommodations they find most beneficial, the challenges they face in accessing these accommodations, and their perceived impact on their academic success.

The existing literature on the experiences of post-secondary students with LDs reveals several deficiencies and gaps that hinder a comprehensive understanding of their challenges. The need for systematic analysis of a large sample of students with LDs and their experiences in higher education poses a significant deficiency in the literature. Because understanding the meaning of their challenges requires a comprehensive and in-depth investigation, which has yet to be undertaken on a broad scale. This study aims to fill this critical gap in the current literature by providing a detailed examination of the challenges faced by students with LDs in Canadian

post-secondary institutions. In doing so, this study prioritizes qualitative insights and actively involves students in the research process. This study seeks to understand the nature and meaning of challenges faced by post-secondary students with LDs from their perspectives and facilitate identifying possible factors that may positively impact the academic success of students with LDs.

Theoretical Lenses

This study is guided by the Social Model of Disability in understanding the challenges faced by students with LDs in post-secondary education. The Social Model of Disability posits that individuals with disabilities conduct their lives within a complex social structure characterized by barriers and opportunities created by systems, resources, and resilience (Traci et al., 2025). For example, inaccessible physical spaces, discriminatory attitudes, and lack of policy support restrict individuals with disabilities from reaching their full potential. The goal of this model of disability is to remove challenges created by social and cultural institutions. The relevance of inclusivity in higher education institutions is tied to the goal of this model to address issues of marginalization, discrimination, and oppression, which are created by and exist in social and cultural institutions. Creating a culture in which challenges to participation are perceived as a social and cultural responsibility is essential to developing an inclusive learning space.

The three theoretical models — Nora and colleagues' Student Engagement Model, Tinto's Student Integration Model and Astin's Inputs-Environments-Outcomes (I-E-O) College Impact Model — are the second theoretical lens in this study. These three models collectively theorize that institutions have the responsibility to support student success, particularly the success of the most marginalized groups, by providing adequate services and support.

Importantly, these three models collectively emphasize the shared responsibility of institutions, including educators, service providers, and policymakers, to actively support students' successes, particularly students experiencing learning challenges.

Integrating the Social Model of Disability with these three models, the study constructs a collaborative framework that is crucial in understanding the experiences of students with LDs in post-secondary education institutions. This framework explores how intentional institutional supports, such as accessible learning materials, inclusive teaching practices, and dedicated support services, can help these students navigate the academic environment, develop a sense of belonging, and achieve academic success.

The theories and models used in this study collectively highlight the potential for success of students with LDs in higher education. They underscore the importance of institutional responsibility and support, arguing that with adequate support and intentional measures, students with LDs can overcome socially constructed barriers and achieve their full potential in higher education. The following chapter (e.g., Chapter 2) will discuss these theories and models further in detail.

Research Questions

This study aims to understand how students with LDs make sense of their challenges and successes in post-secondary Ontarian institutions. In understanding the extended meaning of students with LDs experiences at a post-secondary institution more in-depth, the study sets a number of secondary research questions.

This study also finds it essential to comprehend faculty members' perspectives on the challenges faced by students with LDs and the strategies they use to overcome them. As faculty members play a pivotal role in shaping inclusive educational practices, their experiences and

observations in this study could provide valuable insights into students' challenges and practical approaches to overcoming them. The study includes a question to understand the extended meaning of faculty members' perspectives.

The study will look at the following questions:

1. What is the nature of the challenges students with LDs face during their post-secondary educational experiences?
2. What are students with LDs' understandings of their post-secondary educational challenges from their perspectives?
3. What factors are identified by students with LDs for their educational interventions or related academic accommodations that may positively impact their continued success in post-secondary education?
4. What challenges are identified by faculty members when supporting students with LDs, and what strategies or factors do they find effective in addressing these challenges?

Definitions of Terms

Several critical terms referenced throughout this dissertation are defined for consistency and clarification.

Disability

Disability is a multifaceted phenomenon that arises from the interplay between an individual's physical and mental characteristics and the social context in which they live (Human Resources and Skills Development Canada, 2013). From the social model standpoint, disability is viewed as an individual's identity, similar to race, ethnicity, or gender. This model suggests that disability arises from a mismatch between the individual and their environment, both

physical and social. The environment creates barriers and obstacles, not the disability itself. The solution is to change the environment and societal attitudes rather than individuals with disabilities (Olkin, 2002).

Learning Disabilities

Learning disabilities refer to a number of disorders that may affect the acquisition, organization, retention, understanding, or use of verbal or nonverbal information. These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking and/or reasoning. As such, learning disabilities are distinct from global intellectual deficiency (LDAC, 2015b).

Dyslexia

Dyslexia is a life-long specific learning disability that is neurobiological in origin, resulting in an unexpected difficulty in reading in those with average to above average intelligence (Hulme & Snowling, 2016).

Dysgraphia

Dysgraphia is a disorder of writing ability at any stage, including problems with letter formation/legibility, letter spacing, spelling, fine motor coordination, writing rate, grammar, and composition (George, 2020).

Dyscalculia

Dyscalculia comprises all the difficulties related to acquiring the concept of numbers, arithmetic calculation, and mathematical reasoning (Pirani, 2013).

Attention Deficit Hyperactive Disorder (ADHD)

According to *DSM-5*, ADHD is a persistent pattern of inattention and hyperactivity-impulsivity that significantly affects social, academic, or occupational functioning in two or

more settings, such as home or school (Parker et al., 2022). The condition is primarily characterized by two core symptoms – inattention, for example, difficulty focusing on a task, and hyperactivity-impulsivity, for example, restlessness and inability to wait (Parker et al., 2022; Villalta-Gil et al., 2006).

Central Auditory Processing Disorder (CAPD)

CAPD is a situation that affects how an individual hears the sounds around them. Individuals who experience CAPD find it difficult to understand others, especially in noisy situations, even when a hearing test is standard (Caryn & Margaret, 2021). LDAC (2024) notes that individuals experiencing CAPD encounter difficulties in interpreting auditory information, language development, reading, and anticipating how a speaker will end a sentence. Furthermore, CAPD can even co-occur with other conditions, such as ADHD, and cause challenges with learning, leading individuals to stress and barriers to functioning at school, work, and home. Although CAPD is not very well known, many students with CAPD struggle silently with it.

Non-Verbal Learning Disability (NLVD)

Non-Verbal Learning Disability (NLVD) refers to individuals with average or above-average intelligence who have specific difficulties in non-verbal skills. Individuals with NVLD may struggle with organization, attention, executive functioning, nonverbal communication, and motor skills, often impacting their academic and professional performance (LDAC, 2014).

Learning Strategist

A learning strategist is an educational professional who utilizes diverse perspectives, evidence-based practices, and inclusive strategies to support students' learning and address the unique challenges they may face (NEADS, 2018).

Assistive Technology

Services and devices that enable individuals with disabilities to accomplish daily living tasks, assist them in communication, education, work, or recreation activities, and ultimately help them achieve greater independence and enhance their quality of life (McNicholl et al., 2021).

Chapter 2: Literature Review

Chapter 1 provided background information on the study, introduced the research problem, provided the rationale and significance of the study, and provided a critical analysis of LDAC's (2015) definition of learning disability. The importance of having appropriate academic and related accommodations support from educators, service providers, peers, and families as a foundation to succeed in post-secondary education. The study further expands on the literature presented in Chapter 1 to provide a comprehensive and detailed summary of challenges faced by post-secondary students with LDs, including several supportive factors that support their academic success. The goal for Chapter 2 is twofold: first, to expand on the theoretical lens introduced in Chapter 1 to contextualize and position the study; second, to provide the reader with a rich context that will engage and interest them in understanding the experiences of academic and related challenges of students with LDs in higher education institutions.

Chapter 2 begins by providing the reader with the meaning of learning and learning disabilities in the Canadian context, including the history of learning disabilities, current use of the term "learning disabilities," provincial and territorial initiatives, and diagnostic criteria for learning disabilities. Next, the study analyzes literature that offers a comprehensive overview of the challenges and barriers of students with LDs in higher education. Finally, the study examines literature that explores the supportive factors, for example, family and peer support, positive perspectives of faculty, service providers, and appropriate academic and related accommodations, crucial for the success of students with LDs in higher education institutions.

Theoretical Lens

Higher education institutions are critical in influencing the learning experiences of students and their success in education. In the last few decades, scholars worldwide, specifically

in Western developed countries, have developed many theories and models to explore how educational institutions influence the learning of students. In this respect, the Social Model of Disability, including theoretical models — Nora and colleagues' Student Engagement Model, Tinto's Student Integration Model, and Astin's Inputs-Environments-Outcomes (I-E-O) College Impact Model — is crucial. These theories and models speculate that students' academic and social integration into the campus community is significant to continue their higher education toward academic success (Astin, 1999; Chrysikos et al., 2017; Hosking, 2008; York et al., 2015).

Social Model of Disability

The Social Model of Disability highlights the influence of social, cultural, and environmental factors on disability. The goal of the Social Model of Disability is to empower people with disabilities and promote a more accessible society by eliminating systematic barriers, for example, inaccessible infrastructure, discriminatory attitudes, and the absence of policies and support systems favorable for individuals with disabilities (Traci et al., 2025).

Disability has been historically defined through a medical lens, which speculates that disability is a personal limitation (Brinkman et al., 2023). As such, disability is often defined as a pathological construct that ignores the socially constructed barriers that hinder accessible environments for individuals with disabilities (Oliver, 2013). Thus, the limitations for individuals with disabilities stem from their inability to integrate fully into the physically, politically, and socially constructed environments (Oliver, 2013). The Social Model of Disability challenges the pathological approach to understanding disability, positioning disability not as an individual limitation but as a limitation of the social environment (Oliver, 2013).

Oliver (2013) states that what makes an impairment disabling to an individual is society's inability to accommodate and support individuals with varying abilities. Furthermore, the authors

refer to this approach as a social model of disability and extend the notion that disability is an interrelated relationship between the individual's response to the impairment affecting them and the response of social constructs to support and accommodate their varying abilities.

In their most authentic state, learning disabilities are increasingly seen as social and political issues. Because the Social Model of Disability opposes medical and pathological perspectives, shifting the focus from individual limitations to the societal and environmental factors that create barriers for individuals with disabilities (McKenzie, 2015). As there are increasing numbers of learners with disabilities entering post-secondary education institutions, this goal is relevant for higher education institutions. For this reason, this study employs the fundamental tenets of Social Model of Disability, which asserts that disability is not an individual's limitation but a societal construct and that the social disadvantage experienced by individuals with disabilities is a result of the social environment's failure to adequately respond to the diversity presented by disability (Oliver, 2013; Petty et al., 2012). This perspective serves as the lens for this study as it delves into the critical role of institutions in supporting students with learning disabilities in higher education institutions.

In the next section, the study explores three theoretical models that underscore institutional responsibility as a means to support student success. These models exemplify the position of the Social Model of Disability that facilitating students' success is a shared responsibility between the individual and the institutions, particularly those of underrepresented groups.

Nora and Colleagues' Student Engagement Model

Nora's student engagement model encompasses five main domains influencing student persistence: pre-college and pull factors, sense of purpose and institutional allegiance, academic

and social experience, cognitive and non-cognitive outcomes, and goal determination/institutional allegiance (Nora et al., 2011).

Nora and colleagues developed this model to understand the persistence and retention of Latino/students, an underrepresented group in post-secondary education, particularly in the U.S. (Nora et al., 2011). Though this model was designed with a specific group in mind, it provides a lens to understand other minority groups in post-secondary education as it recognizes that institutional support is essential to the persistence of such groups. This study's focus on this model is significant as it highlights the crucial role that various institutional actors and programs play in shaping students' academic and social experiences. By focusing on these factors, the model highlights the importance of institutional support in promoting student success and retention.

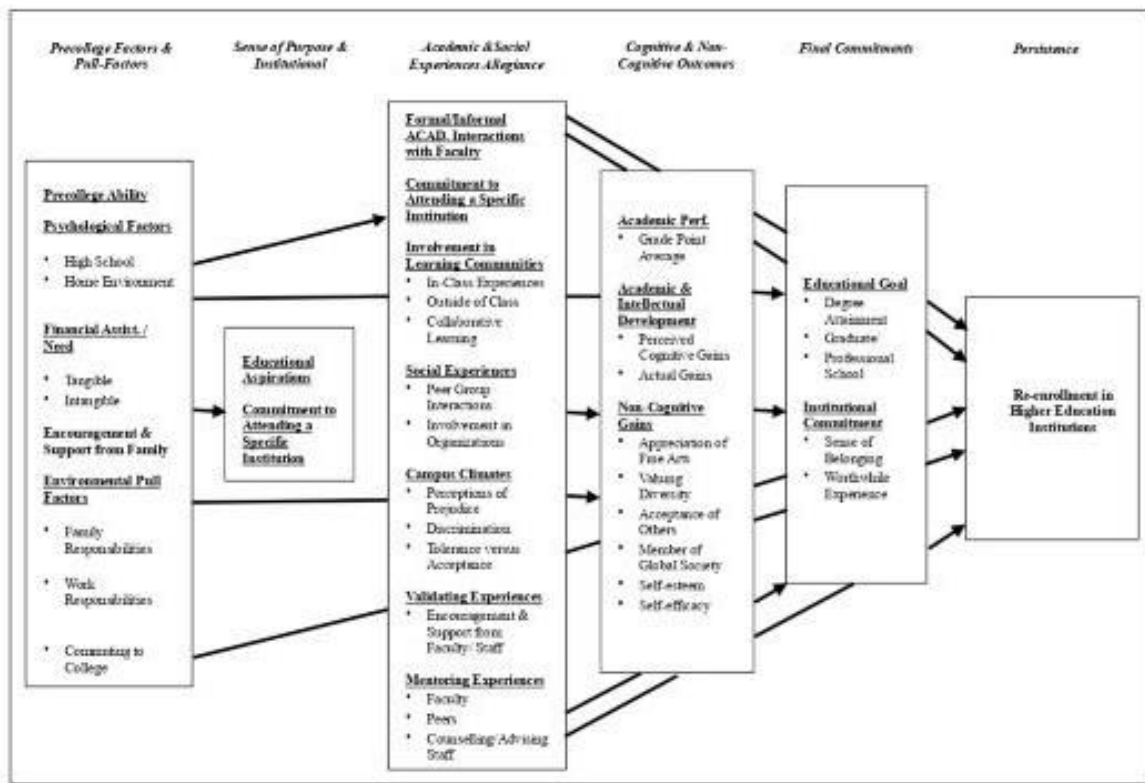
Figure 1 illustrates Nora's student engagement model, which is provided as a visual aid to guide the reader. Specifically, the third box of Figure 1 represents students' academic and social experiences and how these connect to cognitive and non-cognitive outcomes related to educational goals and persistence. Notably, institutional supports and mechanisms influence academic and social experiences in five categories: formal and informal academic interactions with faculty, involvement in learning communities, social experiences, campus climate, validating student experiences, and providing mentoring opportunities to students (Nora et al., 2011).

Within each category, the institution has some control; institutions can promote and support these categories by developing programs and services that influence academic and social experiences in meaningful ways. Ingraham et al. (2018) indicate that several institutions have recognized that faculty and student interactions are essential for student success and thus have

developed research opportunities for graduate and undergraduate programs where students work with faculty gain research experiences. Another example is the development of peer mentorship programs to promote peer interactions, which have been associated with a sense of belonging (Tasselli & Addabbo, 2023).

Figure 1

Nora, A (2011). Student Engagement Model



Note. Adapted from Nora, Crisp, and Matthews (2011).

Within each of the categories represented in this model, institutions can make intentional efforts to support students' academic and social experiences. Because academic and social experiences are critically fastened between pre-collegiate factors, sense of purpose, cognitive and non-cognitive outcomes, and goal determination (Nora et al., 2011). For this reason, the work of educators, researchers, and policymakers is integral to these efforts. While pre-collegiate

characteristics are expected to remain relatively constant over the student's life, academic and social experiences can be influenced by institutional efforts, which have a multi-layer effect on cognitive and non-cognitive outcomes, goal determination, and persistence (Nora et al., 2011).

Tinto's Student Integration Model

According to Chrysikos et al. (2017), socially integrated students into the campus community are more likely to remain enrolled in their studies and achieve academic success. This model emphasizes the importance of creating a sense of belonging and community for students in post-secondary institutions. Tinto's (1993) student integration model is contemporary education's most cited retention model. The model has suggested three conditions that are crucial in order to achieve student persistence in academic institutions and explored these conditions in the following:

The first condition is that students should have access to retention programs that aim to support them rather than the institution. The second condition is that retention programs need to focus not only on a particular student population, such as low-income or minority students, but instead focus on all students. The third condition is retention programming. A successful retention program must offer a degree of integration for students in both social and academic communities. (Chrysikos et al., 2017, p. 3)

The argument of Tinto's (1993) student integration model focuses on social and academic integration concerning students' commitment to academic institutions and outside efforts. It is worth noting that students bring many academic and social skills and abilities before they transition from high school to post-secondary institutions that lead to a set of commitments, goals, and intentions from and to institutions (Chrysikos et al., 2017). This means that students are aware of their intention to what they are supposed to achieve from higher education

institutions before their enrollment. So, there is a massive need for higher education institutions to set out their students' expectations, which in turn aids students' success.

In analyzing Tinto's (1993) student integration model, Chrysikos et al. (2017) also stipulate that students who become a part of their campus academically and socially are more likely to stay in their study program. They also contend that a significant part of the student's connection to their campus is through engagement in learning communities, as learning communities represent groups of students who may take standard courses together, share common academic interests, or live in the same residence. Shapiro (1999) argues that fostering learning communities is crucial in supporting increased student learning and retention.

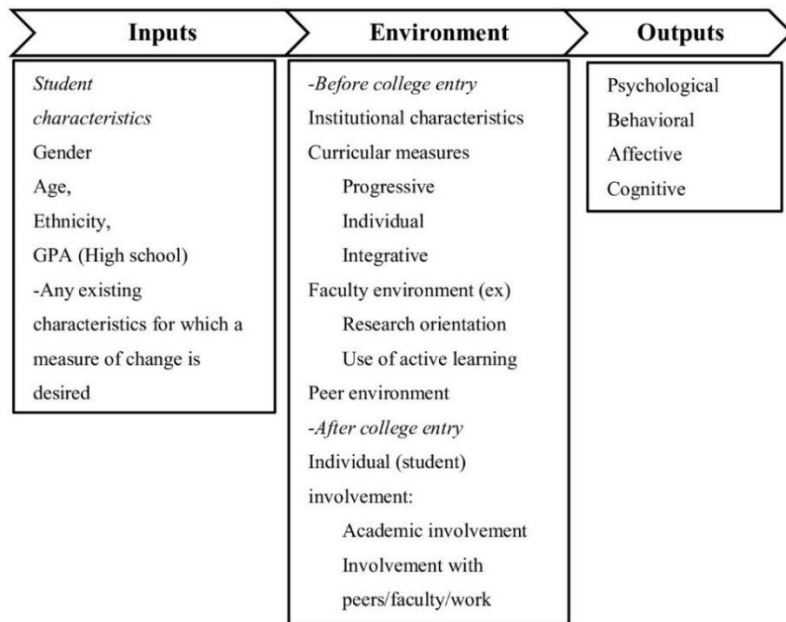
Astin's Inputs-Environments-Outcomes (I-E-O) College Impact Model

Student development theorists have focused on determining what students require to succeed in the higher education environment. Several student development theorists argued that students learn by becoming involved in every aspect of the campus community based on their interests and capacities. For example, students who experience difficulties in mathematics may not compete in the "Math Olympiad" with their peers. Similarly, students experiencing difficulties in written expression only compete if there is a contest in the written expression on campus. So, challenges remain for students with academic difficulties to "learn by becoming involved" (Astin, 1999). Astin (1999) proposed the theory of Involvement with five basic postulates and posited that Involvement includes dedicating both physical and mental energy to various activities. It exists on a continuum, meaning that students display varying levels of engagement in any given activity. This engagement can be measured both quantitatively and qualitatively. The extent of student learning and personal growth in an educational program is directly linked to how much and how well they are involved. Moreover, the link between

Involvement and educational effectiveness is crucial, as it determines the impact of educational policies or practices. (Astin, 1999, p. 519).

Figure 2

Astin’s Inputs-Environments-Outcomes (I-E-O) College Impact Model



Note. Adapted from Popkess, A. (2010).

It is worth noting that the theory of student involvement is qualitatively different from other developmental theories that speak for higher education. Although prevalent development theories focus primarily on the developmental outcomes of students (e.g., the *what* of student development), the theory of student involvement is concerned much with the behavioral mechanisms or processes that facilitate student development (e.g., the *how* of student development) (Astin, 1985, 1999). For example, different support services in higher education institutions, such as disability service professionals, administrators, counselors, and volunteers, play a crucial role in achieving maximum students with disabilities involved in their academic pursuits. These service professionals are in a unique position to monitor the involvement of

students with disabilities in their educational process, frequently work with them on a one-to-one basis, and increase students with disabilities' involvement to the greatest extent possible.

One of the challenges confronting the provision of support services and/or personnel for students with disabilities is finding appropriate academic and related accommodations that stimulate them to get more involved in the post-secondary education experience. This consists of taking courses in adaptive mode, changing residential accommodations, participating in extracurricular activities, and finding new peer groups. In this respect, the theory of involvement outlines a useful frame of reference for supporting students with academic difficulties.

The post-secondary academic support department can help these students by identifying the principal activities in which the student is currently involved, including "the objects of cathexis," and then determine if "the academic difficulties stem from competing involvements, poor study habits, lack of motivation or some combination of these factors (Astin, 1999, p. 527). Although there are some limitations that could be improved in terms of clarity, specificity, and practicality, the theory of student involvement offers a cohesive framework that directs the efforts of various institutional support services toward a shared goal.

The participation of students could aid researchers in comprehending the variables that impact student outcomes in higher education, including retention and attrition. Tinto's *Student Integration Model* suggests that student attrition is due to students' inadequate social and academic integration into the institutional culture or the matching between the two (Peng & Zhang, 2022; Tinto, 1975). Therefore, additional factors like the institutional environments and the extent of student involvement significantly shape the student's learning experience and development in higher education institutions.

In examining the significance of institutional factors for students' learning and development, Inkelas et al. (2006) referred to Astin's (1993) *Inputs-Environments-Outcomes (I-E-O)* college impact model and noted:

In Astin's model, "outcomes," or student characteristics after exposure to college, are thought to be influenced by both "inputs," or student characteristics before and at the time of entry to college, and "environments," or various programs, policies, faculty, peers, and educational experiences that students interact with while in college. (Inkelas et al., 2006, p. 41)

The author suggests that these three elements of Astin's (1993) I-E-O framework are significant for understanding students' academic learning and related development. It is well-known that the learning environment plays a critical role in producing the best quality out of the students. Folami et al. (2021) note that learning does not exist in a vacuum, meaning that students' intellectual development can only be achieved with an established relationship between where students are learning, learners, educators, and stakeholders. In line with this notion, several other studies have shown that students learning, and their intellectual development are influenced by a variety of academic factors, including the nature of the coursework, students' effort in studying, out-of-class involvement, and faculty and peers interactions (Inkelas et al., 2006; Pascarella, 2005).

The importance of learning environments in higher education continues to gain momentum. However, strategies to support a more holistic student learning experience through more effective use of learning environments are yet to be developed. According to Closs et al. (2022), the learning environment is considered the "social, physical, psychological, and pedagogical contexts in which learning occurs, and which affect student achievement and

attitudes" and which allow an organic understanding of the student's learning experience in higher education (p. 272). The author further argues that elements such as financial resources, structure, people, and time are associated with organizational and government rules, processes, or priorities that might affect educators and students in the learning environments; their physical, pedagogical, and psychosocial dimensions play a central role in the learning process.

Ellis and Goodyear (2018) note that physical spaces facilitate different pedagogies and influence the psychosocial learning environment; flexible spaces, such as tutorial classrooms, support students and teachers in agentive and active behaviors, cooperative work, and knowledge creation. The student-centered physical and pedagogical learning environment dimensions stimulate student cohesiveness (Baeten et al., 2016; Stefanou et al., 2013) and satisfaction elements from the psychosocial dimension, which all influenced the students' learning experience (Dorman, 2014; Skordi & Fraser, 2019). Besides pedagogical strategies, the organization of topics included in a subject or course, the contents, time management, assignment planning, and assessment rubrics by higher education institutions influence the psychosocial dimension of the student's learning environment.

The outcomes for the psychosocial dimension of their study examining the influence of learning environments on students' learning experience, Closs et al. (2022) note that there is an interrelated influence of learning environment dimensions on one other. For example, positive faculty attributes stimulate students to participate in class and interfere with the pedagogical dimension. Authors like Chambliss (2014) and Childers et al. (2014) examined how physical, pedagogical, and psychological learning environments influence students' learning experiences in higher education institutions. Their studies conclude that physical, pedagogical, and psychological elements impact students' learning experiences. More specifically, they argued that

the importance of psychosocial learning environments, such as sharing emotions between students and teachers and supportive relationships, especially educators' influence, help create positive learning environments that promote student success.

Connection Between the Social Model of Disability and Institutional Models

The Social Model of Disability including the three institutional models - Nora and colleagues' Student Engagement Model, Tinto's Student Integration Model, and Astin's Inputs-Environments-Outcomes (I-E-O) College Impact Model - outlined above grounded this research study. The Social Model of disability provides foundation that disability is not the limitation of an individual, but a limitation posed by structural and social barriers. This concept institutes these three institutional models, emphasizing how higher education institutions support students, especially those with varying abilities.

Additionally, the Social Model of Disability asserts that society and its institutions have a responsibility to accommodate students with varying abilities in order for everyone to have equal opportunities to succeed. These three institutional models influence this notion in higher education institutions and highlight how physical, pedagogical, and psychological factors influence students' academic success and personal growth. These models also demonstrate that students' experiences are shaped by their surroundings and accelerate persistence with engagement and integration. Together, these models provide a comprehensive view of how various environmental dimensions impact students' learning and development. Therefore, the Social Model of Disability along with these three institutional models provide the current study with a foundation to understand the essence of challenges faced by students with LDs and factors that contribute towards their success.

Learning Disabilities in the Canadian Context

The term "learning disability" (LD) in the Canadian context is challenging to understand because differences in the meaning of learning disability are widespread across the country. The definition of learning disabilities in Canada largely depends on geographic location, given that provincial governments all have their working definitions, key terms, and policies concerning the matter (D'Intino, 2017b; Fiedorowicz et al., 2015). However, the most widely accepted definition of learning disabilities comes from the Learning Disabilities Association of Canada (LDAC), which was established in 2015 to address the unique needs of individuals with learning disabilities appropriately.

The Learning Disabilities Association of Canada (LDAC) states learning disabilities as limitations in one or more processes related to perceiving, thinking, remembering, or learning (Fiedorowicz et al., 2015; LDAC, 2015). These processes are diverse and include, but are not limited to, language processing, phonological processing, visual-spatial processing, processing speed, memory and attention, and executive functions (e.g., planning and decision-making) (Waterfield, 2019). Several institutions, specifically educational institutions, medical institutions, workplace institutions, and legal institutions, have greatly accepted this definition (Waterfield, 2019). Nonetheless, scholars within the field of critical disability studies raise many concerns and argue that definitions of disability cannot be fully understood without understanding the socio-political and cultural environment in which understandings of disability emerged (Waterfield, 2019).

Canada has ten different provinces and three territories, each with their own education system, and their specific multicultural, linguistic, and socio-economic conditions also widely differ from one province or territory to the next. For example, the cultural environment in the

northern territory differs from many other provinces throughout Canada. There are three (3) distinct peoples – *First Nations, Inuit, and Metis* – with unique histories, languages, cultural practices, and spiritual beliefs. According to Statistics Canada (2021), more than 1.8 million people in Canada identify as Indigenous, which represents five percent (5%) of Canada’s total population. In addition, funding allocation differs across provinces and territories, resulting in diverse program and service provision approaches for individuals with disabilities.

In Canada specifically, education is governed at a provincial level, resulting in different approaches to and ‘treatments’ for individuals with learning disabilities across provinces (D’Intino, 2017b). D’Intino (2017) further notes that “the variability among provinces is so much that some provinces do not apply the term “learning disability, but instead, use terms such as students who are at-risk, students with exceptionalities, or those with academic difficulties” (p. 229).

As the definition of learning disability is at variance, this study adopts the Official Definition of Learning Disability proposed by the Learning Disabilities Association of Canada (LDAC) since LDAC's definition considers many critical factors in defining learning disabilities. Besides, LDAC's is the most widely accepted definition of learning disability, specifying that learning disabilities are lifelong, neurobiological, or injury-related brain impairments that affect one or more processes related to learning (Fiedorowicz et al., 2015; LDAC, 2015b).

History and Current Use of the Term “Learning Disabilities”

Learning disabilities have been studied since the late 1800s when developmental dyslexia was first described “in works like Morgan 1896 or Hinschelwood 1895, which referred to as word blindness” (Lenhard & Lenhard, 2013, p. 1). The term “learning disabilities” and related difficulties were also discussed in the early 1800s. A German physician, Franz Joseph Gall,

explored the relationship between brain injury and mental impairment in 1802 and the effect of brain damage on what today is called Broca's aphasia (Hallahan & Mercer, 2001). Broca's aphasia is named after the French scientist Paul Broca in 1861, who first related a set of deficits associated with this type of aphasia to localized brain damage (Lazar & Mohr, 2011). Individuals with this type of aphasia may be able to read, but they may have difficulties understanding complex sentences with more grammatical constructs and other learning difficulties.

Throughout human history, for example, the ability to read and comprehend complex mathematical concepts was not always considered a necessary skill (Penney, 2018). In recent times, these skills have become increasingly important. Arguably, like any other skills, some individuals may be good at arts and drawings or sports, while others may struggle with reading, writing, and mathematics. Penney (2018) further contends that it is better to consider these learning challenges as a part of the range of human ability to learn specific skills rather than as disorders. Importantly, it was only in the 1960s and 1970s in Western developed countries like Australia, Canada, the USA, and the UK that the term 'learning disability' emerged and was widely discussed in the field of education and educational policies (Fletcher, 2012).

It is, therefore, essential to understand the history of learning disabilities (LDs) within the context of Canada. It is also crucial for this study because the historical context helps identify how perceptions, definitions, and educational policies have evolved and make us aware of their influence on current support systems and challenges, specifically for students with LDs in post-secondary Canadian institutions. Besides, with an understanding of the historical background of these populations, it would be easier to analyze the existing barriers to students with LDs and propose meaningful solutions critically in this respect. Moreover, historical knowledge also

provides insight into how past perspectives may continue to impact post-secondary students with LDs today.

History of Learning Disabilities in Canada

The challenges of learning disabilities appear to have first been recognized in Canada by a group of workers at the Montreal Children's Hospital in the late 1950s (Wiener & Siegel, 1992a). Their article described a child with only mild behavioral difficulties and average intelligence but significant reading, writing, and spelling problems. The psychiatrists at the Montreal Children's Hospital began to work with several psychologists in the United States to determine the reasons for the children's problems and appropriate treatments (Wiener & Siegel, 1992a). Their collaboration encouraged them to start operating the Montreal Children's Hospital Learning Centre in 1960 to treat and diagnose children's learning disabilities.

Simultaneously, in the United States, learning disabilities emerged as a formal category from 1960 to 1975. During this period, the term learning disabilities was introduced, the government included learning disabilities on its agenda, parents and professionals founded organizations for learning disabilities, and educational programs for students with learning disabilities also emerged (Daniel & Mercer, 2001).

Most importantly, in 1963, the term learning disabilities was first introduced. Professor Samuel Kirk at the University of Illinois first coined the term learning disabilities in 1963 when addressing parents of children who appeared to experience learning difficulties (Daniel & Mercer, 2001). The term learning disabilities/difficulties since then has become, by far, the most frequently used label in special education. Parents, advocates, and educators began to use this term as a central theme to organize, gain, and provide services for students with learning disabilities.

Provincial and Territorial Initiatives

Unlike the United States, where the federal government has legislation on education for individuals with learning disabilities, Canadian provinces and territories are individually responsible for their educational efforts. This allows each territory and region to create and implement policies that reasonably fit its specific multicultural, linguistic, and socio-economic conditions (Wiener & Siegel, 1992). This decentralized approach, however, has led to different interpretations of what learning disabilities mean, resulting in a lack of a unified understanding of the term "learning disabilities" (Klassen, 2002).

The educational services for individuals with learning disabilities in the eastern coastal provinces of Nova Scotia, New Brunswick, and Prince Edward Island emphasize a holistic approach to learning disabilities, embracing social, emotional, and cognitive aspects of individuals with learning disabilities (D'Intino, 2017; Wiener & Siegel, 1992). Their commitment to individualized support facilitates an environment of inclusivity and growth. While highly appealing, innovative educational practices for individuals with learning disabilities have appeared in the province of Quebec. This province had been at the forefront of redefining learning disabilities (Klassen, 2002). Their efforts in shifting definitions and practices encouraged a dynamic approach integrating neurodiversity and cultural sensitivity. Since then, collaboration between provincial governments and advocacy groups, such as the Learning Disabilities Association of Canada (LDAC), has taken a strong first step toward establishing a unified understanding of learning disabilities across Canada.

Furthermore, provincial advocacy groups such as the Learning Disabilities Association of Ontario (2017), the Learning Disabilities Association of Saskatchewan (2017), and the Learning

Disabilities Association of Yukon (2017), among others, promote awareness and resources that help students with LDs towards success (D'Intino, 2017a).

Ontario's initiatives, specifically among other provinces and territories, toward defining learning disabilities were considered a milestone in Canada. Ontario's commitment to the Official LDAC Definition of Learning Disabilities is reflected through its vast expanse (LDAC, 2015b).

The expansive prairies of Alberta, Manitoba, and Saskatchewan are pioneering to highlight the influence of collaboration between educational institutions, families, and community organizations in providing educational support and services for individuals with learning disabilities. Kozey and Siegel (2008) note that through a combination of innovative strategies, these provinces create an empowering environment that advocates the unique strengths and talents of individuals with learning disabilities. Besides, multilateral dialogue between the regions of British Columbia and the official Learning Disabilities Association of Canada (LDAC)'s definition and the Diagnostic and Statistical Manual of Mental Disorders (DSM-5)'s criteria set a reflective tone in defining and understanding the meaning of learning disabilities to a new dimension (DSM-5, 2013; Fiedorowicz et al., 2015; LDAC, 2015b).

The movement through the provincial and territorial influences of learning disabilities highlights Canada's commitment to promoting education for all, including those with diverse needs and backgrounds. Approaches and initiatives carried out by these provinces and territories showcase the unique blend of patterns that come together to form a unified whole, ensuring that individuals with disabilities can unlock their true potential and contribute meaningfully to Canadian society (Fiedorowicz et al., 2015; Klassen, 2002b; Kozey & Siegel, 2008a; LDAC, 2015b; Wiener & Siegel, 1992a). However, the lack of an agreed-upon and functional definition

of learning disability is of particular concern among Canadian provinces and territories, as each has its policies regarding services and accommodations made available to individuals with learning disabilities (D'Intino, 2017b).

D'Intino (2017) further notes that establishing a consistent definition across Canada to distinguish between different types of learning disabilities and rendering supports that specifically accommodate different types of learning difficulties is challenging. Arguably, establishing policies according to the needs and priorities of different types of learning disabilities could help to develop more consistent and evidence-based methods of supporting students with LDs.

For example, in Saskatchewan, provincial documentation distinguishes between general learning disabilities and reading disabilities as the most common types of learning disabilities (Wawryk-Epp et al., 2004). Saskatchewan defines learning disabilities as an individual's relatively poor reading, writing, and mathematics performance despite having average to above-average intelligence, appropriate instruction, regular school attendance, and favorable environmental factors. The guidelines in Saskatchewan also address the specific skills that may be affected by different types of learning disabilities (Wawryk-Epp et al., 2004).

Similarly, the province of Alberta has clear and concise guidelines regarding various types of learning disabilities and the accommodations allowed to support students. Alberta's documentation categorizes accommodations into instructional, environmental, assessment-based, or technology-driven categories (Alberta, 2006). These guidelines provide educators and support staff with a structured framework for understanding and addressing students with a learning disability (D'Intino, 2017b). This is also true in other provinces; there is no explicit mention of

learning disabilities, but rather a general definition of those who are at-risk or who have exceptional learning needs, for example, in Prince Edward Island and Newfoundland-Labrador.

It is important to note that while there are some variations in the specifics of how learning disabilities are conceptualized and supported across provinces, the main objective is to provide appropriate academic and related accommodations to students with LDs to help them achieve their full academic potential. The provinces, specifically Saskatchewan and Alberta, emphasize the importance of addressing the needs and priorities of students with LDs based on case-by-case interventions and accommodations.

As variations in the specifics of how learning disabilities are defined and supported across provinces, it is crucial to understand the extent of variations in the diagnosis of learning disabilities across provinces and the impacts on accommodations and support services for individuals with learning disabilities. It is important to note that provincial variations to diagnose learning disabilities significantly impact individuals with learning disabilities. The variations of provincial diagnosis criteria can influence students with LDs' eligibility for academic and related accommodation services, access to campus resources, and compliance with provincial legislation. Therefore, understanding the varied diagnostic criteria across provinces helps meaningfully comprehend the challenges these students face in different educational settings.

Diagnostic Criteria for Learning Disabilities

The latest version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) published in 2013, includes Specific Learning Disorder's diagnostic criteria and features (DSM-5, 2013; Fiedorowicz et al., 2015). Many of the criteria are consistent with the LDAC's Definition of Learning Disabilities, which has had longstanding endorsement by the Learning Disabilities Association of Canada (LDAC) as well as provincial and territorial

Learning Disabilities Associations and Chapters across Canada (Fiedorowicz et al., 2015; LDAC, 2015b). The DSM-5 manual is widely used by qualified professionals in various fields for diagnosing learning disabilities, and its current definition is more comprehensive than earlier editions.

Most literature on learning disabilities also aligns with the *DSM-5* description (Fiedorowicz et al., 2015). There are *DSM-5* criteria at variance with the LDAC's Definition of Learning Disabilities. In this respect, the LDAC will need to consider whether the current definition should be more aligned with the *DSM-5* because the *DSM-5* criteria serve as a relevant framework for understanding and diagnosing learning disabilities in the Canadian context (Fiedorowicz et al., 2015; LDAC, 2015b). It provides a standardized approach that resonates with the prevailing understanding of learning disabilities in Canada, ensuring consistency and accuracy in diagnoses across professional settings.

The *DSM-5* outlines several conditions and criteria to diagnose whether an individual is experiencing some learning disability. In doing so, *DSM-5* breaks specific learning disorders into three distinct categories: impairment in reading, written expression, and mathematics (DSM-5, 2013). Specific learning disorders with impairment in reading experience difficulties in "word reading accuracy, reading rate or fluency, and reading comprehension"; with impairments in written expression experiencing problems in "spelling accuracy, grammar, and punctuation accuracy, clarity or organization of written expression"; and with impairments with mathematics face challenges in "number sense, memorization of arithmetic facts, accurate or fluent calculation, and math reasoning" (Fiedorowicz et al., 2015, p. 5).

A Comparison of the verbatim LDAC's Definition of Learning Disabilities and excerpts of the *DSM-5* Specific Learning Disorder Criteria shows that the criteria for diagnosis of learning

disability require that academic functioning and/or achievement of a learner be substantially below that expected as measured on standardized tests, given the chronological age, measured intelligence, and age-appropriate education of the individual. One position paper, "*The Official Definition of Learning Disabilities Versus DSM-5 Criteria*" published in March 2015, is explicit in this respect. It says,

The affected academic skills are substantially and quantifiably below those expected for the individual's chronological age and cause significant interference with academic or occupational performance or with activities of daily living, as confirmed by individually administered standardized achievement measures and comprehensive clinical assessment. (Fiedorowicz et al., 2015, p. 5).

Indeed, academic skills "substantially and quantifiably below" are crucial to diagnosing a learning disability. Critical authors, however, are concerned that this aspect of the diagnostic criteria, "substantially and quantifiably below" according to the criterion outlined in *DSM-5*, means a two-standard deviation discrepancy between intellectual potential and academic functioning (Kozey & Siegel, 2008a). The authors further argued that a discrepancy between intellectual potential and academic functioning is one of several factors that determine a diagnosis of a learning disability. Other critical areas to reveal "the nature of the cognitive processing deficit or weakness (memory, attention, executive function, processing speed) and to ensure that school attendance and other conditions are not the primary reason for a student's difficulties" have been uttered by educational psychologists across provinces (Stegemann, 2016, p. 56). They also challenge the need to change the definition of learning disabilities outlined in the Diagnostic and Statistical Manual of Mental Disorders –5th Edition (*DSM-5*, 2013; Stegemann, 2016).

It is worth noting that many of the *DSM-5* criteria are consistent with the LDAC's Definition of Learning Disabilities, which has been endorsed by the Learning Disabilities Association of Canada (LDAC) and provincial and territorial Learning Disabilities Associations and Chapters across Canada. However, using standardized tests to measure the extent of difficulties between intelligence and academic achievement has been particularly criticized in identifying a reading disability (Klassen, 2002b; Kozey & Siegel, 2008a; Stegemann, 2016). The authors further argued that students who experience learning difficulties, such as word reading accuracy, fluency, reading comprehension, spelling accuracy, grammar and punctuation accuracy, clarity or organization of written expression, math, computation, and problem-solving, should be identified as having a learning disability.

The LDAC's Definition of Learning Disabilities specifies that an individual can be identified as having a learning disability when the individual has at least average to above average intelligence determined by formal psychological assessments (LDAC, 2015b; Stegemann, 2016). Whereas the *DSM-5* specifies intellectual functioning to be an "IQ score of 70 (+/-5)," the LDAC's Definition of Learning Disabilities disagrees with their concept but recommends that IQ scores require to be "interpreted cautiously in the context of all of the other information gathered about the individual" (Fiedorowicz et al., 2015; Stegemann, 2016, p. 56). Therefore, determining a learning disability within an individual depends extensively on critical and professional judgment to make appropriate diagnoses.

There has been a debate between the use of the terms "learning difficulties" and "learning disabilities", especially in the case of students having one of these challenges (Elkins, 2002). Elkins (2002) cites two examples in this respect and explains that in the United States, "learning disabilities" signifies a specific group eligible for special services under the Individuals with

Disabilities Education Act of 1990. In contrast, Australia asserts "learning disabilities" for a smaller subgroup with persistent difficulties in learning. They consider "learning difficulties" to include a broader category of students struggling with their classroom programs. They argue that using "learning difficulties" may reduce stigmatization and provide a more inclusive approach, while it is advantageous to use the term "learning disabilities" to ensure related accommodation supports (Lenhard & Lenhard, 2013). The debate highlights the importance of precise and context-sensitive terminology in education and special services for individuals with learning disabilities.

Though the term learning disability usually highlights general and long-lasting learning difficulties, often linked to special education, the choice of terms to describe students who have learning problems carries important distinctions (Elkins, 2002; Lenhard & Lenhard, 2013). Hence, understanding the meaning of learning difficulties and learning disabilities, including critically analyzing the distinctions of these terms from the perspectives of researchers, scholars, and related organizations, is crucial.

Understanding Learning Disabilities

In addition to the classification in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* and the *International Statistical Classification of Diseases and Related Health Problems (ICD-10)*, there is no universally accepted terminology, and the connotations of the technical terms related to learning difficulties and learning disabilities (DSM-5, 2013; Lenhard & Lenhard, 2013; WHO, 2011). These terms are used interchangeably throughout the world. For example, even among countries that use the same language (e.g., Australia, Great Britain, and the USA), the meaning of the term – *learning difficulties and learning disabilities* – significantly varies.

Generally, people find the terms “*learning difficulties*” and “*learning disabilities*” confusing. Because learning disability/difficulty continues to be used interchangeably with other terms, such as mental handicap, mental incapacity, cognitive impairment, learning difficulty, developmental delay, and in some instances, is confused with mentally ill (Cluley et al., 2022). Cluley et al. (2022) further note that what a learning disability or learning difficulty means to different people has consequences for people in this group. For example, the definition of disability and people having any disability has psychological, social, economic, and political significance. This is relevant not only to those who identify as having a disability but also to those who do not but are still labeled as disabled (Gates & Mafuba, 2016).

In Canada specifically, people with disabilities suggest that Canadians must use respectful terms when writing and speaking about them. The study of the Employment and Social Development Canada (ESDC) in 2006 states that

People with disabilities are asking Canadians, particularly the media, to use respectful terms when writing and speaking about them or issues that affect their lives. They also ask that images chosen to portray them be respectful and not reinforce outdated stereotypes. (ESDC, 2006, p. 1)

As words and images are a powerful tool in shaping attitudes and perceptions of communities about people with disabilities, people in communities should do everything possible to “eliminate remaining prejudices and stereotypes” (ESDC, 2006, p. 6). Canadians with disabilities recommend that choosing respectful words and images can help shape positive attitudes and promote people rather than their disabilities. Ultimately, the study gives many examples of using appropriate/respectful words instead of outdated terminology. For example, instead of saying *learning disabled*, *learning disordered*, or *dyslexic (the)*, use *a person with a*

learning disability to eliminate prejudices and stereotypes (ESDC, 2006). Nevertheless, there has been a long debate about using a person-first or identity-first language within disability discourse.

One study by Dunn and Andrews (2015) notes that person-first language emphasizes the individual before the disability (e.g., 'person with a disability') to highlight individuals' complex and rich nature, who are not solely defined by their disability. The authors further note that this approach aimed to reduce stigma and emphasize the multifaceted nature of individuals. However, critics of person-first language argue that it can unintentionally suggest that disability is something negative or separate from the individual. For instance, saying "person with autism" might imply that autism is separate from the person (Wooldridge, 2023). It can also be challenging, making communication less natural, and it aligns with a medical model of disability, which focuses on the individual's condition rather than societal barriers and the culture of disability (Dunn & Andrews, 2015).

On the other hand, identity-first language places the disability-related word first (e.g., "disabled person, autistic individual, deaf person") to stress that the disability is an integral part of the individual's identity (Dunn & Andrews, 2015; Wooldridge, 2023). These authors further argue that many individuals with disabilities view their disability as a critical aspect of their identity and culture rather than something to be minimized.

The movement towards identity-first language is part of a broader shift driven by the disability rights movement and evolving cultural competence, which refers to the ability to understand, communicate with, and effectively interact with people across cultures (Wooldridge, 2023). This shift emphasizes recognizing disability as a valuable identity rather than a deficiency. Wooldridge (2023) further notes that this approach is more closely aligned with the social model

of disability, which focuses on societal barriers rather than individual impairments. It is preferred by many communities, such as the Deaf and Autistic communities, who view it as a source of pride and solidarity (Dunn & Andrews, 2015).

Language preference is highly personal and can vary significantly even within the same disability community. Therefore, understanding the personal nature of language preference is not just important; it is crucial in disability discourse. For this reason, respecting individual preferences is significant and is vital in promoting respect and inclusion within the disability community, making each feel empathized with and understood.

As there remains a lack of consensus surrounding the terminology used for people with a learning disability/difficulty within Western developed countries and other countries, culturally sensitive terminology is critical in this respect since the demand for the exchange of research and practice initiatives relevant to this group is rapidly growing throughout the world (Gates & Mafuba, 2016).

Definition of Learning Disabilities

In order to shift attention to the students with persistent long-term problems and their educational needs, the term learning disabilities is most frequently used for students with a multitude of other problems that require high support in one or more of the areas of literacy, numeracy, and learning how to learn. Much research has been carried out to define the meaning of learning disabilities, resulting in emerging learning disabilities as a formal category of disability. Though a more comprehensive definition of learning disabilities is outlined in the USA's Diagnostic and Statistical Manual of Mental Disorders (DSM-5), a more-research-based meaning of learning disabilities is elaborated in the Learning Disabilities Association of Canada (LDAC).

LDAC's definition of learning disability is more research-based because it is rooted in extensive studies and collaborations with a network of ten (10) provincial and two (2) territorial Learning Disabilities Associations, including related government organizations. From these extends, “a network of chapters in some fifty-five (55) communities across the country with more than seven thousand (7,000) members across Canada” (LDAC, 2007, p. 8). LDAC's commitment to providing cutting-edge information and practical solutions is evident through its recent initiation of an applied research study entitled “*Putting a Canadian Face on Learning Disabilities (PACFOLD)*” in collaboration with the Social Development Partnership Program – Disability Component (Wilson et al., 2011).

Firstly, LDAC's definition benefits from the PACFOLD study, a groundbreaking research initiative conducted over several years specifically focusing on “obtaining, quantifying, and disseminating knowledge about the impact of learning disabilities in Canada” (LDAC, 2007, p. 1). By accessing Statistics Canada data sets, LDAC ensured the strength and reliability of the research, making its definition well-informed by empirical evidence (Wilson, A. M., Furrrie, A., Walcot-Gayda, E., & Armstrong, 2011). Secondly, LDAC's definition recognizes the linear and cyclical nature of the challenges of individuals with learning disabilities. This acknowledgment reflects an in-depth understanding derived from the comprehensive examination of ten (10) different datasets, making it research-driven and adaptable to the real-life experiences of individuals with learning disabilities in Canada (LDAC, 2007).

Revisiting the Definition of Learning Disability

Several authors have explored the revised definition of learning disabilities from their point of view. For example, Fiedorowicz et al. (2015) explain that learning disabilities involve disorders that hinder the ability to process verbal or nonverbal information despite having

average or above-average cognitive abilities, aligning with the revised definition of LDAC in 2015. Additionally, the authors explore that it is crucial to understand that these disabilities are distinct from intellectual deficiencies, underscoring the need for accurate diagnosis and understanding. Snowling et al. (2020) view learning disabilities from the extent of difficulties individuals face in terms of the learning skill sets necessary to continue their studies. For example, learning disabilities can affect skills like language processing, reading, writing, math, and social interactions and vary in severity. The authors further note that individuals' learning disabilities are not transient, but lifelong, and can change in expression over time. They are caused by genetic or neurobiological factors or brain injuries, not sensory impairments, socio-economic factors, cultural differences, lack of motivation, or ineffective teaching (D'Intino, 2017b). Several other authors have noted that these disabilities may coexist with other conditions, such as attentional, behavioral, emotional, sensory, or medical disorders (D'Intino, 2017b; LDAC, 2015b; Snowling et al., 2020).

Nevertheless, this revised definition of LDAC is developed from a more researcher-based understanding of learning disabilities perspective to give people the foundation for a shared understanding of learning disabilities based on empirical knowledge, helping to dispel commonly held myths about individuals with learning disabilities (LDAC, 2015b).

Learning disabilities occur worldwide in every culture, race, ethnicity, and socio-economic status. There are also some common misconceptions about learning disabilities. Among these are *(i) people with learning disabilities are lazy, do not want to learn, and cannot be successful; (ii) people with learning disabilities are less intelligent, and (iii) learning disabilities are caused by a curse or by previous sins of parents or relatives* are extensively documented in literature (Hayes et al., 2018). As far as the first myth is concerned, academic

challenges caused by a learning disability do not necessarily indicate laziness; with proper accommodation and support, a person with a learning disability can combat challenges and succeed in education. Similarly, having a learning disability does not mean a student cannot learn but instead benefits from alternative learning formats, materials and methods (Hayes et al., 2018, pp. 4-5).

In many cultures worldwide, specifically in developing and underdeveloped countries, the most predominant example of traditional beliefs is when a child is born with a disability. It is often considered a curse from God or a result of previous sins of parents or close relatives. Therefore, newborn children with a disability are kept hidden. As far as a learning disability is concerned, researchers and scientists have documented "multiple causes of learning disabilities, including structural brain differences, genetics, and environmental causes" (Hayes et al., 2018, pp. 4-5), which means that learning disabilities are not necessarily caused by a curse or by previous sins of parents or relatives.

LDAC's definition of learning disability is developed through extensive research, including the active involvement of scholars and researchers from critical disability discourses and related government, provincial government, and territories across Canada. This collective effort ensures neutrality, minimizing biases and dispelling outdated notions of disability. This collaborative approach safeguards LDAC's definition from prejudices and misconceptions.

LDAC's definition aims to ensure that students with LDs receive adequate support and related academic accommodations. Nevertheless, there is no evidence in LDAC's studies that school boards across Canada have adopted the revised definition. Studies indicate that Canadian definitions of LDs traditionally have varied interprovincially; there are inconsistencies in

defining learning disabilities in provincial school boards (Kozey & Siegel, 2008b; LDAC, 2015a).

Although the category of learning disabilities is commonly used in Canada, there is no precise operational definition of learning disabilities widely accepted across provinces (LDAC, 2015b). For example, some Canadian sources consider attention deficit-hyperactivity disorder (ADHD) a form of learning disability, but other sources consider ADHD a distinct but related category. Several other Canadian sources exclude ADHD from discussions about learning disabilities (Waterfield & Whelan, 2017).

The variability in defining “learning disability” and providing accommodation support following province specific guidelines is explicit. For example, the Ontario Ministry of Education defines learning as one of a number of neurodevelopmental disorders that persistently and significantly has an impact on the ability to learn and use academic and other skills (Ministry of Education, 2023; Ontario Psychological Association, 2018). While Saskatchewan defines “learning disability” as “an individual’s academic underachievement in reading, writing, and/or mathematics despite the presence of average to above average intelligence, appropriate instruction, regular school attendance, and favorable environmental factors” (D’Intino, 2017b, p. 230). The province of Alberta has clear and concise guidelines regarding different “learning disabilities” and which accommodations are permitted to support students with LDs are agreed based on the guidelines (Alberta, 2006).

In defining learning disabilities, including providing reasonable accommodation and related services to individuals with LDs, provinces across Canada use the Intelligence-achievement Discrepancy Model or the Response to Intervention (RTI) to diagnose and treat learning disabilities, although each has advantages and limitations.

Intelligence-Achievement Discrepancy Model. According to Restori et al. (2009), the Intelligence-achievement Discrepancy Model follows four (4) criteria before determining eligibility for a Specific Learning Disability (SLD). An individual can be determined as having SLD when these four (4) criteria are met:

Establishing a discrepancy between intellectual/cognitive ability and academic achievement, identifying the existence of a psychological/cognitive processing deficit, determining if the child's educational needs can or cannot be met without special education and related services, and exclusionary considerations. (Restori et al. 2009, p. 129)

The Intelligence-Achievement Discrepancy Model is widely used in learning disability diagnosis. The model posits that students with LDs possess average intelligence, potentially benefiting from effective interventions. Nonetheless, D'Intino (2017b) argues that this model lacks early intervention, which creates many barriers for students with LDs. Besides, identifying learning disabilities under this model faces challenges like overidentification, variability, specificity, and timing. While the model intends to target those in need, the model's late intervention raises many concerns. For example, the balance between early support and accurate identification is crucial to enhance the model's effectiveness in identifying and assisting students with LDs. When this is not the case, many students with LDs face challenges in their academic progress for a shorter period, sometimes longer.

Response to Intervention (RTI) model. Response to Intervention (RTI) is a multi-tier approach to the early identification and support of students with learning and behavioral needs. The RTI process begins with high-quality instruction and universal screening of all children in the general education classroom. Students who struggle in learning are provided with

interventions at increasing intensity levels to accelerate their learning rate (D'Intino, 2017b; Taylor, 2014). Although RTI models are at variance, the most common and basic model consists of three steps:

First, class-wide assessment is conducted using locally developed curriculum-based measurement (CBM) to determine the class's average reading level and growth as a whole. If most students achieve at a prespecified level, then poor instruction can be ruled out as the cause for individual students' low achievement. Next, students are identified as unresponsive to general instruction based on comparing their performance and rate of improvement to those of their typically achieving peers. Finally, the identified students receive continued assessments with adaptations and referrals for special education services if they do not achieve a certain level or amount of growth. (Taylor, 2014)

The primary benefit of implementing an RTI model is the early identification of students who require supplemental intervention. This way, many students with learning disabilities receive timely support that helps their academic progress. One of the drawbacks of the RTI model is its implementation procedure. Taylor (2014) argues that when RTI is implemented as designed, it ensures that targeted students receive effective intervention, which eventually optimizes their academic development. The challenge lies in educational institutions in that they often need more resources and expertise for proper RTI implementation. Therefore, adequate support and training in adopting the RTI approach within an educational institution is critical (D'Intino, 2017b; Taylor, 2014). Table 1 outlines the various models for identifying learning disabilities in Canadian provinces and territories.

The Canadian experience with the development and definition of learning disabilities has been and continues to be distinct from the U.S. (Kozey & Siegel, 2008a). The definition of learning disabilities in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* in the USA is more comprehensive, which is, to some extent, comparable to the learning disabilities description cited in the LDAC (DSM-5, 2013; LDAC, 2015a). The core of the *DSM-5* definition outlined several criteria for learning disability diagnosis to measure an individual's intellectual potential and academic functioning.

Table 2

Models of Defining LD among Canadian Provinces and Territories

Province or territory	LDAC definition and Intelligence-Achievement Discrepancy Model	Response to Intervention	Other
Alberta	X		
British Columbia	X		
Manitoba			X
New Brunswick		X	
Newfoundland & Labrador			X
Northwest Territories	X		
Nova Scotia		X	
Nunavut	X		
Ontario	X		
Prince Edward Island			X
Quebec			X
Saskatchewan	X		
Yukon	X		

Note. Adapted from D'Intino (2017). *Learning Disabilities in Canada: Definitions and Accommodations*. Canadian Psychology, 58(3), 228–237.

Difficulties with these skills cause problems in reading, writing, and math and impact students' everyday activities (DoH, 2015; DSM-5, 2013; Fiedorowicz et al., 2015; Penney, 2018; Podsiadlik, 2021). In relation to reading, students with LDs do not read as their non-disabled peers. Because of the high volume of reading required in higher education, students with LDs

remain at a distant disadvantage (Richards et al., 2015; Weis et al., 2016). In mathematics, they experience difficulties in basic computations and application to more complex and abstract mathematics such as algebra and geometry (Bugden & Ansari, 2016). In terms of written expression, it is one of the most pervasive problems for students with LDs (Richards et al., 2015).

As a student's learning disability may include a range of difficulties and differ significantly in nature and severity, accommodations for students with LDs in an academic setting widely vary between and among students with learning disabilities. Their challenges also differ from secondary to post-secondary levels. Students with LDs are more likely to have other disorders than their non-disabled peers. Their educational challenges become compounded because of the co-occurrence of LDs with other disabilities and the difficulty of addressing their unique challenges (Aro et al., 2023; Hulme & Snowling, 2016). Therefore, adopting identified solutions relevant to the unique learning challenges of students with LDs can increase their academic success, consequently helping decrease the number of students with LDs who require support and accommodations, including those who experience comorbid conditions with other disabilities despite their learning disabilities.

Co-occurrence of Learning Disabilities with Other Disabilities

The increase in post-secondary enrollment across Canada brought a corresponding increase in students with disabilities, including learning disabilities (LDs) (Aro et al., 2019, 2023). Among these students, many experience additional challenges because of their co-occurrence of learning disabilities with other related disabilities, such as mental health issues, ADHD, or other developmental disabilities (Aro et al., 2023; Hulme & Snowling, 2016; Snowling et al., 2020). When their learning disabilities intertwine with other related disabilities,

their challenges of learning become compounded, further impacting their academic performance. This review examines the relationship between learning disabilities and other disabilities, and the challenges that may develop due to the co-occurrence of learning disabilities with other disabilities.

As stated, the number of students in Canadian post-secondary institutions is increasing progressively in the last two decades (Statistics Canada, 2022; Usher, 2019). Consequently, the number of students with disabilities, including those with learning disabilities, is also increasing (W. Hadley, 2016; Hollins & Foley, 2013). Among this increased number of students with LDs, some experience other related disabilities despite their learning disabilities.

Several studies also demonstrate that an individual's learning disability often co-occurs with multiple disorders (Snowling et al., 2020). The study of Bizier et al. (2014) indicates explicitly that the challenges of students with LDs to learning are not limited to "taking longer to achieve education milestones, taking fewer courses, and changing their choice of courses or career"; students' most minor challenges become compounded when their learning disabilities co-occur with other types of disabilities (p. 7). Their studies reported that, across Canada, "96.3% of respondents who reported a learning disability also reported at least one other type of disability" (p. 5). Several studies in this respect note that students with LDs in post-secondary Canadian institutions take longer to complete their education than students with a single disability or without any disability (Kirby, 2023; McGregor et al., 2016; NEADS, 2018). Therefore, it is essential to examine various learning disabilities thoroughly, their associations with other disabilities, and the challenges that arise from co-occurrence with other disabilities.

A strong association between an individual's learning disabilities and mental health problems is evident. For example, one study by Hammill et al. (1988) and Jones and Wallace,

(2008) indicates that "learning disabilities may occur concomitantly with other handicapping conditions" (Hammill et al., 1988, p. 336). Aro et al. (2019) have studied the impact of diverse sub-types of learning disabilities (LDs) on adult-aged mental health, education, and employment by comparing the LD group (n= 430) with a matched control group without a known history of LD (n= 2,149) found that "individuals with learning disabilities (LDs) had higher rates of mental health problems, lack of education, and unemployment compared to the control group" (p. 71). Their study conceptualizes an individual's mental health problems based on the indications of mental health problems of the World Mental Health Composite Diagnostic Interview Schedule (World Health Organization, 1990) and LD status on self-reported LD diagnoses (Aro et al. 2019). In other studies, Johnson (1995) notes that "learning-disabled individuals may have comorbid conditions such as attention deficit disorder, depression, and neurological problems" (p. 2). One recent study by Aro et al. (2023) specifies that "LD co-occurs with both homotypic (neurodevelopmental disorders) and heterotypic (mental and behavioral disorders, diseases of the nervous system, and injuries) comorbidities" (p. 1).

The findings of these studies indicate that an individual's learning disabilities and mental health challenges are not mutually exclusive but instead frequently intersect and increase the challenges faced by students with LDs. Studies argue that students with LDs remain at a higher risk of developing mental health problems than their neurotypical peers (Kirby, 2023; WHO, 2011). The literature that discusses both mental health and learning disabilities (LDs) finds that those with LDs are at increased risk for mental health problems.

According to Children's Mental Health Ontario (CMHO), 1 in 5 of children and youth under the age of 19 in Ontario have a mental health problem; this means that almost 20% of students in a typical classroom will be dealing with a mental health problem (CMHO, 2020).

This creates many challenges for them to learn or regulate their behavior appropriately. It has its consequences. When these students attend post-secondary institutions, the frustrations during their time in higher studies arising from academic challenges, the feeling of being left behind, loneliness, and societal expectations, for example, from their families, peers, and communities, increase their stress, anxiety, and even depression. It can be concluded that students' learning disabilities and mental health problems intersect in many ways. Therefore, the review delves deeper into the relationship between these two areas and explores their potential impacts on each other.

Learning disabilities (LDs) are a prevalent type of disability among post-secondary students in Canada (Hadley, 2016). Studies of Furrie (2017); NEADS (2018); Statistics Canada, (2022, 2023) have shown that the prevalence of post-secondary students with LDs has increased by 3.0 percentage points since 2017 and has increased from 24.7% in 2017 to 27.7% in 2022. Arguably, students' learning disabilities significantly impact their academic performance and ability to complete their studies successfully. The study by Furrie (2017) that considered 980,080 Canadians with disabilities (e.g., 62% of the 3,775,910 adults with disabilities in Canada) revealed that "24.7% of students with disabilities in post-secondary institutions in Canada reported having learning disabilities" (p. 8). As a learning disability is a neurological disorder that affects a student's ability to process and retain information effectively, it could impact their ability to read, write, spell, or perform mathematical calculations (Penney, 2018; Snowling et al., 2020). Besides, Johnson (1995) contends that learning disabilities limit academic performance and specific social and occupational activities.

Weis et al. (2016), in their literature review about the challenges of students with LDs, noted that:

Some common deficits include problems with phonetic coding, rapid automatic naming, and general auditory processing (especially for reading and writing deficits), visual processing and working memory (especially for mathematics deficits, overall language skills, listening comprehensive, long-term retrieval, and processing speed important for all academic domains. (p. 489)

These challenges highlight the significant impact that LDs can have on a student's academic success, as reading, writing, and math skills are fundamental to success in post-secondary education programs. Several other literature note that difficulties with memory, attention, and organizational skills of students with LDs further impact their academic performance (Mammarella et al., 2013; Mortimore, 2013; Penney, 2018; Podsiadlik, 2021; Russak & Daniel Hellwing, 2015).

About 39.7% of students with disabilities report mental health disabilities among post-secondary students with disabilities across Canada (Furrie, 2017). Several studies have mentioned that many of these adults with learning disabilities are concomitant with mental health problems—for example, one cross-sectional study by Wilson et al. (2009) revealed that "individuals with learning disabilities are more than twice likely to report high levels of distress, depression, anxiety disorders, suicidal thoughts, visits to mental health professionals, and poorer mental health than are individuals without disabilities" (p. 24).

One recent study by Limone and Toto (2022) notes that mental health disabilities may be caused by various factors, including genetic predisposition, life events, and environmental stressors that significantly impact students' ability to learn and succeed in their academic journey. These symptoms of mental health disabilities include difficulty concentrating, memory problems, decreased energy, and feelings of hopelessness or worthlessness (Michaud & Fombonne, 2005).

The increasing trend of higher rates of depression and anxiety (14.7% and 18.4%) among post-secondary students in 2016 compared to 2013 (10.0% and 12.3%) leads to decreased academic performance, lower retention rates, and a higher dropout risk (Esmaeelzadeh et al., 2018; NEADS, 2018; Statistics Canada, 2022). It is imperative to provide counseling services and academic accommodations and ensure that mental health support resources are accessible for their best academic performance and inclusiveness.

An anxiety disorder makes it difficult for students with disabilities to focus on their studies (Esmaeelzadeh et al., 2018). The authors further specify that symptoms of anxiety disorders exclusively include excessive worry, fear, and nervousness. When these symptoms persist for a long time among students with anxiety disorders, they may have relatively lower academic performance. Studies show that 6% of students with disabilities attending post-secondary education across Canada reported anxiety disorder and symptoms of anxiety disorders (NEADS, 2018; Statistics Canada, 2022). Therefore, case-by-case counseling services, academic accommodations, and mindfulness resources designed for these students in higher education institutions are imperative for their success in education.

Characterized by “episodes of depression and mania,” bipolar disorder is a mental health disability prevalent among 2% of post-secondary students across Canada (Benazzi, 2007, p. 935; NEADS, 2018). This is particularly challenging for students, as symptoms can be difficult to predict when episodes of their depression and related difficulties occur.

There is a high prevalence of learning disabilities among post-secondary students with ADHD (attention deficit hyperactivity disorder), a neurological disorder that affects a student's ability to concentrate, stay focused, and control impulsive behaviors (Parker et al., 2022). Seager and O'Brien (2003) indicate that ADHD is more common among people with learning

disabilities than the non-learning-disabled population. A recent nationally representative survey of first-year college students indicated that “5.9 percent self-reported a diagnosis of ADHD and 3.3 percent self-reported LD” (DuPaul et al., 2017, p. 246). Several other authors have reported that individuals with ADHD are significantly less likely to pursue postsecondary education relative to their non-ADHD peers and, of those who attend college, students with ADHD are significantly less likely to enroll at four-year institutions (Jensen, 2009; Kuriyan et al., 2013). Therefore, students with ADHD (with or without comorbidity) reported poor academic performance, personal situations, and course-related self-efficacy (Budd et al., 2016). Their study also found that students with ADHD have more confidence in understanding textbooks than students with LDs. It is not always the case because several studies specify that comorbid ADHD and learning disabilities sometimes lead to worse academic outcomes than learning disabilities or ADHD alone (Budd et al., 2016).

In Canada, the relationship between post-secondary students with LDs and attention deficit hyperactivity disorder (ADHD) presents many challenges in their academic journey. This complex connection contains a range of factors, including the importance of self-monitoring academic performance, the overlap between spectrum disorders, levels of engagement, positive core self-evaluation, school preparation, and expectations for college. It is worth noting that the relationship between learning disabilities and ADHD in Canadian post-secondary students is a multifaceted phenomenon, with each aspect contributing to these individuals' unique difficulties and potentials.

In addition, the relationship between Non-verbal Learning Disability (NLVD) and Central Auditory Processing Disorder (CAPD) with other related disabilities pose many challenges for students with disabilities (Caryn, 2021; LDAO, 2018). For example, Nonverbal Learning

Disability (NLVD) describes a well-defined profile that includes strengths in verbal abilities contrasted with deficits in visual-spatial abilities. Individuals with NVLD often have trouble with areas like organization, attention, executive functioning, nonverbal communication, and motor skills, intersecting with other related disabilities (LDAO, 2018). Central Auditory Processing Disorder (CAPD), often co-occurring with ADHD, is a situation that affects how sounds are processed, making it difficult for students to understand lectures, especially in noisy conditions. It also impacts students with LDs regarding language, reading, and speech prediction (Caryn, 2021; LDAC, 2024).

The challenges faced by students with LDs, including their association with other disabilities, compounded their academic and related challenges. They are less likely to compete with their non-disabled peers, including students with a single disability, because of the comorbid condition of LDs. As stated earlier, among students with LDs, problems with learning are significantly greater among those who also have ADHD as an example than those who do not. ADHD intensifies learning problems in students with LDs (Smith & Adams, 2006). Therefore, students with combined LDs and other disorders face relatively more challenges in many areas of academic achievement. Their challenges remain complex and multifaceted and sometimes difficult to address by higher education institutions.

Learning disabilities (LDs) are a growing concern among post-secondary students in Canada, and there is a need for better support and accommodations to ensure their academic success. The association between a student's learning disability and other related disabilities, for example, mental health difficulties, attention deficit hyperactivity disorders, central auditory processing disorder, and non-verbal learning disability is a multifaceted one that deserves in-depth analysis and critical inquiry.

Challenges and Barriers of Students with LDs in Higher Education

The increasing emphasis on improving higher education has been documented in many Western developed countries (Norris et al., 2019). Higher education institutions develop policies, programs, and legislative frameworks to promote equal opportunity and full participation of students with disabilities in these countries. Although policies to ensure equitable opportunities for students with all disabilities at the post-secondary level are mandated, students with LDs have lower enrollment and graduation rates than those without disabilities (Lightfoot et al., 2018).

Nonetheless, navigating higher education remains particularly challenging for students with LDs. Their journey contains unique challenges, from engaging academic demands to coping with the post-secondary environments. Additionally, limited individualized accessibility resources, such as specialized learning materials, and the inclusion of new assistive technologies, which many students are unfamiliar with, compound their challenges to success.

The study by NEADS (2018) further speculates that for a first-year student with LDs, navigating the complex system of post-secondary institutions remains the most challenging because resources are not equally accessible to everyone within these institutions. Therefore, students with LDs transitioning into post-secondary institutions is a multi-layered challenge affecting their personal, social, and academic lives. While much is known about the challenges that affect the experiences of post-secondary students with LDs, less is known about those experiences from the perspectives of the students themselves (Fullarton, 2016). The literature review explicitly examines the experiences of challenges faced by students with LDs from the perspectives of the students themselves.

Table 3*Challenges and barriers of Students with LDs in Higher Education*

Challenges	Excerpts from literature	Relevant sources
Accessing Academic Accommodations	<ul style="list-style-type: none"> • Underfunded and overwhelmed services, especially in smaller institutions. • Disparities in access to support services across institutions. • Inappropriate or ineffective accommodation is assigned without considering individual needs. • Accommodations are often based on the disability label rather than specific challenges. • Late diagnosis leads to delayed access to services. • Inconsistent criteria for accepting psycho-educational assessments across institutions. 	Black et al. (2015); Waterfield & Whelan (2017); Hollins & Foley (2013); Weis et al. (2016); Zeng et al. (2018); Penney (2018); Abreu-Ellis et al. (2009).
Stigma and Negative Attitudes	<ul style="list-style-type: none"> • Reluctance to disclose disabilities due to fear of stigma or discrimination. • Negative perceptions from non-disabled peers. • Peers doubt the fairness of accommodations. • Students avoid disclosure to avoid being labeled as "disabled." 	Kendall (2016); Hansen et al. (2017); Mullins & Preyde (2013); Akin & Huang (2019); Wood et al. (2014); Black et al. (2015); Gow et al. (2020); Lightfoot et al. (2018).
Academic Performance	<ul style="list-style-type: none"> • High levels of anxiety, particularly in timed tasks. • Difficulties with text-based learning materials. • Impact of late identification on access to support and accommodations. 	Carroll & Iles (2006); Reed et al. (2011); Hulme & Snowling (2016); Abreu-Ellis et al. (2009).
Transition from High School	<ul style="list-style-type: none"> • Shift from managed education to self-advocacy for accommodations. • Complex navigation of support systems. • Challenges in balancing academic and social life. 	Hadley (2006); Getzel & Thoma (2008); Mullins & Preyde (2013); NEADS (2018); Mull et al. (2001); Perry et al. (2005); Skinner & Lindstrom (2003); Smith & Zhang (2009).
Use of Assistive Technology	<ul style="list-style-type: none"> • Cost of assistive technology. • Lack of proficiency with learning technologies. • Delays in approval and provision of assistive technology. • Lack of support staff. • The complexity of assistive technologies leads to overwhelm. 	Malcolm & Roll (2017); Ko & Petty (2022); McNicholl et al. (2021).

Challenges of Accessing Academic Accommodations

Black et al. (2015) indicate that for students with disabilities, academic and related accommodation encompasses “acquisition or modification of equipment or devices; appropriate adjustments of or alterations to examinations, training materials or policies; and provision of qualified readers or interpreters for students” (p. 2). McGregor et al. (2016) further argue that accommodation improves grades and persistence to achieve a degree. The interrelationship between academic success and the availability of necessary support and accommodations for students with disabilities is documented elsewhere (McKenzie, 2015). So, accommodations for students with LDs must be relative to the individual student’s unique needs and circumstances. Specifically, post-secondary students with LDs in Canadian institutions face numerous challenges when accessing academic accommodations and related support services.

In one of their studies, Waterfield and Whelan (2017) noted, “available university accommodation services are underfunded and overwhelmed, unable to provide the level of accommodations needed for the growing number of learning-disabled students” (p. 990). The problem becomes especially noticeable in smaller institutions or rural regions, where there might be a lack of resources to offer modified assistance to students with disabilities. These smaller institutions have limited and, in many cases, no funding to recruit professionals trained in learning and other disabilities or provide the assistive technology necessary to support their students with disabilities. It resulted in significant disparities in access to support services for these students, with students in some institutions having far fewer resources available than their counterparts in other institutions. Critics contend that “policies, procedures, and accommodations alone cannot circumvent inequity if accommodations are not accessible to all students” (Waterfield & Whelan, 2017, p. 986). It can be argued that access to learning to succeed

academically and the overall well-being of students with LDs are significantly impacted based on accessible academic and related accommodations. This is one critical area of concern that requires urgent attention and action.

Authors like Black et al. (2015); Hollins and Foley, 2013; and Weis et al., (2016) explore that post-secondary students with LDs suggested accommodations are recommended without considering each student's limitations in specific academic contexts, their history of learning disability, and their current functioning. The study of Hollins and Foley (2013) shows that numerous accommodations offered to students with LDs are ineffective and inappropriate. Besides, students with LDs accommodations are assigned based on their disability rather than understanding the meaning of their challenges and what they practically need for their academic inclusion (Cawthon & Cole, 2010). Weis et al. (2016) indicate that a student diagnosed with a reading disability needs additional time on all her/his exams but receives a wide range of accommodations that may not be directed at the student's specific areas of limitations. When this is the case, the challenges of students with LDs receiving individually selected accommodation matched to their needs and priorities remain uncertain, and their academic performance also remains at risk.

Because disabilities must be accommodated, post-secondary institutions must extend accommodations when students self-identify their disabilities (De Los Santos et al., 2019). Zeng et al. (2018) speculate that the student-centered approach is essential to current academic interventions for post-secondary students with LDs. Other studies suggest that this approach is proven practical for students with LDs acquiring skills to promote their academic success (Cooper et al., 2011; Zeng et al., 2018). The approach follows an individualized education plan designed specifically to overcome the academic barriers of students with disabilities (Penney,

2018). So that individualized interventions can help students overcome their academic challenges and maintain success, as the outcomes of these interventions are more effective than general interventions.

To determine which accommodation students with disabilities should receive varies considerably relative to their challenges and related factors (Bolt et al., 2011). For example, accommodations for students with dyscalculia are not similar to students with dyslexia. Students with dyscalculia may take a long time to complete their math papers and need accommodations such as extended time, using a calculator, or oral exams rather than written exams (Pirani & Sasikumar, 2013). Students with dyslexia may struggle to correctly interpret the text-based learning materials and need accommodations such as a reader, a screen reading software, or a tape recorder (Hulme & Snowling, 2016). Although students with LDs' accommodation needs differ between the two types of LDs, they may also intersect. For example, dyslexia can be associated with dyscalculia (Mammarella et al., 2013). So, customization of the unique needs of students with LDs is essential in suggesting support and accommodations.

De Los Santos et al. (2019) contend that providing academic accommodations to students with disabilities does not necessarily mean lowering or substantially modifying essential requirements of the academic rigors of a course. The objective is to make meaningful access to course resources adequate for students with LDs success because accommodations in students' deficiency areas would increase and contribute to their academic success.

Persistent Stigma and Negative Attitudes Toward Disability

Students with LDs often face negative attitudes and stigma that can lead to discrimination and limited opportunities in post-secondary institutions. Despite efforts to promote inclusivity and diversity, many individuals still hold misconceptions about LDs that can create significant

barriers to academic and career success for students with these disabilities. In addition, negative attitudes and stigma towards LDs can create significant barriers to accessing accommodations and support services in post-secondary institutions. For example, students with LDs may hesitate to disclose their disability to their institution due to a fear of stigma or discrimination (Kendall, 2016; Majoko, 2018).

Post-secondary students with disabilities should self-identify as having a disability to receive accommodation. Although data are limited, the study of McGregor et al. (2016) indicated that a minority of post-secondary students with LDs disclose their disability. Students with LDs decide not to disclose their academic needs due to their fear of being stigmatized by others (Hansen et al., 2017; Hollins & Foley, 2013; Mullins & Preyde, 2013). They also feel uncomfortable discussing their disabilities with their faculty (Black et al., 2015). As a result, numerous challenges emerge for faculty, administrators, and service providers to recommend appropriate accommodations for students with LDs on time (Trimmis & Bessas, 2016).

Several studies show that students with disabilities experience a variety of negative perceptions from their non-disabled peers (Akin & Huang, 2019; Kendall, 2016). They even doubt the fairness of academic accommodations for their peers with disabilities (Akin & Huang, 2019). Critical peers perceive students with LDs as challenging to talk to, lazy, responsible for their condition, and dangerous (Wood et al., 2014b). Such perceptions create numerous challenges for students with LDs. Therefore, for a student to accept the label of “disabled” is a double-edged sword; they have to accept the stigma attached to the label (e.g., “disabled”) to access positive institutional supports and accommodations.

Furthermore, students with LDs have negative self-perceptions, being misunderstood by faculty, peers, and service providers in the way that accommodations as a marker of weakness, a

privilege, and an excuse influence them to avoid disclosing their disabilities to others (Black et al., 2015; Gow et al., 2020; Kendall, 2016; Lightfoot et al., 2018). Such a number of dilemmas reinforce many inherent challenges for students with LDs to participate fully in post-secondary education.

Post-secondary institutions need to adopt effective strategies to make the meaning of these perceived stigmas towards students with LDs a lot better (e.g., *what and why*). These institutions could convince students to share their learning disabilities with institutional authorities because proper accommodations are necessary for academic success. Without disclosure of their disabilities, students with LDs may experience limited access to the necessary accommodations and support services compared to students with other disabilities. This significantly impacts their academic success and overall well-being. Additionally, students with LDs may experience low self-esteem or confidence, particularly if they have faced discrimination or limited opportunities in the past. The stress and anxiety caused by these experiences can negatively impact on the mental health and overall well-being of students with LDs.

Challenges to Academic Performance

Though the level of academic preparedness may vary in degree, prerequisite cognitive and academic skills required for success in higher education are similar for all students (Foley, 2006; Reed et al., 2011). However, students with LDs arrive at post-secondary institutions with little different characteristics; some experience anxiety as other students at this education level, take less responsibility for their learning, and have a lesser repertoire of knowledge and study strategies (Abreu-Ellis et al., 2009).

In their research comparing students with and without dyslexia in anxiety associated with a timed reading test, Carroll and Iles (2006) found that students with dyslexia have anxiety levels well above their peers without dyslexia. Although a small amount of anxiety is a motivator to enhance a student's performance, the anxiety experienced at higher levels can become detrimental to academic performance (Abreu-Ellis et al., 2009). Reed et al. (2011) contend that students with LD anxiety stem from their feelings of lower self-efficacy, perceived levels of competence, and actual achievements. So, effectively dealing with these students' anxiety will benefit academic performance and retention to a greater extent.

Students who have difficulties with poor reading, writing, and spelling in high schools continue to be challenged in their later educational careers (Fullarton, 2016). This is very concerning, given that information, evaluations, and learning materials in higher education are highly text-based (Hollins & Foley, 2013). Difficulties in reading emerge because higher education involves a high volume of reading materials. They also need help to correctly interpret the significance of text-based materials due to reading miscues, leading to negatively impacting their academic performance. Hulme and Snowling (2016) assert that with the identification of word miscuing, students with LDs can use supports such as a reader, a screen reading software, or a tape recorder, making text-based information accessible for their academic performance.

The literature suggests that early identification of LDs is an essential determinant of students' success in post-secondary education. A later diagnosis causes a delay in receiving services that impact students' academic performance. For example, students require the skills necessary to decode information, remember the learning materials, and communicate these materials in an organized and coherent manner during assessment (Abreu-Ellis et al., 2009). In their research comparing the early LDs identification group and the late LDs identification group

related to test-preparation and test-taking strategies, Abreu-Ellis et al. (2009) found that students who were diagnosed later did not have access to the same opportunities in the form of test preparation and test-taking strategies as their peers with a documented LDs from their high schools. Early identification of students' disabilities would create opportunities for easy access to better academic accommodation. In this case, documentation from students past institutions can be transferred to higher education institutions to ensure prompt access to appropriate academic accommodations.

Nevertheless, many of these assessment documents from their earlier institutions may need to be reassessed for their desired post-secondary institution enrollment because the criteria to accept psycho-educational assessment differs from one institution to another across Canadian provinces. When this is the case, freshly enrolled post-secondary students with LDs face many challenges, including receiving academic and related accommodations in a timely manner and spending extra costs for reassessment.

Challenges to Acceptable Learning Disability Assessment

Students experiencing learning difficulties must have a standardized assessment of their intellectual and academic abilities at the post-secondary level. One issue is that academic accommodations for students with LDs are granted when an “acceptable” psycho-educational assessment provides an LD diagnosis (Gyenes & Siegel, 2014a). Researchers further contend that what "acceptable" means appears inconsistent across post-secondary settings as no commonly accepted and empirical procedure for an individual's learning disability assessment is yet to be established. Appropriate psycho-educational assessments largely differ from one institution to another and even within the same province across Canada. Therefore, students with

LDs rarely access academic accommodations immediately after enrollment, and their academic challenges relative to other students with disabilities remain high.

Students with LDs' complex identification and documentation process relative to other disabilities, inconsistent and incomplete delivery of accommodations, and varying learning disability diagnosis criteria across post-secondary institutions further thwart students with LDs' academic performance and retention.

Transition From High School to Post-secondary Institution

The legislative frameworks that address the issues of disability differ widely from secondary to post-secondary levels in several ways. For example, in high school, parents are involved in the identification process and preparing Individualized Education Plans (IEP). Without parental consent, services and testing may not be rendered. However, in post-secondary institutions, students with disabilities need to act as their own advocates to request and receive appropriate accommodations. In other words, they must self-identify as having their disabilities to others. As resources are not equally accessible to everyone within the post-secondary setting, students with disabilities need to navigate a complex system to access these supports (Mullins & Preyde, 2013; NEADS, 2018).

Transitioning from high school to post-secondary institutions requires students to shift from a position in which their education is managed to one in which they must be in control of their education (Hadley, 2006). As stated earlier, post-secondary students with disabilities are responsible for managing and advocating for any accommodations they require to complete their academic coursework (Getzel & Thoma, 2008). In addition, students are confronted with balancing academic demands and establishing a social life within their new post-secondary education environments. For the first time, many students live alone away from home; they feel

inadequate, lonely, and lack support during the transition from high school to post-secondary level (Mull et al., 2001; Perry et al., 2005). Students are also more likely to be inadequately prepared in study skills organizational skills and have issues with interpersonal relationships (Getzel & Thoma, 2008). Several other studies note that students with disabilities experience low self-concept, depression, poor interpersonal skills, substance abuse, and academic problems (Skinner & Lindstrom, 2003; Smith & Zhang, 2009), which means that they are beginning a journey that includes unique challenges in developing compensatory skills, maintaining motivational drive, and developing and maintaining effective social relationships (Abed & Shackelford, 2020).

Challenges to the Use of Assistive Technology

In one study, data were collected over a 5-year period on students with disabilities at a university in the US who used assistive technology and found that sixteen percent (16%) of students studied indicated that they stopped using assistive technology due to its cost (Malcolm & Roll, 2017). Another challenge students with LDs face is their lack of proficiency in using learning technologies, which is critical to be prepared for and succeed in higher education. Specifically, freshly enrolled post-secondary students with disabilities are less likely be aware of the various assistive technologies available or understand how these technologies could help their studies. These assistive technologies are either lacking certain features, or these features are too complicated to access or do not work appropriately, examples include text-to-speech or speech-to-text translation errors, poor quality audio recordings, and difficulty with playback of audio or video segments (McNicholl et al., 2021). Authors further note that the procedures at post-secondary institutions can cause delays in students with disabilities being approved to use assistive technology or in receiving assistive technology hardware. Some educators are even

reluctant for students to use assistive technology in the classroom or during evaluations. In addition, some students with disabilities need support from a teaching assistant or interpreter and there can be a lack of support staff available (Malcolm & Roll, 2017; McNicholl et al., 2021).

Often students with disabilities must work harder than their peers to keep up with their coursework, so they have little spare time. They do not have a lot of time to spend learning new assistive technology on their own (Malcolm & Roll, 2017). This appears to be more prevalent in students with "invisible" disabilities, such as mental health disabilities like generalized anxiety disorder, obsessive-compulsive disorder, and bipolar disorder (Ko & Petty, 2022). Ko and Petty (2022) further note that students with disabilities may not be aware of the various assistive technology available or understand how these technologies may help them.

There are many benefits to the use of assistive technology for students with disabilities in a post-secondary setting. Assistive technology can increase students' comprehension of course material and their ability to communicate their learning. This leads to improved grades and increased persistence in their courses and program of study (Malcolm & Roll, 2017; McNicholl et al., 2021). Assistive technology can lead to improved psychological well-being for students with disabilities as their motivation, autonomy, self-esteem, and sense of belonging increase through the successful use of assistive technology.

Although many assistive technologies exist, there are several barriers to their use. Cost plays an inhibiting role in the successful use of assistive technology from both the initial assistive technology purchase as well lack of funding for post-secondary staff to advocate for assistive technology and to provide training and troubleshooting for students (Malcolm & Roll, 2017). Without support, students with disabilities can become overwhelmed by complicated technologies.

Summary

Apart from the challenges outlined above, the review of recent literature informs many supportive factors crucial for post-secondary students with LDs toward academic success, including family and peer support, positive attributes of faculty members, and appropriate accommodations (Banks, 2014; Erten, 2011; Fullarton, 2016; Gow et al., 2020). Institutional support and related accommodation services are not the only factors that have an impact; critical external supporting factors also contribute to the success of students with LDs. Zheng et al. (2014) note that self-determination, perseverance, and desire for a better future are critical for the continued success of students with LDs.

Success Factors for Students with LDs in Higher Education

The review of the literature uncovers many success factors directly contributing to the academic and related successes of students with disabilities in higher education (Alyahyan & Düşteğör, n.d., 2020; Condra et al., 2015; Showers et al., 2021; Thapa et al., 2022; Trimmis & Bessas, 2016). Several authors have identified success factors such as effective academic accommodations, a supportive faculty, intrinsic motivation, and strong family and peer support are crucial for contributing to academic and related successes specifically for students with LDs (De Los Santos et al., 2019; Gow et al., 2020; Lightfoot et al., 2018).

De Los Santos et al. (2019) explicitly mention that academic accommodations best suited to individual student needs, such as extended exam times or alternative formats, help students with LDs overcome their barriers reasonably without declining academic standards. Lightfoot et al. (2018) note that faculty awareness and their sensitivity toward the challenges of students with LDs are crucial for promoting a positive learning environment. Gow et al. (2020) view that self-

determination, perseverance, and strong support from family and peers contribute significantly to students' academic success.

Academic Accommodation

Because disabilities must be accommodated, post-secondary institutions must extend accommodations when students self-identify their disabilities (De Los Santos et al., 2019). Zeng et al. (2018) speculate that the student-centered approach is essential to current academic interventions for post-secondary students with LDs. Other studies suggest that this approach is proven practical for students with LDs acquiring skills to promote their academic success (Cooper et al., 2011; Zeng et al., 2018). The approach follows an individualized education plan designed specifically to overcome academic barriers of students with disabilities (Penney, 2018). So that individualized interventions can help students overcome their academic challenges and maintain success as the outcomes of these interventions are more effective than general interventions.

For example, students with dyslexia may struggle to correctly interpret the text-based learning materials and need accommodations such as a reader, a screen reading software, or a tape recorder (Hulme & Snowling, 2016). Although students with LDs' accommodation needs differ between two different types of LDs, they may also intersect. For example, dyslexia can occur in association with dyscalculia (Mammarella et al., 2013). For this reason, customization of the unique needs of students with LDs is important in suggesting support services and accommodations.

De Los Santos et al. (2019) contend that providing academic accommodations to students with disabilities does not necessarily mean lowering or substantially modifying essential requirements of academic rigors of a course. The objective is to make meaningful access to

course resources effective for students with LDs success because accommodations in students' deficiency areas would increase and contribute to their academic success.

Table 4

Success factors for students with LDs in higher education

Success Factors	Relevant Excerpts	Relevant sources
Academic Accommodation	"Post-secondary institutions must extend accommodations when students self-identify their disabilities (De Los Santos et al., 2019)." - <i>Accommodations for students are crucial for academic success.</i>	De Los Santos et al., 2019; Zeng et al., 2018; Penney, 2018; Bolt et al., 2011
	"The student-centered approach is essential for overcoming academic barriers (Zeng et al., 2018; Penney, 2018)." - <i>Individualized plans address specific challenges.</i>	
	"Accommodations should not lower academic standards but make resources accessible (De Los Santos et al., 2019)." - <i>Focus is on access, not lowering rigor.</i>	
	- "Accommodations vary based on specific needs (Bolt et al., 2011)." - <i>Customization is essential for effective support.</i>	
Faculty Members' Perspectives	"Faculty attitudes towards students with LDs can be a barrier (Erten, 2011)." - <i>Attitudes affect effectiveness and success.</i>	Erten, 2011; Marshak et al., 2010; Lechtenberger et al., 2012
	"High awareness of students' needs by faculty is crucial (Marshak et al., 2010)." - <i>Understanding and sensitivity are key.</i>	
	"Faculty should be sensitive to disability issues and address learning needs from students' perspectives (Lechtenberger et al., 2012)." - <i>Proactive engagement is essential.</i>	
Intrinsic Factors	"A strong drive to succeed and positive attitude are key (Lightfoot et al., 2018)." - <i>Determination and resilience are important.</i>	Lightfoot et al., 2018; Getzel & Thoma, 2008; Gow et al., 2020; Zheng et al., 2014
	"Understanding how to access accommodations is a crucial skill (Getzel & Thoma, 2008)." - <i>Self-reliance aids success.</i>	
	"Personal attributes like determination and perseverance are integral to success (Gow et al., 2020)." - <i>Assertive characteristics are critical.</i>	
Family and Peer Support	"Family support is a significant determinant of positive academic identity (Gow et al., 2020)." - <i>It supports achievements.</i>	Gow et al., 2020; Couzens et al., 2015
	"Students rely on family and peer support (Gow et al., 2020)." - <i>Vital where institutional support is seen as inadequate.</i>	
	"Peer support helps with planning and organizing difficulties (Couzens et al., 2015)." - <i>It contributes significantly to success.</i>	

Faculty Members' Perspectives

The barrier most often cited in literature is faculty perspectives towards students with LDs (Erten, 2011). Students with LDs feel that faculty members' high awareness of their unique needs and priorities is crucial for their academic success (Marshak et al., 2010). As students have more frequent interactions with faculty than others in post-secondary institutions (Walker, 2016). Lechtenberger et al. (2012) contend that faculty members should be more sensitive towards disability issues and deal with disabled students' learning needs from the students' perspectives.

One study of Smith and Tylor (2011), a comprehensive analysis of the experiences of students with LDs in higher education, posits a significant disparity in how Faculty students perceive the challenges faced by these students. They argue that faculty members often focus on academic performance or behavioral issues, overlooking these students' underlying cognitive or neurological challenges. It is important to note that these challenges could include difficulties in processing information, organizing thoughts, or maintaining attention. Faculty members are frequently concerned about challenges such as difficulty in classroom management, the need for awareness about appropriate accommodations, or limited time and resources to implement individualized support.

Nevertheless, it is crucial that students with LDs are not just understood, but fully supported by faculty, particularly in terms of the availability and effectiveness of accommodations (Ingraham et al., 2018). The impact of faculty support on students with LDs and their academic success is not just significant but crucial. Besides, when faculty members remain unaware of or unwilling to make necessary adjustments to teaching methods or assessments, these students may experience helplessness (Hansen et al., 2017). This could significantly impact their academic success and overall education experience.

Lightfoot et al. (2018) argue that an effective and informed faculty not simply have a positive, non-judgmental view of LDs; they need to be aware of the educational challenges students encounter. Besides, faculty members' willingness to address the unique educational needs of students with LDs, such as providing extended time on exams, alternate exam formats, and implementing adaptive teaching approaches, benefits their academic success. Arguably, supportive faculty could engage with students with disabilities in exploring ways to overcome their barriers to learning. Studies also suggest that post-secondary institutions need to create opportunities to develop faculty awareness towards the unique needs and priorities of students with disabilities (Trimmis & Bessas, 2016). As students with LDs need accommodations and denial of them negatively affects their experience at higher education, specifically their academic success and sense of belonging (Banks, 2014; Duquette, 2016; Erten, 2011).

Intrinsic Factors

One study of Lightfoot et al. (2018) found that having a solid drive to succeed, a positive attitude towards learning and a strong belief in student's ability is key to overcoming their challenges. Researchers, however, contend that understanding how to access accommodations is a critical self-determination skill for students to successfully transition to and succeed within post-secondary institutions (Getzel & Thoma, 2008). Gow et al. (2020) highlight that students' self-reliance and self-determination, knowledge of their disability, and related needs are critical factors to their academic success.

There is limited research in reviewing how self-concept and self-determination impact students with and without LDs academic success. The review of available literature often cited that students with LDs' tenacity and determination are key factors in their academic success (Gow et al., 2020; Zheng et al., 2014). The current review of literature demonstrates that students

with LDs personal attributes such as strong determination to succeed, perseverance, and desire for a better future as integral in their academic successes. Their assertive characteristics, such as taking the initiative, being stubborn, and being willing to prove others wrong, are critical to their success.

Family and Peer Support

Families have been identified as a significant determinant of students' positive academic identity and serve as many success factors (Gow et al., 2020). Although family support is beneficial to students with LDs, lack of support does not always result in decreased functioning (Fullarton, 2016). Even though faculty members provide emotional support, some students with LDs express their discomfort in discussing their needs with them (Fullarton, 2016). Students have the feeling that faculty members will misunderstand them or make them feel guilty for seeking accommodations (Quinlan et al., 2012).

Students, therefore, depend on their peer group and demand support from their family members. They are even reluctant to seek support from institutions because they perceive these supports as inflexible, complex, and lengthy (Gow et al., 2020). As emotional support is scarce in a post-secondary environment, students with LDs mostly depend on their family and friends for social and emotional support, including their peers, for special needs support (Duquette, 2016; Fullarton, 2016).

Critics assert that peer support can lessen the planning and organizing difficulties of students with a learning disability, while peer group supports are an influential determinant in students with LDs academic success (Couzens et al., 2015b; Gow et al., 2020). Because peer groups can contribute much to building students' skills in planning and organizing when they are

in study groups. Therefore, building on and strengthening peer and family support is crucial for post-secondary students with LDs academic successes.

Acknowledging these multifaceted contributors from the institutional (e.g., faculty, peers, and disability service office), individual, and family levels is essential. Post-secondary institutions should consider this diverse range of factors crucial in supporting and accommodating students with LDs. The practical and appropriate interventions in terms of academic support and related accommodations from the institutional, individual, and family levels are significant for the overall success of post-secondary students with LDs.

Summary

The literature review shows that students with LDs experience numerous barriers to success in education relative to students without a disability. Access to accommodations is a determinant of students with LDs' academic success, but students receive accommodations only when they self-identify as having a disability. Post-secondary institutions have a moral and legal responsibility to offer support and accommodations that allow students with disabilities to succeed when they admit students (Fullarton, 2016). Nevertheless, students with disabilities are obliged to navigate a complex system to access these services. Their learning challenges appear largely misunderstood within this complex system (Gyenes & Siegel, 2014b).

The literature review also shows that students with LDs undertake a challenging journey attending post-secondary institutions; their academic efforts intertwine with their type and degree of learning disability. Besides, comorbid conditions in students with LDs reinforce their challenges in post-secondary education. These additional disabilities intensify their academic and related difficulties and often limit their ability to compete effectively with their non-disabled peers and students with single disabilities. Therefore, the challenges to accessing appropriate

disability services for post-secondary students with LDs face demand persistent resilience, individually designed accommodations, and related support services to succeed. Students with LDs transitioning from high school to higher education institutions also present a multi-layered challenge that impedes their academic success and affects their personal and social lives.

The literature review identified that a flexible resource navigating system is significant for students with LDs to access and receive support and accommodations. Besides, students' self-determination, attributes of coping with challenges, power of communication with faculty, service providers, and peers, and their strong desire to succeed are critical determinants to overcome their challenges to learning.

More specifically, the literature review highlights the significance of understanding the challenges post-secondary students with LDs face from their perspectives. Firstly, the review highlights that the nature of the challenges experienced by students with LDs should be observed through the students' perspectives (Fullarton, 2016). This aligns with Research Question 1, which seeks to uncover the challenges faced by post-secondary students with LDs. The objective here is to delve into the types and characteristics of challenges faced by post-secondary students with LDs in order to uncover relevant narratives informed directly by those affected.

Secondly, the literature review focuses on understanding challenges from the perspectives of students with LDs, which connects with Research Question 2, exploring their understanding of these challenges. By grounding the research in constructivism, which values personal perspectives and subjective experience, this study seeks to uncover how students interpret and make sense of their educational challenges (De Freitas, 2016; Mills et al., 2016; Mogashoa, 2014). Because having a holistic understanding of the challenges faced by students with LDs and how they view and experience these challenges personally and uniquely is crucial to this study.

Research Question 3 concerns factors identified by students with LDs that could positively impact their educational experiences. The literature review shows that insights from students' perspectives could reveal such factors, as understanding the challenges from their experiences might illuminate specific areas where accommodations or support systems could be most effective (Stahl, 1995; Tuli, 2010). The constructivist approach here could involve gathering direct suggestions from students with LDs on what interventions they believe would support their academic success and how these interventions could best suit their needs and priorities (De Freitas, 2016; Lee, 2012; Willing, 2016).

The literature review focuses on understanding the perspectives of faculty members on challenges faced by post-secondary students with LDs. It connects with Research Question 4 and finds their perspectives critical in promoting inclusive education practices. The literature review shows that faculty members have direct interactions with students with LDs, their interactions directly influence the learning experiences of these students. Besides their experiences providing academic accommodations to students with LDs, their insights into the challenges faced by these students contribute largely to identifying effective teaching and learning practices that support students with LDs.

In summary, the literature review explores valuable insights from students with LDs perspectives related to their experiences of challenges at the post-secondary level, including faculty members insights into the learning experiences of these students are crucial for identifying, understanding, and addressing the challenges they face in a way relevant to their lived experiences (Mullins & Preyde, 2013; Stolz, 2020; Wilson, 2015).

Chapter 3: Research Methodology

A systematic review of contemporary research paradigms acknowledges that the selection of research methodology is contingent on the philosophical paradigm that guides the research activity, beliefs about the nature of reality and human beings “*ontology*”, how researchers can examine the nature of reality “*epistemology*”, and how that knowledge can be accessed “*methodology*” (Lee, 2012; Park et al., 2020; Slevitch, 2011). So, researchers use methodologies of their choice to describe, explore, and understand the socially constructed phenomenon that can generally be subdivided into quantitative and qualitative research methodologies (Tuli, 2010). This study used qualitative research and selected an appropriate qualitative research paradigm. In doing so, I thoroughly analyzed different types of qualitative research approaches, including their critique explored deeply by scholars in the field of qualitative research methods.

Qualitative Research

Qualitative research methods include a set of diverse approaches that investigate the complexities of human experiences, behaviors, and social phenomena. Qualitative research methods provide researchers with tools to explore, understand, and interpret the complex and multi-faceted aspects of the human world. Several authors have argued that qualitative research methods are pioneering in understanding the rich and subjective interpretations of human experiences (Connelly, 2010; Flood, 2010; Polkinghorne, 2005). Drawing insights from scholarly books, documents, and peer-reviewed articles, I believe that this method would provide a comprehensive understanding that describes the essence of human experiences as they are lived due to the diverse approaches and nature of qualitative research methods (Connelly, 2010; Creswell, 2013; Denzin, 2003; Flood, 2010; Guba, Lincoln, 1994; Qutoshi, 2018). Additionally,

qualitative research emphasizes the crucial role of participants' perspectives, which constructively reflect the multifaceted aspects of individuals' lived experiences (Donna, 2010).

Qualitative Research and Individual's Lived Experience

Qualitative research is a dynamic and multi-faceted approach that delves deep into the complex phenomenon of individuals' lived experiences. This methodological paradigm has evolved to encompass various techniques, transcending the conventional boundaries of verbal connotations. To truly comprehend how qualitative research captures the nuanced details of individual's experiences, we must delve into various dimensions, including arts-based expressions, narrative analysis, phenomenological analysis, and other methods of qualitative research, the reorientation of quality control, linguistic versus numeric outcomes, data gathering through language, and the pivotal role of research interviews.

One critical facet of qualitative research that contributes to capturing the nuances of lived experiences is the integration of arts-based expressions. In Lindhout's seminal work in 2020, it is argued that arts-based expressions provide a unique window into individuals' experiences related to health, illness, and disability (Lindhout et al., 2020). By incorporating visual art, music, dance, and other non-verbal forms of expression, qualitative researchers can tap into the reflective reservoir of emotions and perceptions that individuals may find challenging to articulate verbally. These artistic mediums offer a canvas for participants to communicate their experiences holistically and nuancedly, transcending the limitations of words alone.

Furthermore, Stiles (1993) sheds light on the fundamental shift in the qualitative research paradigm regarding quality control. Unlike quantitative research, where the emphasis often lies on the objective truth of statements, qualitative research places a higher premium on understanding from the perspective of the individuals under investigation. The aim is not to

measure or quantify experiences but to capture the subjective meaning that individuals attribute to their lived realities. This shift allows researchers to navigate the complex and multi-faceted nature of human experiences, acknowledging that these experiences are inherently diverse and cannot be reduced to numerical values.

Qualitative investigations into human experiences also tend to yield primarily linguistic results rather than exclusively numeric ones, as noted by Polkinghorne (2005). Language is a powerful tool for individuals to convey their thoughts, emotions, and experiences. Qualitative researchers uncover the rich account of meanings embedded in participants' words through narrative analysis, discourse analysis, and other linguistic tools. These linguistic insights provide a nuanced understanding of how individuals interpret and make sense of their lived experiences, unveiling the layers of subjectivity that underlie their narratives.

To further illuminate the process of capturing individuals' lived experiences, Flinders's book review highlights the importance of research interviews (Flinders, 1997). Qualitative researchers often engage in in-depth interviews as a primary means of data collection. In these interviews, participants can share their stories, perceptions, and emotions in their own words and from their unique perspectives. This personalized approach allows individuals to recount their experiences authentically, free from the constraints of predefined categories or scales.

Qualitative research ensures that the subtleties and complexities of their lived experiences are preserved and honored by giving voice to the participants and letting them shape the narrative.

It is worth noting that qualitative research is a multi-faceted approach that captures the nuanced dimensions of individuals' lived experiences. Through the incorporation of arts-based expressions, narrative analysis, phenomenological analysis, and other methods of qualitative research, the reorientation of quality control towards understanding, a focus on linguistic rather

than numeric outcomes, and the use of research interviews that prioritize the perspectives of participants, qualitative research provides a holistic and reflective insight into the intricate complexities of human experiences. It goes beyond traditional verbal interpretations, prioritizing the rich, subjective, and multi-faceted nature of individuals' lived realities.

Importance of Selecting Qualitative Research for this Study

Qualitative research methods can capture the nuances of individuals' lived experiences by using various methods beyond traditional verbal interpretations and prioritizing understanding over objective truth. Qualitative research relies on text rather than numerical data. Research within qualitative methods could enable participants to make meanings of their realities and appreciate their construction of knowledge through practice. Willing (2016) notes that most qualitative studies engage with meaning-making, while researchers construct meaning during their study period. The author further argues that "the construction of meaning is at the heart of qualitative research, and it is no surprise that most qualitative researchers embrace a constructivist perspective" (p. 2). As the construction of meaning is at the heart of qualitative research, it has a distinct connectedness to constructivism (Willing, 2016)). Therefore, this study utilizes qualitative research to understand how students with LDs make sense of the realities of challenges in post-secondary institutions.

Qualitative research is a situated activity where research attempts to make sense of and interpret phenomena that people bring to them (Denzin, 2003). Guba and Lincoln (1994) claim that qualitative study can include many epistemological positions, theoretical frameworks, and methodologies. Qualitative research predominantly involves descriptive data and concerns the research process, not just results. I decided to use qualitative research as it would meaningfully explore my research questions and comprehend the central phenomenon of the problem.

Qualitative research is naturalistic and occurs in authentic settings. Researchers are critical for collecting data and emphasizing other people's perspectives and meanings (Donna, 2010). It is relevant to my study because the challenges of students with LDs are contextual and socially constructed. To construct knowledge of this phenomenon meaningfully, the research selects constructivism's epistemology, which is fundamentally associated with qualitative research.

Relationship Between Phenomenology and Constructivism

This qualitative study integrated phenomenology and constructivism to provide a comprehensive understanding of how students with LDs perceive and interpret their experiences of challenges and how to overcome these challenges in post-secondary education.

Specifically, phenomenology, as a research paradigm, focuses on capturing individuals' lived experiences and understanding the essence of these experiences from their perspectives. The objective is to employ a phenomenological paradigm in this study to explore how students with LDs experience, describe, and assign meaning to the challenges and successes they face in their post-secondary education institutions. This significantly relates to the study's focus on participants' subjective experiences and, more specifically, addressing questions about how students with LDs understand their challenges and what factors contribute to their success.

Accordingly, employing constructivism, the study's epistemological foundation, complements phenomenology by emphasizing that knowledge is actively constructed through experience and interaction with the environment. Considering this framework, the perspectives of students with LDs are not seen as objective realities; their interpretations are revealed by their personal, academic, and social contexts. This perspective is reflected in this study's interpretivist

approach, acknowledging that meaning is co-constructed between participants and their environment rather than uncovered as an external truth.

The depth of students with LDs lived experiences, including how these students construct and interpret their educational realities, has been captured through integrating phenomenology as a research paradigm and constructivism as an epistemological foundation in this study.

Epistemology

Epistemology provides ways to analyze the nature of knowledge and its related notions, including truth, belief, justifications, and knowledge production (Carter & Little, 2016). Scholars like Ayaz and Şekerci (2015), Amineh and Asl, 2015; Bada and Olusegun (2015); Liu (2010); Patton (2014); Ültanır (2012), and many others discussed a number of assumptions and elements within the constructivist paradigm that resonate with the purpose of this study.

Constructivism assumes that there are multiple realities, and these realities are constructed through individuals' lived experiences and interactions with others. Liu (2010) notes that individuals construct meaning from reality but do not passively receive what is taught in their learning environment. It means that learning involves constructing, creating, inventing, and developing an individual's own knowledge and meaning. The process through which students with LDs construct their challenges depends on their biography and social exchange with other individuals within any learning environment. The study aims to uncover as many of these constructions as possible to understand how post-secondary students with LDs perceive their challenges and successes.

Constructivists' view of reality is subjective as it derives from the individual perspectives of participants involved in the study and is thus multiple views. Concentrating constructivism in

this study would illuminate these diverse realities and provide multiple solutions rather than singular "one-size-fits-all" answers to issues related to the challenges of students with LDs.

Constructivism accepts that all knowledge is constructed, and all learning is a process of that construction, and individuals construct knowledge as part of a community (Ültanır, 2012). Individuals create or construct their new understandings or knowledge by interacting with what individuals already believe and the ideas, events, and activities they encounter. So, knowledge cannot only be constructed through interactions with others; an individual's experience of a specific phenomenon is an influential determinant to co-create knowledge.

Constructivism is used to underpin studies that seek to understand how individuals make sense of their everyday lives in their natural settings (Ayaz & Şekerci, 2015). Patton (2014) urges that the only way to know what another person experiences is to experience the phenomenon as directly as possible for ourselves. Constructivism is relevant to my study as it will help construct meanings from the phenomenon through my own experiences and those of participants in the study.

Constructivist researchers remain part of constructing knowledge, and the subject and object are inextricably related, both affecting the other (Kearney, 2009). Researchers within constructivism engage in critical research activities to experience the phenomenon and learn how others experience it to find the true state of the situation. Because of the researcher's position, constructivism is particularly relevant to this study since the meanings of challenges of students with LDs are socially and culturally constructed, and there are interactions between students and their world.

Constructivist researchers collect data through students' interactions in their social and cultural contexts, which will begin with an open-ended inquiry through research questions. The

study conclusions would construct knowledge from meaningful results by interacting with students in their natural settings. This notion of constructivism is quite relevant to this study as the meaning of 'challenge' is attached to a real relationship between the concepts of challenge and students with LDs.

It is important to note that considering a constructivist epistemology in this study shapes the research questions towards one that is about how students with LDs conceptualize their post-secondary educational challenges around them rather than questions relating to actual events in the real world, so the study ends up with something less descriptive information and a bit more analytical data. While the focus of the phenomenological paradigm is on the lived experiences of students with LDs, this study intends to reveal information relating to post-secondary educational experiences but also a whole lot richer information about how students with LDs make sense of their challenges and successes and how far their 'challenges' and 'successes' interrelate each other.

Theoretical Framework

In view of the epistemology of constructivism, the study operates from an interpretivist theoretical perspective grounded in the phenomenological paradigm using a qualitative methodology. The use of phenomenology as a method in educational research has risen in popularity, particularly in studies interested in understanding and generating knowledge about participants' lived experiences in a particular educational context.

According to Sloan and Bowe (2014), phenomenology is a philosophy as much as a methodology. While exploring a phenomenon and the lived experiences of participants in relation to it, the data brings about a philosophical discussion of the research process itself (Creswell, 2013; Creswell, 2016). A preconception of phenomenology is that there is no

dichotomy between subject and object: the reality of an object is always about the subjective experiences with it. Thus, to allow common meanings from the data to emerge, researchers have to bracket their own experiences in the project as much as possible, which otherwise may serve as a canary in the coal mine. Other theories, like complexity theory, also touch on this idea, such that objects in the world never change; instead, by changing the descriptions of objects, we change how we interact with them (Davis, 2009).

Exploring the significance of phenomenology in qualitative research methods, authors like Creswell (2013) and Crist and Tanner (2003) indicate that the objective of phenomenology is to describe, rather than explain or analyze, the *essence* (or deep meaning) of an experience; this description moves past empiricism (knowledge based on the senses) and relies on the intentionality of consciousness to unveil meanings through percepts and experiences. For example, in the field of healthcare education, phenomenology has been used to find the true essence behind *care* by delving into the deep meanings that patients have ascribed to such a term, and this "increases [healthcare professionals'] sensitivity to humans' ways of being in the world" (Crist & Tanner, 2003, p. 202).

Furthermore, phenomenology excels in revealing the unknown surroundings of a phenomenon. As van Manen (2010) explains, phenomenology can be a powerful tool to delve into the meanings that people ascribe to intimacy and privacy in a digital world, a relatively new phenomenon in the 21st century. In a world where secrets are often publicly displayed without much thought from the writer, van Manen (2010) suggests that people have developed an "uncanny sense of intimacy or closeness" (p. 1028) and that the "lifeworld of the digital generation [and] the very meaning and significance of the private may be changing" (p. 1024).

Concerning capturing the essence through a phenomenological description, it has been characterized as an unrestricted process and lacking a linear structure, according to some accounts (Crist & Tanner, 2003; van Manen, 2010). For example, phenomenological research questions usually evolve during the interview process in response to emerging perceptions of participants that require further inquiry (Crist & Tanner, 2003). In addition, the analytical process requires writing, reflecting, and re-writing cycles before essences emerge. In this respect, van Manen (2010) argues that researchers use phenomenology in ways that best suit and fit their research. This ambiguity can leave a researcher wondering whether they are using phenomenology appropriately and to its full potential.

Describing *why* the phenomenological method is beneficial to researchers who are interested in the study of the lived experiences of individuals, Stolz (2020) mentions that phenomenology provides a clear method for accessing some phenomenal domain and a clear means for having a shared, common agreement in the definition of an object. Connelly (2010) further clarifies that phenomenology focuses on the nature of experience from the point of view of the person experiencing the phenomenon. Since humans are embodied beings, they experience life through meaningful interactions with the world around them. This notion is relevant to this study as it wants to make sense of the experiences of post-secondary students with LDs and their reactions to the experience.

Furthermore, this study explores post-secondary students with LDs' interpretations of their experiences by examining the qualities or essence of experiences through in-depth individual interviews. Patton (2014) urges that the only way to know what another person experiences is to experience the phenomenon as directly as possible for ourselves. Corby et al. (2015) further clarified the meaning of the phenomenological perspective by stating that, from a

phenomenological perspective, researchers search for “essentials, essence or the central underlying meaning of the experience and emphasize the intentionality of consciousness where experiences contain both the outward appearance and inward consciousness based on memory, image and meaning” (p. 452).

The primary position of the phenomenological perspective is that the most basic human truths can be accessed only through inner subjectivity and that the person is integral to the environment (Flood, 2010). This is particularly relevant to this study. Since the meanings of challenges post-secondary students with LDs are constructed by themselves as they engage in the world, they interpret. Our knowledge of universals or essences is gained by abstraction from the phenomenon and, therefore, involves a relationship between the perceiver and the thing being perceived (Connelly, 2010).

Flood (2010) asserts that humans are embedded in their world, so their subjective experiences are inextricably linked with social, cultural, and political contexts. This is the case in this study. The researcher engages in critical research activities to experience the phenomenon and learn how others experience it to find the true state of the situation. The study explores the meanings of the lived experiences of students with LDs and how these meanings influence the choices students make rather than seeking purely descriptive categories of the real, perceived world in the narratives of the students with LDs.

The study explores students with LDs' lived experiences in post-secondary education. So that the study obtains students with LDs descriptions of challenges where the researcher sets aside any prior thoughts, conceptions, or judgments the researcher may have so the researcher can be open to the description. The researcher acts in the study to analyze intentional experiences

of consciousness to perceive how the challenges of students with LDs are given meaning and arrive at their essence.

Positionality Statement

The positionality statement provides transparency by openly acknowledging my background, biases, and assumptions. This transparency helps readers understand how my identity and experiences may shape the research process, including data collection, analysis, and interpretation.

Reflecting on my positionality, I was aware of the potential bias during the study process. My years of professional experience working directly with individuals with disabilities made me believe they are as competent as others, whether in education, workplaces, or community interventions. They need their skills and knowledge to be developed in a way that is sustained based on the degree and type of their disabilities.

In education, I believe that despite having a learning disability, all students can learn, and they do so by doing it differently. Many students with LDs may have a great deal of self-determination because they want to succeed like others in society. It may take longer for them to succeed, but they could, and when they will, that remains exemplary in many cases.

While I did not have any professional role at the study site, nor did I hold a professional relationship with potential students with LDs in the study, my previous experience as an educator working with students with LDs helped me to avoid bias. I maintained reflective journals in this study to minimize personal biases because of my views, values, and beliefs. Being reflexive helped me clarify and contextualize my position about the research process, the research participants, and the readers of the research outputs (Gary & Holmes, 2020).

I had to consistently “bracket” my beliefs and emotions to make meaning of and objectively view the data with an impartial lens of the phenomenon (Moustakas, 1994). I used bracketing to identify personal biases and reduce their effect on data analysis. As a researcher, I collected, analyzed, and reported the data accurately while protecting the students' privacy. My value position in my doctoral research allowed students with LDs to share their chronicles so that society becomes more aware of their challenges and successes in the post-secondary educational drive.

Ethical Considerations

The significance of possible areas where ethical concerns can arise was addressed throughout the research process. The study ensured that there was no physical, mental, or social harm to the participants due to the research. The matter of informed consent was maintained strictly. A written copy of informed consent is read and signed by every participant. Privacy was kept in every step of the study, and it was not interrupted even for the sake of the study. There was no way that this study would adopt the path of deception. The participants were well-informed about the purpose of the study so that they could understand the significance of the study and cooperate.

Ethics Approval Process

The data collection was started following the ethics approval. The study submitted an application to the Office of Research Ethics and Integrity at the University of Ottawa, Canada, for their approval to commence research and have consent from human participants. The University of Ottawa Research Ethics Board, which operates in accordance with the *Tri-Council Policy Statement* (2014) and other applicable laws and regulations, has examined and approved the ethics application for the above-named research project on March 03, 2023 (Appendix X).

The researcher's first preference was collecting data from participants at Ontario's post-secondary institutions, hoping that intended data were collected from Ontario's institutions. As the intended data are adequate, the researcher must refrain from the ethical approval process from other institutions of Canadian provinces for participant recruitment, which was the plan initially.

Although I preferred to collect data on campus, I respected the individual preferences of the participants (e.g., students with LDs). Therefore, I conducted remote interviews, ensuring that the quality and standard of the data were maintained.

Data Collection

Distinct from quantitative studies, the sample size is not mathematically calculated in qualitative studies as there are no set rules for deciding the sample number (Depeursinge et al., 2016; Patton, 2015). The sampling method and sample size may vary in qualitative studies as the study progresses and findings evolve (Depeursinge et al., 2016). For this study, a screening questionnaire, an individual in-depth interview (face-to-face or remote) and an open-ended questionnaire for faculty members were the main approach of data collection (Appendix A, B & C). Importantly, in a naturalistic inquiry researchers elect to use him or herself and other humans as the primary tools for gathering data, as humans excel at understanding and interpreting the meanings of interactions and these skills are crucial for accurate analysis of research data (Creswell, 2013; Denzin, 2003; Guba & Lincoln, 1994).

Specifically expressed by Guba and Lincoln (1994) and Shenton (2004), only humans can truly understand and evaluate the unique interaction. Since instrumental involvement disrupts the interdependent shaping of other elements, restricting their capacity to fully comprehend and assess the process. This is because all instruments are influenced by specific

values and interact with local values. It is this influence of values that makes instrumental involvement subjective, and only humans can recognize and, to some extent, account for the resulting biases. In this study, my educational background, which includes training in qualitative methodology, is a key factor in my qualification to act as a human instrument. This, combined with my professional experience as an educator, disability and community development, and research publication based on qualitative inquiry, accentuates my capability and readiness for this role.

The study collected data from ten (10) post-secondary students with LDs in Ontario due to saturation. There has been much debate and disagreement among social sciences professionals and researchers who define data saturation from their perspectives, including the importance of data saturation. For example, Saunders et al. (2018) defines saturation as “the point in coding when you find that no new codes occur in the data. There are mounting instances of the same codes, but no new ones” (p. 1985). Authors like Given (2015) considers saturation as the point at which ‘additional data do not lead to any new emergent themes’, a similar position regarding the non-emergence of new codes or themes has been supported by Birks and Mills (2022) and Olshansky and Chesnay (2015). Therefore, the sample size in this study was determined to the point at which the study realized that no new codes, which thereby led to any new categories and emergent themes, were obtained from the participants.

Additionally, qualitative research studies vary in their end goals; for example, some studies necessitate a comprehensive exploration of all possible avenues, while others require fewer comprehensive studies. In accordance with this understanding, this study was not designed to generalize findings broadly but to focus on specific cases. This approach was carefully

considered and implemented, concentrating on the idiographic experiences of students with LDs in post-secondary education.

The study generated a pool of potential participants based on the findings from Sections A and B of the screening questionnaire and assigned a pseudo-code for each participant based on information richness. In order to learn the perspectives of faculty members at participating institutions or other Ontario post-secondary institutions who have experience supporting students with LDs or knowledge about reasonable ways to provide accommodation and support services to students with LDs were consulted in this research study. Faculty members were given an open-ended questionnaire for faculty members to learn their perspectives on providing academic and related accommodations, including the challenges faced by students with LDs toward success.

Recruitment of Participants

Access to Participants

The participants (e.g., students with LDs) were recruited through the Undergraduate and Graduate Students Association (GSA) of the University of Ottawa, Carleton University, Critical Disability Studies at York University, and the Learning Disabilities Association of Canada (LDAC). The faculty members were recruited through the list of professors/instructors and their contact information on the Ontario post-secondary institution's website. Also, the faculty members were contacted in recruiting for the study with whom the researcher has personal contacts.

In the case of student participants, the study sent an introduction letter to the Undergraduate and Graduate Student's Association (GSA) of various Ontario post-secondary institutions and the Learning Disability Association of Canada (LDAC) requesting their

assistance in recruiting this group of participants (Appendix D & H). The introduction letter, including a student recruitment poster, clearly explained the nature and process of the study and informed participants that they would not be affected by their decision to participate or not to participate. The recruitment poster was embedded with a QR code and a hyperlink that included a consent form followed by the “screening questionnaire” created using the University of Ottawa licensed *Survey Monkey* survey platform.

Initially, the study aimed to select from a pool of fifty (50) potential participants. The study had given a deadline date to respond to the “screening questionnaire” and within this time frame, only thirty-five (35) students with LDs were included. Their information was taken into account for analysis. Secondly, the study considered "information-rich cases" to select the participants for an individual in-depth interview (face-to-face or remote). In doing so, the "information-rich cases" were identified based on the number of questions a participant responded to *Section B* questionnaire and whose responses were exceptionally knowledgeable about or experienced with the phenomenon of this research interest and illuminate relevant insights.

In this process five (5) participants' responses were found ambiguous and incomplete, and they skipped more than five (5) questions in Section B of the “screening questionnaire”. Therefore, the response of students with LDs to participate in this study was limited to thirty (30) individuals.

In the case of faculty member recruitment, the study sent a recruitment text to the faculty members' contact information requesting them to participate in the study (Appendix F). The recruitment text clearly explains the nature and process of the study. The recruitment text is embedded with a hyperlink that includes the consent form followed by a questionnaire

(Appendix L) created using the University of Ottawa licensed *Survey Monkey* survey platform to have more in-depth information about this research study and proceed or not to proceed.

Specific Inclusion Criteria

Students with LDs were selected for inclusion by identifying as having various learning disability diagnoses according to their psycho-educational assessments, being 16 years of age and over, currently enrolled either full-time or part-time at the post-secondary level, and commitment to participate in a 60-to-90-minute interview for this study.

Faculty members at the Ontario post-secondary institutions were sent an open invitation to participate in this study. Faculty members who were interested in participating in the study were sent an open-ended questionnaire.

Number of Participants

The study generated a pool of thirty (30) potential participants (e.g., students with LDs) based on the findings from Sections A and B of the screening questionnaire and assigned a pseudo-code for each participant based on information richness. Information collected from Sections A and B was considered as research data; however, the study selected ten (10) information-rich cases from this pool of students.

The study received responses from five (5) faculty members who completed and sent the open-ended questionnaire. The data from the open-ended questionnaire for faculty members can provide valuable insights into the experiences of post-secondary students with LDs. Their perspectives shed light on the nature of the challenges these students face, suggesting a broader context to the barriers identified by these students themselves. Understanding how faculty perceive and address these challenges is crucial in revealing the support systems and barriers within the educational environment (Erten, 2011; Lightfoot et al., 2018). This, in turn, can help

identify gaps in awareness or support that impact students with LDs experiences and academic outcomes, and their faculty members play a supportive role in this process (Lipka et al., 2019).

Additionally, faculty insights into effective interventions and accommodations could highlight successful strategies and areas that need improvement, directly correlating with the factors identified by students with LDs for their academic success. Therefore, the data compiled from an *"open-ended questionnaire for faculty members"* improves the understanding of students with LDs by providing a complementary viewpoint that enhances the depth and breadth of the research findings on their educational experiences.

Participants Selection Process

Purposive sampling is used in qualitative research, usually with a small sample size, to ensure that the sites and participants selected can provide information-rich cases for in-depth study and purposely inform the understanding of the research topic and methods (Creswell, 2016; Patton, 2014, 2015). Seidman (2013) posits that when doing a phenomenological study finding "a sample of participants who all experience similar structural and social conditions give enormous power to the stories of relatively few participants" (p. 59). Therefore, the study utilized a purposeful sampling method and considered "information-rich cases" to select the participants. As Patton (2015) argues, information-rich cases are those from which researchers can learn a great deal about issues of central importance to the purpose of the inquiry that yields insights and in-depth understanding rather than empirical generalizations.

For example, an "information-rich case" in a study exploring the challenges faced by post-secondary students with LDs could provide detailed insights into the barriers they have encountered, such as difficulties with reading and writing comprehension and time management, as well as the strategies they have developed to succeed, including the use of assistive

technologies and accommodations. Johnson (2022) conducted a qualitative study with a student who had been using disability support services for four years and could describe how these services evolved to meet their needs and the ongoing challenges with self-advocacy and stigma.

A "non-rich case" in the same study might involve a student recently diagnosed with a learning disability and is just beginning to understand their needs and the available support options. This student, due to their short experience, might provide limited information. In Johnson's (2022) study, a participant who had only recently registered with disability services was unable to provide comprehensive insights into long-term strategies or the effectiveness of accommodations, resulting in less substantial data.

The "information-rich cases" in this study were identified based on the number of questions a participant responded to the *Section B* questionnaire and whose responses were exceptionally knowledgeable about or experienced with the phenomenon of this research interest and illuminate relevant insights. This study aims to learn as many of these insights as possible to understand how post-secondary students with LDs perceive their challenges and successes. Besides, participants who could communicate experiences and opinions in an articulate, expressive, and reflective manner were considered "information-rich cases" (Palinkas et al., 2015).

It is significant to understand the most valuable learning strategy that faculty members have implemented to improve the learning environment for students' success, their understanding of what students need the most for their academic success, and the challenges students continue to face in learning. Therefore, it is of value to learn the perspectives of faculty members who have experience providing accommodations and academic support to students with LDs or have knowledge recommending appropriate accommodations and support to students with LDs.

Research Instruments

Three research instruments, a screening questionnaire, an individual in-depth interview (face-to-face or remote) and an open-ended questionnaire for faculty members, were utilized to gather data and information in this study. The study developed an initial screening questionnaire to select participants based on the predetermined criteria of a diagnosed learning disability and post-secondary student status at Ontario's university or post-secondary institution. The diagnosis should be obtained from a professional qualified to administer and interpret standardized psychometric tests, such as a psychologist, psychiatrist, or speech and language pathologist. When considered acceptable by higher education institutions, this documentation allows the student to receive accommodation at the post-secondary institution they attend.

The screening questionnaire has two sections: Section A and Section B. The objective of Section A is to ensure whether the participants meet the inclusion criteria for participating in the study. The screening questionnaire was developed so that only participants who meet the inclusion criteria outlined in Section A of the screening questionnaire were allowed/directed to Section B. The objective of the Section A questionnaire only serves the purpose of whether or not the participants are eligible for the study. The data collected through Section B of the screening questionnaire was used for the recruitment of individual in-depth interviews (face-to-face or remote).

The second part of the screening questionnaire (e.g., Section B) aims to obtain insights that would allow for participant selection and increase sample variation. The eligible students will then be given Section B of the screening questionnaire, which will provide participant background information highlighting differences in initial experiences such as age and the grades of diagnosis, type of learning disability, and specific educational approaches experienced in

terms of interventions and accommodations, secondary school completion, and their obstacles to transition from secondary to post-secondary level. These data have been integrated with the data revealed from the individual in-depth interviews, and the data sets of each participant have been compared using the same analytic approach.

The individual in-depth interview (face-to-face or remote) is a semi-structured questionnaire used to conduct interviews and meaningfully understand students with LDs' challenges and successes related to their post-secondary education experiences. The objective of the interviews was to gain in-depth participant narratives that describe the meaning of post-secondary education for participants and explore how participants make sense of the challenges and successes often experienced at different points in their education journey.

The open-ended questionnaire for faculty members was designed to understand the experiences of teachers, instructors, and faculty members' perspectives on supporting students with LDs at a post-secondary institution. This interview questionnaire is designed to address the study's primary and secondary research questions in a comprehensive manner. It provides an external viewpoint on the challenges faced by students with LDs, the effectiveness of accommodations, and the perspectives of faculty members. This complements the insights of students with LDs and helps to understand how the educational environment impacts student success.

Through exploring the perspectives of students with LDs on their educational experiences, challenges, and accommodations, interviews directly addresses the primary research question about how they make sense of their post-secondary education experiences. In addition, questions about challenges, stigmatization, and accommodations in this interview provide data

relevant to the secondary research questions regarding the nature of challenges faced by students with LDs and potential factors contributing to their success in education.

Instruments Development Process

I have followed a structured process to design and develop data collection materials for this study that were effective in gathering comprehensive and meaningful data while being considerate of participants' needs and aligning with the research objectives.

Research Purpose and Objectives Clarification

Before developing the data collection materials, I first clarified the research objectives, which were to understand the experiences, challenges, and supports of students with LDs in post-secondary education. Based on these objectives, I identified the necessary information to collect, such as academic challenges, support systems, experiences of stigmatization, and faculty perspectives on accommodations.

Review of Literature and Existing Tools

To ensure the questions were relevant and grounded in theory, I reviewed graduate-level theses and dissertations, peer-reviewed articles, and reports published from 2010-2021, mostly in the EBSCOhost, ERIC ProQuest, and Google Scholar online research platforms. My professional experience conducting evaluation research, particularly on the challenges faced by students with disabilities in education in less developed countries, helped develop the questionnaire. Besides, in my doctoral-level courses, for example, *EDU 8190: Qualitative Research II* and *EDU 5258: Learning Differences in Education*, at the Faculty of Education, University of Ottawa, Canada, I have carried out small qualitative studies concentrating on educational challenges faced by women with disabilities in Bangladesh. By reviewing existing literature and tools used in similar

studies and looking at theories in educational psychology that inform the questions I would include in the data collection materials.

Designing the Students Screening Questionnaire

The Screening Questionnaire was designed to quickly assess whether participants met the criteria for inclusion in the study and to gather basic demographic information. I included questions about the participant's learning disability diagnosis, areas of academic difficulty, and level of commitment to the study. I also incorporated both multiple-choice and Likert-scale items for quantitative data, as well as open-ended questions to explore more complex aspects of their experience dealing with LDs, including social, emotional, and academic impacts.

Designing the Individual In-depth Interview

The Individual In-depth Interview aimed to collect rich, qualitative data on the students with LDs lived experiences. I divided the interview into sections such as personal educational views, interactions with others (family, faculty, peers), academic accommodations, challenges, and successes. I used open-ended questions to encourage detailed responses, focusing on various aspects of the students with LDs educational journey, including their motivations, experiences with faculty and peers, and the impact of accommodations on their success. The goal was to capture the depth and complexity of the students with LDs experiences of challenges and successes in higher education.

Designing the Open-ended Questionnaire for Faculty Members

This questionnaire was developed to gather faculty members' perspectives on teaching and supporting students with LDs. I asked the faculty to reflect on the challenges they perceive in supporting students with LDs, their experiences providing accommodations, and strategies they have used to improve the learning environment best suited for students with LDs. I also

sought their views on how students with LDs insight into online courses, recognizing that this is an increasingly important aspect of post-secondary education.

Revisiting the Questionnaire

The draft questionnaire was submitted to my PhD Committee Members for their comments and feedback. This helped me assess whether the questions were clear, the length of the surveys and interviews was appropriate, and if any questions needed revision. Feedback from the Committee Members informed necessary adjustments to improve clarity, relevance, and flow, ensuring the questions aligned with the research objectives.

Ethical Considerations

Given the sensitive nature of the topic, I made sure to address ethical concerns by including informed consent procedures. These explained the purpose of the study, assured participants of confidentiality, and clarified that they could withdraw at any time without penalty. I also made sure the questions were respectful of the participants' privacy and dignity, avoiding any potential discomfort while ensuring the data collected was valuable for the study.

Finalize the Questionnaire

After incorporating feedback from the Committee Members and addressing all ethical considerations, I finalized the materials. This ensured they were well-structured, clear, and ready for distribution to participants for data collection.

The Interview Process

The study thoroughly analyzed participants' responses to *Section B of the "screening questionnaire"*. It concluded that only twelve (12) students with LDs had communicated their experiences and opinions in an articulate, expressive, and reflective manner and, therefore, were considered "information-rich cases" (Palinkas et al., 2015). These twelve (12) participants were

communicated requesting them to participate in an interview. Ten (10) participants expressed their interest in participating in this study and sent a signed “Consent Form” (Appendix K) to the researcher.

An interview was then carried out with ten (10) participants to collect narrative data about their post-secondary educational experiences as a student with LDs (see Appendix E & K for the interview guide). Interviews generally lasted around 45 - 60 minutes. The aim of gathering narrative data was to capture participants' natural, unscripted narratives. To facilitate this, interview prompts focused on addressing conversational pauses. The interviews were recorded, with participants allowed to discontinue the recording or refrain from discussing specific topics or probes as desired. This approach is aimed at ensuring an authentic and unforced data collection process.

Data Analysis

This study delves into the lived experiences of post-secondary students with LDs on the challenges and barriers they faced throughout their educational journeys and the strategies they identified to overcome them, including the perceptions of faculty members concerning their experiences supporting these students. The examination relied on scrutinizing raw data to glean insight into the difficulties faced by students with LDs and the factors contributing to their successes. These interviews were instrumental in gathering pertinent information about their experiences in post-secondary education and capturing their recommended approaches to foster academic success for students with LDs.

Data Analysis Process

The data analysis in this study represents the process I undertook to gain insight into the educational experiences of post-secondary students with LDs. I began by familiarizing myself

with the data and identifying key challenges and success. I then generated initial codes and grouped them into broader themes, such as themes related to challenges and success. Reviewing and refining these themes, I captured the complexities faced by students with LDs. This process provided valuable insights into the barriers and supports influencing post-secondary students with LDs education experiences.

Familiarization with the Data. The first step in my analysis was reading through the transcripts to familiarize myself with the overall data. This was an essential step as it gave me a broad understanding of the key challenges and support described by students with LDs in post-secondary education. I specifically looked for repetitive themes, struggles, and coping mechanisms participants shared. I wanted to engage with the material in a way that would allow me to form an in-depth understanding of their lived experiences.

For example, a recurring theme that emerged early on was the importance of academic accommodations provided by post-secondary institutions. One participant shared, "*... Accessible Learning Services support me, including academic accommodations, assistive technology training, and referral to on-campus and community services.*" This clearly indicates how institutional support is vital for students with LDs to succeed. However, it also underscored the complexity of accessing these services, as another participant mentioned, "*I had to redo and re-submit diagnosis documentation to the Accessible Learning Services Office*"— an administrative issue that could slow down or discourage students with LDs from accessing the support they need.

Another theme that immediately stood out to me was students with LDs' interpersonal interactions with faculty and peers. One student reflected, "*A strong and positive interaction with faculty members makes a difference in my learning experiences,*" showing that faculty support is

pivotal in promoting positive educational experiences for students with LDs. This stood in contrast to experiences where peer interactions were described as challenging. One participant said, *"Sometimes, non-disabled peers' attributes negatively influence my everyday educational journey."* This highlighted the social barriers that students with LDs face in a university setting.

Generating Initial Codes. After becoming familiar with the data, I identified and generated initial codes. I examined the data line by line during this stage, marking relevant excerpts and attaching specific codes to each segment representing key issues or experiences. I aimed to capture the essence of each excerpt while remaining true to the participants' words.

For example, a participant's experience accessing academic accommodations was marked with the code "Academic Accommodations" as it directly impacts students' ability to succeed in post-secondary education. One participant stated, *"Faculty members directed me to secure academic and related accommodation services from the Humber College's Accessible Learning Services Office."* This statement highlights the need for faculty guidance in helping students access these services.

The code "Interpersonal Interaction" captured segments like *"A strong and positive interaction with faculty members makes a difference in my learning experiences,"* reflecting the significant role faculty play in creating a positive learning environment. In contrast, another student shared, *"Sometimes, non-disabled peers' attributes negatively influence my everyday educational journey,"* showing how peer interactions can sometimes have negative consequences for students with LDs.

Another important code was "Self-Identification and Disclosure," particularly when participants discussed the challenges of revealing their learning disabilities. One student shared, *"Initially, I was reluctant to self-identify with faculty members and Dean to secure academic*

accommodations," underscoring the emotional barriers many students face when disclosing their learning disabilities. This was further supported by a statement from another participant who expressed, *"I felt stigmatized going to talk to them about my learning disability."* These experiences were coded to capture the fear and stigma students face in self-identification.

Generating Initial Themes. Once I had generated the initial codes, I began to group them into broader themes. This step helped me identify patterns within the data and better understand the key focus areas for students with LDs. I looked for connections between codes and how they fit into larger conceptual areas.

One central theme that emerged was "Academic and related accommodations". I grouped the codes related to institutional support mechanisms into this theme, such as *"Accessible Learning Services support"* and *"Faculty referrals."* These codes speculated on how important it is for students with LDs to access a range of accommodations, including assistive technology, extended deadlines, and specialized training. A participant highlighted this need, saying, "
..... *Accessible Learning Services support me, including academic accommodations, assistive technology training, and referral to on-campus and community services."* This demonstrated the holistic approach post-secondary institutions need to take to meet the needs of students with LDs.

Additionally, the challenges in accessing these accommodations were evident. One participant shared, *"I had to redo and re-submit diagnosis documentation to the Accessible Learning Services Office,"* revealing a barrier to timely access to academic services. This led me to form a sub-theme within "Academic and related accommodations," focusing on the barriers to accessing accommodations.

The theme of “Interactions with faculty, peers, and families” was also prominent, with codes such as *“Positive faculty interaction,” “Negative peer interactions,”* and *“Supportive family interaction”* being grouped. One participant shared that positive interactions with faculty were crucial: *“A strong and positive interaction with faculty members makes a difference in my learning experiences.”* In contrast, negative peer interactions were highlighted as a significant challenge, with one participant mentioning, *“Sometimes, non-disabled peers’ attributes negatively influence my everyday educational journey.”* These interpersonal dynamics strongly shaped students with LDs experiences in post-secondary education.

The “Self-identification and disclosure of disability” theme emerged from codes relating to students' reluctance to disclose their learning disabilities. One participant revealed, *“Initially, I was reluctant to self-identify with faculty members and Dean to secure academic accommodations”* showing the internal struggle students with LDs experience when deciding whether to disclose. Another shared, *“I felt stigmatized by going to talk to them about my learning disability”* reinforcing the psychological impact of isolating a disability.

Reviewing Themes. With the initial themes in place, I reviewed them to ensure they accurately captured the data. This step was critical for refining my analysis and ensuring that the themes were meaningful and represented the most significant issues. I revisited the data to ensure I was not missing any crucial insights and that the themes were well-organized.

For example, the “Interactions with faculty, peers, and families” theme was refined further and divided into three sub-themes: “Interactions with faculty” which included support from faculty like providing extra-time for exam and assignment submission; “Interactions with peers” such as finding peers who assist negative emotions and creates a supportive learning environment; and “Interactions with families” like the importance of familial cooperation in

recognizing and addressing the challenges faced by students with LDs. The sub-theme of barriers emphasized how positive interaction and engagement with faculty, peers, and families are essential supports for the academic success.

The “Self-identification and disclosure of disability” theme was also refined. The initial codes related to fear and stigmatization were reviewed and merged into one cohesive “Labelling and stigmatization” sub-theme. The review of the data reinforced the idea that many students feel pressure not to disclose their learning disabilities due to the social stigma they associate with being labeled as different.

Defining and Naming Themes. At this stage, I defined and named each theme to clearly reflect the core issues that emerged from the data. I ensured the names were concise and accurately captured the essence of the data. In doing so, I have followed the following strategies in defining and naming themes.

For example, the theme “Academic and related Accommodations” focuses on how essential institutional support is for students with LDs and their challenges in accessing that support.

Excerpt: " ... Accessible Learning Services support me, including academic accommodations, assistive technology training, and referral to on-campus and community services".

Excerpt: " I had to redo and re-submit diagnosis documentation to the Accessible Learning Services Office".

The theme “Interactions with faculty, peers, and families” reflects how students with LDs' post-secondary education experiences are impacted by their positive and negative interactions with faculty, peers, and family.

Excerpt: " A strong and positive interaction with faculty members makes a difference in my learning experiences".

Excerpt: " Sometimes, non-disabled peers' attributes negatively influence my everyday educational journey".

While “Labelling and stigmatization” theme captures the emotional challenges and stigma students face when disclosing their learning disabilities.

Excerpt: " Initially, I was reluctant to self-identify with faculty members and Dean to secure academic accommodations".

Excerpt: " I felt stigmatized going to talk to them about my learning disability".

The theme “Positive interaction and engagement” emphasizes the importance of support from family, faculty, and financial resources in managing post-secondary education.

Excerpt: " My parents are a benefactor in helping me manage my post-secondary educational journey".

Excerpt: " Financial support to purchase adaptive laptops and related electronic devices as it costs more than regular prices".

I have elaborated each step and connected the data with the themes to ensure a comprehensive and in-depth understanding of the challenges faced by students with LDs and factors positively contribute to their academic success.

Writing Up

Finally, stage six focused on writing up the findings. At this stage, I provided a detailed description of each theme, included relevant illustrative quotes from participants' interview data, and discussed the broader implications of the findings.

Phenomenological Analysis

The study utilized phenomenological analysis to understand this phenomenon. More specifically, the experiences of students with LDs in a post-secondary setting. The three phases to analyze a phenomenon - *Epochè*, *phenomenological reduction*, and *structural synthesis* – suggested by Moustakas (1994) were considered for data analysis. The data analysis process utilized phenomenological reduction, including bracketing, horizontalizing, organizing invariant qualities and themes, and constructing textual descriptions (Merriam, 2009; Moustakas, 1994). The data analysis process started with two critical steps: *Epoche and Reduction*.

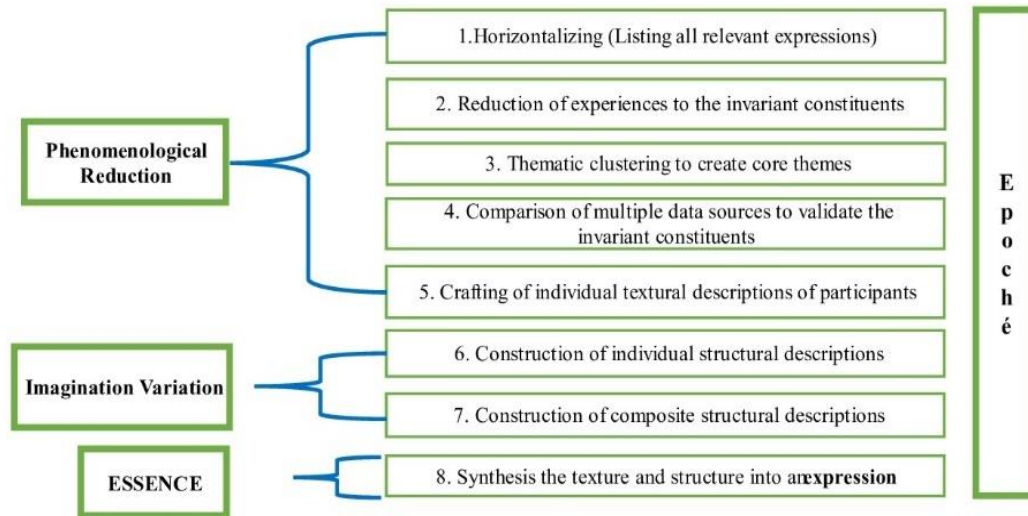
Epoche means “to refrain from judgment, to ascertain from the everyday, ordinary way of perceiving things” (Moustakas, 1994), p. 74; Patton, 2015, p. 55). The perspective of *Epoche* and reduction allows the researcher to become aware of personal biases, remove involvement with subject materials, and eliminate presumptions about the phenomenon being studied (Patton, 2015). It sets aside the researcher from personal judgment and prejudice and lets the researcher dive into the data with a fresh eye.

The second phase of the phenomenological analysis is called phenomenological reduction or bracketing. Phenomenological reduction or bracketing of the data is defined as reviewing the data in the form presented to the researcher (Patton, 2015). The researcher considered the phenomenon with an open mind, from different perspectives, and with the technique of *horizontalizing* that assigns equal value to each statement, representing a segment of meaning (Merriam, 2009; Moustakas, 1994). The statements irrelevant to the topic and question and those that were repetitive or overlapping were deleted, leaving only the *horizons* (the textual meaning and invariant constituents of the phenomenon). Then, cluster the *horizons* into *themes* and

organize the *horizons* and *themes* into a coherent textual description of the phenomenon (the “what”).

Figure 3

Theoretical frameworks, methods, and procedures for conducting phenomenological studies



Note. Adapted from Yüksel, Pelin; Yıldırım, S. (2015). *Theoretical Frameworks, Methods, and Procedures for Conducting Phenomenological Studies in Educational Settings*. Turkish Online Journal of Qualitative Inquiry, 6(1), 1–20.

Finally, the textural-structural description was examined from different perspectives (imaginative variation) that eventually arrived at a description of the structure (the "how"). A textural-structural description that emerged represents the meaning and essence of the experience (Creswell, 2016; Moustakas, 1994). A textural-structural description was generated for each participant by repeating the above steps. The descriptions were integrated into a universal description of group experience (Moustakas, 1994).

Methods of Verification

There are various methods for verifying data in qualitative research. Morse et al. (2002) argue that reliability and validity are still essential for ensuring rigor in qualitative research and that researchers should implement verification strategies during the research process. Sofaer (2002) discusses how qualitative methods such as focus groups and interviews can be used to develop valid and reliable survey instruments and to gather data on patient experiences and responses. Brink (1993) emphasizes the importance of validity and reliability in all research, particularly in qualitative work where subjectivity can cloud interpretation.

The study focused on students with LDs experiences in post-secondary institution settings and emphasized the importance of trustworthiness in qualitative research. To ensure the trustworthiness of this research, the authors employed several verification methods. Shenton (2004) discusses Guba's constructs for ensuring trustworthiness in qualitative research, which include credibility, transferability, dependability, and confirmability. Let us delve deeper into these methods of verification in the context of this study:

Credibility

Reflexive Journaling

Using a reflexive journal was fundamental in this study. The researcher documented reflections, questions for follow-up with participants, and realizations of emergent themes throughout the research process.

This reflective practice allowed the researcher to maintain self-awareness, which is crucial for credibility. It also provided transparency regarding the researcher's thought processes, which can be used to evaluate the trustworthiness of the findings. Therefore, the researcher used a reflexive journal for the entire study period. Journal entries were representative of the

researcher's reflections, questions to follow up with the participants, and realizations of emergent themes.

Transferability

Purposeful Sampling

The researchers used purposeful sampling and thick descriptions to enhance the transferability of the study's findings. A purposeful sampling method was adopted in this study because it involved selecting participants who could provide rich and diverse perspectives on challenges faced by students with LDs in post-secondary education. The thick description refers to providing comprehensive details about the research context, methods, and participants, ensuring that readers have all the necessary information to assess the applicability of the findings to other contexts. This approach increases the study's transferability as readers can judge if the findings are relevant to their settings.

Dependability

Member Checking

Member checking was employed to ensure the dependability of the study. Participants were invited to review the researcher's interpretations of their experiences, and their written feedback was considered for data trustworthiness. This process helps establish the dependability of the findings by verifying that the researcher's interpretations align with the participants' experiences. It minimizes the risk of misrepresentation and strengthens the overall dependability of the research. Participants were asked to review the researcher's constructions of the interview and offer feedback based on their experiences as post-secondary students with LDs.

The study employed a combination of methods to verify its trustworthiness, following the recommendations of Lincoln and Guba (1985). These methods include member checking,

reflexive journaling, purposeful sampling, and thick description. Through these rigorous verification processes, the study aimed to ensure that its findings accurately represented students' experiences with LDs in a post-secondary setting and could be considered credible, transferable, dependable, and confirmable.

Summary

This chapter outlines the rationale for the qualitative methodology. It includes a personal reflection by the researcher on historical events that may have influenced his interpretation of the research findings. This chapter also delves into selecting participants, collecting and analyzing data, methods used to verify the research, and ethical considerations regarding the participants.

Chapter 4 of the dissertation presents the emergent themes identified during the study. These themes are a crucial component of the research findings. In chapter four, I also discussed these emergent themes in relation to existing research and the writings of experts in providing disability services to higher education students. This section connects the study's findings with existing knowledge and expertise.

The final part of the dissertation discusses the practical implications of the research findings and their relevance to future research endeavors. It serves as a link between academic investigation and its potential real-world applications.

Chapter 4: Results

Chapter 4 describes and analyzes the data and information gathered for this study. This chapter includes research participants profiles, including a thorough analysis of participants quantitative and qualitative responses to explore a comparative phenomenon of challenges they encounter and services they receive during their post-secondary education. This chapter also presents an in-depth analysis of accounts of students with LDs specifically of their post-secondary education experiences.

The themes that emerge from students account to explain what it means to have a learning disability as a post-secondary student with LDs and to explain educational interventions or related academic accommodations that positively contribute to their continued success in post-secondary education. This chapter also includes the views of faculty members from post-secondary institutions in Ontario with experience supporting students with LDs or knowledge about reasonable ways to provide accommodation and support to students with LDs.

This chapter also explores faculty members' narratives to meaningfully understand their experience supporting students with LDs. For example, the most valuable learning strategy that faculty members have implemented to improve the learning environment for students' success, their understanding of what students need the most for their academic success, and the challenges students continue to face in learning.

The objective throughout the study is to better understand the experiences of challenges faced by post-secondary students with LDs; how they make sense of these experiences of challenges; and factors that positively contribute to their successes. This chapter concludes with a summary of the data and a preview of the next chapter.

Profiles of Students with LDs

There were ten (10) participants in this study. These selected participants were introduced in a case study format to better understand the unique characteristics of each student with learning disability, including a synopsis of their challenges they encountered in post-secondary education. The focus of this study is on comprehending the phenomenon of students with LDs in Ontarian post-secondary institutions, aiming to understand their unique experiences of challenges they face in this specific context.

Table 5

Profiles of Students with LDs

Participants	Gender	Learning Disability	Challenging areas
Norman	Male	ADHD	Maths, Attention and Memory
Valentina	Female	ADHD	Reading and Attention
Jasper	Female	Reading Disability	Reading, Writing, and Note-taking
Arian	Male	Dysgraphia	Maths and Memory
Ethan	Female	Dyscalculia	Reading, Writing, Spelling, Maths, Note-taking, and Memory
Denise	Non-binary/ third gender	ADHD with Dyslexia	Reading, Writing, Spelling, Maths, Note-taking, Attention, and Memory
Genevieve	Male	Dyslexia	Attention and Memory
Martin	Male	ADHD	Spelling, Maths, Note-taking, Attention, and Memory
Lindsay	Female	Central Auditory Processing Disorder	Note-taking and Attention
Kelly	Female	Nonverbal Learning Disability	Writing, Spelling, Maths, Note-taking, Attention, and Memory

It is important to note that the study considers Attention Deficit Hyperactive Disorder (ADHD), Nonverbal Learning Disability (NVLD), and Central Auditory Processing Disorder (CAPD) as learning disabilities and as participants of this study based on the definitions outlined by the Learning Disabilities Association of Canada (LDAC, 2024) and a critical analysis of their impact on learning and subsequent academic performance. LDAC (2024) documents under "Common LD Terms" states that ADHD is increasingly recognized as a learning disability due to

its effects on attention, impulse control, and executive functioning; Nonverbal Learning Disability (NVLD) affects nonverbal reasoning and coordination, while Central Auditory Processing Disorder (CAPD) impairs auditory information processing, all of which significantly impede individuals' academic performance.

Norman

Norman is a male student at an Ontarian higher education Institution, studying master's level program in engineering education. He has been diagnosed with ADHD and giftedness, which he noted interacts with his ADHD in unique ways. As he said, "I also have "giftedness" which although is not a learning disability, it interacts with ADHD in weird ways" (Norman, 101). Norman further said that he first suspected having ADHD in Grade 9 but did not pursue it further. It was not until the end of his fifth year in a two-year master's degree that he sought a formal diagnosis of ADHD.

During his academic journey, as Norman stated, he faced academic challenges, dealing with issues related to his learning disability, for example, reading, math, attention, memory, and starting assignments on time. Besides, he said that the pandemic exacerbated his emotional challenges, fostering feelings of hopelessness and being overwhelmed. His learning disability also reduced personal relationships with family and faculty members. As he stated:

During the pandemic when I was living back with my family it was extremely difficult because they kept putting way too much pressure on me and would not listen to me when I was trying to explain that they needed to stop. After being diagnosed, they have been much more supportive, but nevertheless the whole experience put a strain on me.

(Norman, 105)

The reluctance to seek help from faculty members is a significant aspect of his experience, and it is deeply intertwined with ADHD-related challenges. His anxiety around asking for extensions/extra-time for assignment submissions from faculty members and inability to plan for certain tasks stem from a fear of judgment or a desire to meet expectations, which he argued may be common experiences for individuals with ADHD. He explained:

Anxiety around asking for extensions; inability to plan for certain things and self-advocate (for example, when trying to select a 4th year project). Actually, I just thought of another one and came up here to write it: I would never go and ask for help because I never thought that I "needed" help when I got things wrong for a few reasons related to ADHD: 1) actually going to office hours or a peer learning time (remembering the time, not being too tired, etc.); 2) not recognizing that there was a possibility of getting better because the self-regulation bit of ADHD means that "you try it once and either you are perfect at it or you will never try it again" (which is an exaggeration, but certainly there is a reduced efficacy in thinking I can focus/learn/improve); 3) being organized enough to know that I needed assistance and where I needed assistance before it was "too late".
(Norman, 105)

Despite these challenges, he managed to receive support from faculty members and service providers, who accommodated his needs. He had an Individual Education Plan for giftedness introduced in Grade 4 but did not have a formal plan for ADHD. For this reason, he wasn't meeting his potential, assuming there was a missing skill or technique thwarting his performance, similar to what other students possessed in accomplishing tasks. As he told:

I believed that I was under-performing compared to my expected abilities and that this was because I lacked some trick or ability to get things done just like other students were. (Norman, 102)

Later Norman noted that his learning disability had a direct effect on his academic performance, leading to a decrease in his GPA. He has been working on developing time management strategies to address the limitations of ADHD. Norman also highlighted the need for hybrid learning approaches to benefit students with LDs, suggesting a mixture of structured class time and unstructured learning time.

Valentina

Valentina is a female participant and a full-time PhD student at Ontario Tech University, studying Criminology and Social Justice. Valentina has been diagnosed with ADHD. She first became aware of her learning disability and was formally diagnosed during her post-secondary education, specifically in her third year of pursuing a PhD. She has experienced difficulties in math, attention, and memory as a result of her learning disability.

In terms of social, emotional, and psychological difficulties, Valentina does not attribute any early school difficulties to her ADHD. She does not feel she has social issues related to her learning disability, as she stated, "I learned about my disability later in life, so I do not equate any difficulties early on in school to my ADHD. I do not feel I had any social issues, or do at my current age" (Valentina, 117). Valentina, however, described that she experiences occasional overwhelm and helplessness due to her ADHD, particularly when facing high workloads and tight deadlines. As she explained her situation in the following way:

I experience overwhelm as a result of my ADHD, but it is not chronic or consistent. It is depending on the level of work I have to do and the timeline I've been given to complete

the task. I do feel a sense of helplessness as a result, but it's only until I figure out a "game plan" so to speak. I don't feel any sense of hopelessness or unworthiness because of it. (Valentina, 117)

Valentina also experiences anxiety, but she is uncertain if it is directly linked to her ADHD, as she noted "Definitely anxiety as a result, but I've always dealt with anxiety so I'm not quite sure if it's a result of my ADHD (and not being diagnosed early on)" (Valentina, 117).

Regarding her interactions with others, Valentina believes that her learning disability has not significantly impacted her interactions with family members or peers. But she acknowledges that it has affected her interactions with teachers or professors, as she requires accommodations such as extra time. She also identifies her supervisor and therapist as individuals who have supported her educational success with the best-suited accommodations.

Valentina did not have a formal Individual Education Plan (IEP) or Individualized Transition Plan (ITP) during her school years. She experiences academic difficulty in post-secondary education related to her ability to organize and plan rather than the quality of her learning and ability as a graduate student. She uses specific time management strategies and accommodations the institution provides to help her succeed in her studies.

She has experienced challenges as a result of her learning disability, particularly in school and in her relationships with family. She has also faced stigmatization related to her ADHD, however, she has not been excluded from an area of study due to her learning disability.

In respect to online learning platforms, she says that remote learning has been complex for her due to the lack of structure, and she suggests more follow-ups and reminders about deadlines as support for students with LDs in remote/online learning. As challenges, she explained that "Remote learning was extremely difficult because I need structure to help me

maintain my time management, as self-driven structures/timelines are difficult to maintain”

(Valentina, 119) and as suggestions, she noted:

More follow-ups from the university (perhaps through the disability services), mainly in reminding about deadlines. I'd also suggest accountability, giving the student multiple deadlines to complete small parts of the bigger assignment/task so that it doesn't get overwhelming when we've procrastinated until a few days before it's due. Or forget!.

(Valentina, 120)

Valentina's profile provides valuable insights into the experiences and challenges faced by post-secondary students with LDs, particularly those with ADHD and diagnosed as having a learning disability at later stage of educational level.

Jasper

Jasper, a female student at Humbler College in Toronto, Ontario, has a reading disability and studies management with a focus on accounting. She was first aware of her learning disability in Grade 5 and was formally diagnosed at the same time. During her K-S4 years, she faced challenges in reading. However, at the post-secondary level, she continues to struggle with reading, as well as writing, attention, and memory issues while having no difficulties with math and note-taking.

Jasper highlights the social, emotional, and psychological difficulties she faces due to her learning disability, including difficulty making friends, feelings of hopelessness, and depression. Jasper acknowledges that her interactions with Faculty peers have been impacted, with faculty noticing her poor performance in theory and peers laughing at her reading difficulties. However, she credits the Dean of the Faculty, a close friend, for supporting her educational success. She

stated, "My Dean of the Faculty a close friend of mine, who contributed to my study" (Jasper, 130).

Despite not having had a formal IEP or ITP during her school years, Jasper uses specific management strategies, such as time management and participation in peer study groups, to succeed in her post-secondary education. She also faces challenges in school and relationships with peers and experiences labeling and stigmatization. For example, she says, "Some of my peers tell me I cannot make it" (Jasper, 131). She feels that the accommodations available to her in post-secondary education differ from those in her earlier school years.

In the context of remote/online learning, Jasper faces challenges due to her need to stare at the computer screen for a long period of time, which exacerbates her reading difficulties. As she said, "Yes, because I have to stare at the screen; it is still part of reading" (Jasper, 131). However, she has access to technological and teaching aids and suggests extra time to support students with LDs in remote/online learning.

Arian

The participant, Arian, diagnosed with dysgraphia, is a full-time student at Humber College Institute of Technology in Toronto, Ontario, studying physical science with a focus on computer science. He first became aware of his learning disability in Grade 5 and was formally diagnosed at the same time. He did not have a formal Individual Education Plan (IEP) and Individualized Transition Plan (ITP) during his school years K-12.

During his K-S4 education, writing and note-taking were problematic areas for him due to his learning disability. Besides, Arian continues to face these challenges in post-secondary education, particularly in reading, writing, note-taking, and attention issues. He also experiences difficulties in maintaining friendships, feelings of helplessness, and low self-confidence, which

he attributes to his learning disability. His interactions with teachers and peers are impacted as they notice his struggles with writing. “The lecturer notices me when I am writing....” and “My colleagues notices too” (Arian, 142).

Despite these challenges, Arian has implemented specific management strategies such as extra time for test-taking, recording lectures, and utilizing tutors to support his academic success. He acknowledges facing challenges in relationships with instructors and peers due to his learning disability. However, he has not experienced labeling, stigmatization, or exclusion from areas of study because of his disability. He notes a significant difference in the accommodation available to him in post-secondary education compared to his earlier years of schooling, particularly in space. As he noted, “Big difference in terms of spaces” (Arian, 143) between K-S4 and post-secondary institutions.

Regarding remote/online learning, Arian does not face challenges due to the virtual learning platforms as he has access to necessary technological and teaching aids. But suggests that “the institution should pay more attention to these ones” (Arian, 143).

Ethan

Ethan, a female student at the University of Windsor, Windsor, Ontario, is a post-secondary electrical engineering degree program student and has been diagnosed with dyscalculia, a type of learning disability. Ethan experiences difficulties in math and memory skills because of her learning disability. She was aware of her learning disability in Grade 5, with a formal diagnosis happening in Grade 6. She had a formal Individual Education Plan (IEP) and Individualized Transition Plan (ITP) during the school years K-12.

During her post-secondary education, Ethan experienced challenges with reading, writing, spelling, math, note-taking, attention, and memory issues. She noted that her learning

disability extends beyond her academic challenges. Her learning disability affects her social, emotional, and psychological well-being. She has difficulties making friends and feelings of hopelessness and anxiety. As she noted, “I try to attach myself somewhere so I will not be full of depression and a lot more” (Ethan, 153).

Interactions with family, teachers, and peers also pose challenges in her educational endeavor. But she tries to overcome these challenges by making others understand her difficulties in learning. As she says, “I just try to make sure they understand who I am” (Ethan, 153). Nevertheless, she receives support from specific individuals and uses various management strategies, including technological aids and institutional accommodations, to overcome these challenges during her academic journey.

Despite the persistent impact on school, home, and relationships, Ethan does not face labeling, stigmatization, or exclusion within her field of study due to her learning disability. However, the academic and related accommodations provided to her in post-secondary education differ from those in her earlier academic years.

She further argued that technological support and teaching aids, particularly valuable during remote or online learning, contribute to her success. So, Ethan advocates for online courses as an inclusive platform for students with LDs, emphasizing the need for continued education accessibility.

Ethan’s profile highlights the importance of individualized support systems and accommodations in facilitating the success of students with LDs. While she navigates challenges, her determination, coupled with the understanding and assistance from supportive individuals and institutions, exemplifies the potential for achievement and inclusion in higher education for those with learning disabilities.

Denise

Denise, a student who identifies as non-binary or third-gender, has been diagnosed with ADHD and dyslexia. They are a full-time student at Algonquin College, pursuing studies in digital art with a specialization in animation. Denise first recognized their learning disability during Grade 10, and a formal diagnosis happened around the same period. Regarding educational interventions and academic management, Denise did not have a formal Individual Education Plan (IEP) and Individualized Transition Plan (ITP) during their school years.

Denise's learning challenges have impacted both academic and personal aspects of their academic life. Specifically, difficulties have emerged in reading, writing, spelling, math, note-taking, attention, and memory. These challenges have posed significant limitations throughout their post-secondary education, especially in certain areas.

Furthermore, Denise has experienced emotional and psychological challenges, including feelings of depression, persistent fatigue, and overwhelming emotions. They have also experienced anxiety, and heightened sensitivity. Describing these emotional and psychological difficulties, Denise mentioned that they are experiencing “overwhelming feelings, constant fatigue, hopelessness, constantly feeling stuck and unworthy” and facing “depression, anxiety, hyperactivity” (Denise, 166).

Denise acknowledges that their learning disability has impacted interactions with family members, teachers, and peers, resulting in deteriorated relationships and negative perceptions from others. For instance, they explained how it “deteriorated my relationships with my parents because I could not perform as well as other kids at school” and how “teachers in certain subjects thought I was being lazy and careless, so they did not like me very much, especially in math”

(Denise, 167). However, Denise received support from their best friend and family members, who have helped them explore alternative ways of learning.

Additionally, Denise has faced challenges in various contexts, including school, home, and relationships with family, instructors, and peers. They have also experienced labeling and stigmatization as a result of their learning disability. However, they have not been excluded from an area of study due to the need to disclose their learning disability for accommodations.

During the COVID-19 pandemic, Denise struggled with remote/online learning, finding it difficult to focus during online classes. They did not have access to technological and teaching aids during remote/online learning and rarely receive specific suggestions for enabling students with LDs to continue their education in this context.

The detailed context provided highlights the challenges and barriers faced by Denise in navigating post-secondary education with ADHD and dyslexia.

Genevieve

Genevieve, a male participant, has been diagnosed with dyslexia and is a full-time student at Wilfrid Laurier University, Waterloo, Ontario. He is studying in the Faculty of Arts, focusing on cultural studies. Genevieve became aware of his learning disability in Grade 4 and was formally diagnosed in Grade 5. He had formal Individual Education Plans (IEP) and Individualized Transition Plans (ITP) introduced in Grades 5 and 7, respectively. Genevieve faces severe difficulties in reading, writing, spelling, math, note-taking, and memory, with moderate attention issues.

Genevieve mentioned that his learning disability impacted his social, emotional, and psychological well-being. He experiences difficulties making friends due to ignorance related to his learning disability. He noted, "I have difficulties making friends because when I try to make

new friends, I am usually mocked or ignored because of my learning disability” (Genevieve, 178).

Additionally, he feels hopeless and sad about his academic performance, leading to occasional feelings of depression, which is reflected in his statement, “I usually get hopeless about my future when I see my academic results, and I am always sad about my learning disability” (Genevieve, 178). Genevieve has experienced labeling, stigmatization, and exclusion from certain study areas due to his learning disability. He notes, “I am not always given a chance to participate in any English language studies classes debate” (Genevieve, 180).

Genevieve further mentioned that he is often unsuccessful in class tests because he is not a fast learner. As he informs, “I am not a fast learner, which is one of the difficulties I have; I do fail many tests because of my learning disability” (Genevieve, 180). However, he adopts specific management strategies and technological support to aid his success in post-secondary education. Besides, he finds accommodations available during post-secondary education different from those available during his school years K-S4 because “In the university, I have some technological support whereas in my K-S4 I did not have” (Genevieve, 180).

Although there are challenges, Genevieve receives support from his family and some faculty members who schedule extra classes for him. For example, in the case of family support, he says, “My parents usually get in touch with me every day to know how I am doing and how is my academic performance; they treat me with care to help support me” and in the case of faculty members supports, he notes, “Some professors do schedule extra classes for me because of my learning disability”(Genevieve, 79).

He finds remote/online learning manageable, as most classes are recorded, allowing him to listen at his convenience and access necessary technological and teaching aids and suggests

that "Free technological and teaching aids should be given to all students with LDs. There should be more funding to help improve remote/online learning" (Genevieve, 187).

Martin

Martin, a full-time student at the University of Toronto, Ontario, studying computer science, was first aware of his learning disability in Grade 7 and formally diagnosed at the same Grade level. He had a formal Individual Education Plan (IEP) during grades K-S4 but did not have a formal Individualized Transition Plan (ITP). He currently uses specific management strategies, such as participation in peer study groups and tutors, to succeed in post-secondary education.

During grades K-S4, he faced challenges related to attention and memory due to his learning disability. In post-secondary education, he experienced severe difficulties with attention and memory while having no trouble with reading, writing, and math and mild trouble with spelling. He faces challenges in understanding what he reads and experiences a range of attention difficulties; he says, "I have problems understanding what I am reading, and my attention wanders a lot" (Martin, 191).

Martin acknowledged feeling anxious, discouraged, scared, and having low confidence, particularly during exams, due to his learning disability. As he says, "Yes, I feel anxious and discouraged," and "I do feel scared and have low confidence when it comes to my exams" (Martin, 190). However, he did not report encountering social difficulties linked to his learning disability. He also mentioned that his learning disability did not impact his interactions with family members, teachers/professors, or peers.

Though Martin experiences challenges as a result of his learning disability, particularly in the school context, he has not experienced labeling, stigmatization, or exclusion from an area of

study due to his learning disability. He also noted that the accommodations available to him during post-secondary education are not different from those available during grades K-S4. Regarding remote/online learning, Martin says that "the only difficulty I face is short attention span," suggesting that extra time for note-taking and more verbal explanations without rushing as support for students with LDs is indispensable.

Lindsey

Lindsey is a female student at Carleton University's Faculty of Public Affairs, majoring in Social Work. She experiences a central auditory processing disorder, a learning disability diagnosed in Grade 2. Lindsey had a formal Individual Education Plan (IEP) from K-S4 but did not have a formal Individualized Transition Plan (ITP).

Lindsay faces difficulties in reading, severe challenges in math and note-taking, moderate attention issues, and severe memory problems. Additionally, she expresses how her disability has impacted her emotionally and psychologically, leading to feelings of hopelessness, low self-esteem, and depression. When talking about emotional challenges, she admits, "I often felt like it was my fault, particularly because many of my teachers would blame me for my struggles" and while regarding psychological difficulties, she confesses, "Yes, I often felt like it was my fault that I could not succeed in school" (Lindsay, 201-202).

Lindsey also mentions the impact on her social interactions, including difficulties forming relationships due to her inability to hear or process others speaking to her. She acknowledges the support she received from her first accessibility worker, who advocated for her. Regarding remote/online learning, Lindsey has not taken remote courses and did not provide suggestions for enabling students with LDs to continue their education in this format.

Kelly

Kelly is a full-time student at Carleton University, Ottawa, Ontario, studying Social Work focusing on children and youth. She was first aware of her nonverbal learning disability (NVLD) in Grade 4 and formally diagnosed in Grade 2. She never had a formal Individual Education Plan (IEP) or Individualized Transition Plan (ITP). Her learning disability primarily affects her social skills, attention, and memory, with varying degrees of impact on reading, writing, spelling, and math.

She struggles to understand nonverbal social cues, leading to difficulties interacting with larger groups. She says, "I struggle to understand nonverbal social cues, which makes it difficult to interact with groups bigger than two people" (Kelly, 213). This resulted in feelings of hopelessness, helplessness, and unworthiness, as well as heightened anxiety that has been reflected in her statement, "As I struggle to understand nonverbal social cues, I worry all the time that I have made a mistake, I question my worth if people actually like me, and I overanalyzed social situations" (Kelly, 213).

Kelly's learning disability has influenced her interactions with family members and professors. She needs to explain to family members how her disability impacts her, and her direct communication style has sometimes been misinterpreted as rudeness by professors. She says, "I am very direct in my communication due to my learning disability. At times, this is seen as me being rude or too abrasive" (Kelly, 214).

Additionally, Kelly faces challenges in time management, prioritization, and social communication, which affect her academic performance; as she said, "I struggle with time management, balancing prioritize, and social communication" (Kelly, 214). Importantly, Kelly

mostly struggles with academic difficulties and the need for accommodations and never faces labeling and stigmatization due to her learning disability.

Profiles of Faculty Members

Five (5) faculty members were recruited to understand their perspectives dealing with the challenges faced by post-secondary with LDs. One significant challenge for students with LDs highlights that positive interaction with faculty members is beneficial for them during their accommodation process and as a key to their success, but students do not feel that faculty members are sensitive to deal with their unique learning needs (Lechtenberger et al., 2012).

Table 6

Profiles of Faculty members

Faculty	Gender	Designation	Training on providing students accommodations
Julian	Male	Associate Professor	“Not at all”
Samir	Male	Assistant Professor	“Not that I can recall”
Nina	Female	Professor	“I can’t think of any”
Steve	Male	Associate Professor	“Don’t recall receiving any training”
David	Male	Professor	“Inclusion, accommodation, and support”

Walker (2016) posits that the more awareness faculty members have about students with disabilities, the more likely they can be successful academically as faculty members' interactions with them are more frequent than others in the institution. Lightfoot et al. (2018) argue that supportive educators could challenge and engage students with disabilities in exploring ways to overcome their barriers to learning.

Julian

Julian is an Associate Professor at a post-secondary institution in Ontario. He is committed to promoting an inclusive educational environment for students with diverse needs

and backgrounds at all levels of education. Julian has experience providing academic accommodations to support students with disabilities at the post-secondary level and recognizes the challenges these students face due to the lack of instructor training on academic accommodations and the need for clear communication about the academic needs of these students.

Julian informs that he has not received formal training on supporting students with LDs but acknowledges the importance of extending appropriate accommodations to students with LDs. He also believes that post-secondary institutions should prioritize instructor preparedness to address the needs and priorities of students with LDs for their academic success.

Julian emphasizes the importance of timely and appropriate accommodation support, specifically in online learning environments, where effective accommodations are significant for students with LDs academic success. Julian's contributions highlight the ongoing need for institutional training and resources to bridge the gap in support for students with LDs in post-secondary education.

Samir

Samir is an Assistant Professor at an Ontario university and actively contributes to advancing inclusive education. He has experience providing academic accommodations to students with LDs by employing Universal Design for Learning (UDL) principles to create accessible learning environments.

Samir further argues that the systemic and cultural barriers often restrict post-secondary students with LDs from practicing self-advocacy for their academic accommodation needs. He believes that promoting a supportive culture that balances seeking accommodations and encourages open dialogue between students and faculty.

Samir also recognizes that strategies best suited for students with LDs in remote or online learning contexts should exist. He acknowledges that building strong faculty-student relationships is critical in remote learning contexts for students' success. Samir informs that he has not received formal training in this area. However, his reflective practices and dedication highlight his commitment to enhancing educational equity for all learners.

Nina

Nina is an Ontarian University professor specializing in special and inclusive education. She has a focus on supporting students with LDs and advocates for flexible, student-centered teaching practices for these students.

Nina has expertise in implementing Universal Design for Learning (UDL), offering assessment methods for students with diverse needs and backgrounds, and promoting an understanding of learning disability among faculty and peers. She emphasizes proactive communication, individualized support plans, and resourceful accommodations for students with LDs that are not limited to alternative assignments and varied instructional methods.

Nina continuously seeks strategies to enhance students' academic success, specifically students with diverse needs and backgrounds, in in-person and online learning environments. She remains committed to creating inclusive environments where all students could thrive academically, regardless of their learning challenges.

Steve

Steve is an Associate Professor at an Ontarian University, has a thoughtful approach to supporting students with LDs. He promotes an open and supportive learning environment and encourages these students for the optimum use of the university's learning services. He has experience providing academic accommodations in the form of extended deadlines for students

with LDs; however, his main focus is helping students develop organizational skills and navigate institutional processes to recognize their needs.

Steve is particularly aware of the unique challenges that students with LDs face, especially in remote or online settings. He suggests innovative solutions like using of software tools to prompt and timely academic task completion for students with LDs. His objective is creating an environment where students feel encouraged and empowered to succeed academically despite their learning challenges.

David

David is a Part-time Professor at an Ontario university and actively accommodates students with learning disabilities by providing extended time for assignments and exams, quiet testing spaces, and adaptive technology.

Although David acknowledges that he has no formal training in learning disability-specific pedagogy, he implements universal design for learning (UDL) principles such as providing accessible learning materials, simplifying instructional content, and offering diverse assignment formats for students experiencing learning difficulties.

David's strategies in addressing disability-specific needs are not only clear but also highly adaptable, ensuring they benefit all learners. In addition, he values balancing institutional support and developing student autonomy, which reflects his commitment to equity and the success of every student.

Making Sense of the Challenges experience by Students with LDs

The study delved into the academic success of post-secondary students with LDs, with a key focus on understanding their unique challenges and the factors that contributed to their success. The screening questionnaire and individual in-depth interviews brought to light a

significant account of diverse characteristics and experiences of challenges among the participants.

To gain a deeper understanding of how students with LDs navigate their experiences of challenges and successes at the post-secondary education level, the study explored the challenges encountered by these students and the factors linked to their academic success. The study emphasized the intertwined nature of challenges and successes, illustrating how participants, through their resilience, transformed significant challenges into reasonable paths towards success.

To understand how students with learning disabilities make sense of their experiences at post-secondary institutions, this section is divided into two main sections: (i) Challenges faced by post-secondary students with learning disabilities and (ii) Factors to which students with learning disabilities attributed their academic success.

The study considers the prevailing nature of the experiences students with LDs reported and the overall outcome of those experiences in deciding whether a theme would fall under "challenges" or "successes". For example, the themes in this study are considered "challenges" when students with LDs narrate them as obstacles or areas where they encounter significant difficulties. Conversely, themes highlighting positive outcomes, adaptive strategies, or growth in academic performance are categorized as "successes." For example, "*Self-identification and disclosure*" are viewed as a "challenge" when students narrate them as complex or stigmatizing. They are also viewed as a "success" when students identify them as leading to positive outcomes like increased awareness of disability services or access to accommodations.

In order to ensure that themes remain distinct, the study focuses on the specific aspects of each experience, even if they are interrelated. For example, the challenge of "*Self-disclosure*" is

separated from the "*Assessment, diagnosis, and documentation*" theme; these are closely linked to the academic efforts of students with LDs. The distinction depends on the nature of the challenges faced by students with LDs. As an example, "*Self-disclosure*" concerns students with LDs personal decision-making to disclose their learning disability to others, while "*Assessment, diagnosis, and documentation*" concerns more institutional processes and requirements.

Similarly, the theme "*Self-identification and disclosure*" is separated from themes like "*Labeling and stigmatization*" to emphasize the instrument of "*Self-disclosure*" compared to the external experiences associated with "*Labeling and stigmatization*".

Though the study categorizes each theme separately to clarify specific challenges or successes, it also recognizes their interconnections. For example, "Assessment, diagnosis, and documentation" often influence "Self-identification and disclosure", as the formal diagnosis process could shape whether or how a student decides to "Self-disclose". Similarly, the theme "Academic and related accommodations" challenge could transform into a success under the "Adaptive academic accommodation", highlighting how overcoming these challenges contribute to positive outcomes. Nonetheless, the "challenges" and "successes" in this study are not considered separate entities; their interactions equipped participants to learn from their challenges and achieve success.

Challenges Faced by Post-secondary Students with LDs

The study uncovered that the educational journey of students with LDs was often difficult, complex, and overwhelming. Yet, they demonstrated remarkable resilience, achieving a significant level of success in continuing their post-secondary studies. This success was not given to them; they had to navigate a complex system of learning about themselves and others, to generate their paths towards educational success. This section presented insights into how

students with LDs interpret their experiences in post-secondary institutions and emerged themes blended from the narratives of study participants and highlighting the connectedness of students with LDs' "challenges" and "successes." These themes, along with their nested corresponding themes, are explained below that explore the comprehension of students with LDs' educational journey.

While exploring the perspectives of faculty members in line with the themes related to "challenges" and "successes", this section analyzed the challenges faced by students with LDs in their academic journeys, ranging from structural issues to individual limitations. The perspective of faculty members also presented how institutional practices and teaching methods could impact students' experiences in their academic journeys. Their narratives also proposed strategies and resources that students and faculty found effective in overcoming challenges and connecting these viewpoints in this study enabled a meaningful understanding of the challenges faced by post-secondary students with LDs and factors positively contributed to their academic success.

Table 7

Themes related to challenges, including participants relevance to the themes

Themes related to challenges	Participants
Assessment, diagnosis, and documentation	3
Self-identification and disclosure of disability	8
Labelling and stigmatization	5
Academic and related accommodations	6
Transition from secondary to post-secondary institution	7
Interactions with faculty, peers, and families	
• Interactions with faculty	4
• Interactions with families	4
• Interactions with families	3
Social, emotional, and psychological	6
Remote or online learning challenges	4

Themes Related to Challenges

Assessment, Diagnosis, and Documentation. Participants reported being aware of their learning disability during a range of ages, however, their formal diagnosis of learning disabilities was carried out during different educational levels even relatively later stages. The study found that six (6) participants had been formally diagnosed with their learning disability between Grade 2 – 5 and four (4) participants diagnosis were conducted between Grade 6 – 12 and above. Two (2) participants were diagnosed at a very later stage of education level, one of them was aware of his ADHD when he was in Grade 9.

The late diagnosis of learning disabilities, as highlighted by Norman and Valentina, significantly impacts their post-secondary educational experiences. Norman's acknowledgment of receiving an ADHD diagnosis only towards the end of his master's program contrasts with his challenges in Grade 3 without a diagnosis or academic support. As Norman stated:

My post-secondary educational experience with a learning disability, particularly my ADHD diagnosis, differs significantly from my earlier educational years. I only received my ADHD diagnosis towards the end of my master's program, contrasting with my earlier experiences in Grade 3 when I struggled with attention issues but lacked a diagnosis or access to academic support. (Norman, 109)

Norman further added that this delay in identification and support led to missed opportunities for intervention and academic assistance, which slowed his academic progress. Similarly, Valentina's experience of hyper-focus being both a strength and a challenge underscores the importance of timely diagnosis to provide necessary accommodations for optimal academic performance. As she stated:

My educational journey has been unique due to my ADHD diagnosis at 33. My hyper-focus on certain subjects was both a strength and a challenge during my early education; the lack of accommodation, however, hindered my performance. (Valentina, 121)

Clearly, earlier and later diagnoses of students with LDs significantly impact their learning and education challenges. For example, the participant Valentina, not formally diagnosed with ADHD until the third year of her PhD program, shared challenges in mathematics, attention, and memory issues from kindergarten to Grade 12 (Valentina, 117).

Valentina expressed that an earlier diagnosis could have significantly benefited her learning. In contrast, Norman, diagnosed with ADHD in the fifth year of a two-year master's program, reported fewer challenges, attributing it to being in "gifted" classes that maintained constant interest and stimulation. However, Norman reported that his French language scores were always much lower than those of other courses due to his lower competencies in reading, writing, and understanding the grammar of that second language (Norman, 108). The experiences of Valentina and Norman suggested potential differences in learning challenges faced by those diagnosed earlier, benefitting from timely interventions, compared to those diagnosed later, who might adapt but face specific learning challenges.

Arian's account sheds light on the submission of disability related documentation challenges faced by students with LDs transitioning to post-secondary education. One example of which is psycho-educational assessment. This type of assessment measures how a student learns and what kinds of things may be getting in the way of their learning. The contrast between the responsibilities taken by secondary schools in diagnosing learning disabilities and the need for students to redo and re-submit diagnosis documentation at the post-secondary level adds an extra layer of complexity. Arian further explained that regarding the diagnosis aspect, the

difference he experienced between post-secondary and secondary-level institutions is solely related to the submission of diagnosis documents. Arian stated:

At the secondary level, the school took many responsibilities in cooperation with my family members in diagnosing my LDs, including submission. In contrast, I had to redo and re-submit diagnosis documentation to the Accessible Learning Services Office.

(Arian, 144)

Arian further comprehends that this type of administrative process is time-consuming and frustrating, potentially delaying the provision of essential accommodations and support services in a timely manner. While Kelly's narrative highlights the financial barriers students with LDs face in accessing necessary assessments for accommodations and support services. As she noted, the requirement to undergo expensive psychosocial assessments, despite having a lifelong disability, poses a significant challenge. This financial burden prevents students from seeking the support they are entitled to, creating inequities in access to accommodations and resources in post-secondary education" (Kelly, 217).

Clearly, post-secondary students with LDs encounter financial challenges in obtaining necessary assessments and receiving timely academic accommodation. Several participants in this study argue that the high cost of psychosocial assessments creates barriers and inequities in accessing support services in higher education, preventing many from getting needed assistance.

Self-identification and Disclosure of Disability. The study highlights the prevalent reluctance among students with LDs to disclose their conditions due to various fears and pressures. For example, a participant like Valentina, whose learning disability was diagnosed later in her post-graduate studies, emphasizes the struggle with self-judgment and the desire to

conform to mainstream methods, indicating a deep-rooted reluctance to self-identify. As she stated:

Many students with LDs struggle with self-judgment, finding it hard to accept their learning disabilities and seek assistance. They often believe they want to conform to mainstream methods, thinking, "I should do it like everyone else." The fear of being perceived as different or incapable can be overwhelming. Moreover, the apprehension of judgment from others, leading to exclusion from social circles or teams, acts as an obstruction (Valentina, 125).

Jasper's initial stigmatization concerns further confirm this reluctance as he narrated, "At first, I felt that disclosing my learning disability to the Disability Services Centre and requesting accommodations was stigmatizing" (Jasper, 134) and Arian's reluctance, for example, "Initially, I was reluctant to self-identify with faculty members and Dean to secure academic accommodations" (Arian, 146), towards self-identification with faculty members and higher education administrators. The fear of judgment, exclusion, and the overwhelming tension to fit in contribute to the complex interplay of internal and external factors that prevent students from disclosing their learning disabilities to others. Such a notion is learned in Martin's statement where he stated, "Many students with LDs feel shy and embarrassed and feel that others will laugh at their difficulties so that they do not disclose their learning disabilities to others. (Martin,196). Therefore, it remains for students with LDs to disclose their difficulties to others in the post-secondary education environment. Martin further contends that in elementary and secondary education settings, special education classes for students with LDs know their difficulties to others; students do not need to disclose. However, this is different in the post-secondary education environment.

This study is explicit to uncover that post-secondary students with learning disabilities continue to encounter significant obstacles while seeking academic accommodations and support services, as well as their fundamental rights to equal opportunities. For example, Ethan's account reflects the internal conflict of resisting equal opportunities while anxious about disclosing her condition of disability. She stated:

Self-identifying my learning disability to secure accommodation support means striving for equal opportunities and enhanced assistance. While accessing the help I need is crucial, I sometimes feel uneasy about disclosing my condition to others. (Ethan, 59)

Denise's argument of societal misconceptions about learning disability leading to non-disclosure further emphasizes the barriers students with LDs face in accessing necessary support services. They stated non-disclosure reasons for learning disability in the following:

Students with LDs often avoid disclosing their conditions due to societal misconceptions about learning disabilities. For example, people may stereotype them as taking undue advantage of educational challenges, being lazy, or having difficulty communicating. (Denise, 173).

This leads students with LDs to avoid disclosing their learning disabilities, although it denies them rightful access to academic and related support services. Besides, the fear of stigma, mockery, and discrimination often outweighs the benefits of seeking accommodations, as stated by Genevieve:

Many students with LDs choose not to disclose their learning disabilities to avoid potential mockery and discrimination. The desire to avoid negative attitudes and judgments often outweighs the benefits of seeking academic accommodations. (Genevieve, 185).

Genevieve further argues that students with LDs are concerned about being treated differently or facing social concerns, which contributes to this decision, even if it means declining the support they need to succeed in their education. While Lindsay's experience in self-identifying for accommodations contrasts with many students' mixed feelings regarding mandatory disclosure. As she stated:

I was comfortable to self-identify my learning disability to secure academic and related accommodations. It is worth mentioning that if someone has a disability, they must self-identify their disabilities in order to register with the Office of Disability Services at a post-secondary institution. (Lindsay, 207)

Although Lindsay believes that many students with LDs have mixed feelings about why it is mandatory to self-identify as having a learning disability, Martin's account, however, underscores the difficulty in disclosing learning disabilities due to fear of stigma and embarrassment, indicating the social complexities that influence disclosure decisions.

Concerning experiences being excluded from an area of study because of the need to disclose one's disability for support, narratives of students with LDs reveal the challenges they face in academic settings when disclosing their learning limitations for seeking accommodations. For example, Genevieve expressed her frustration at being excluded from the debates on English language studies, indicating systemic barriers to participation (Genevieve, 180). In contrast, Jasper discovered a reliable source of comfort in his supportive friend, who helped and covered for him during study sessions, demonstrating a stronger and more effective coping mechanism (Jasper, 131). These participants' narratives illustrate varied experiences of exclusion and adaptation to the post-secondary education environment where there is a need to disclose their disability to others.

Labeling and Stigmatization. Participants were asked whether they experienced labeling and stigmatization as a result of having a learning disability. The study reported that five (5) participants (e.g., fifty percent) experienced labeling and stigmatization in specific situations and were being excluded from an area of study because of the need to disclose their learning disability.

Several participants in this study disclose the negative reality of being mocked and abused due to their learning disability. For example, Jasper reflects on peer discouragement as "Some of my peers telling me I cannot make it," (Jasper, 131), emphasizing the psychological features of external negativity. Jasper's account highlights the damaging effects of stigmatization on self-esteem and self-worth. The internalization of negative stereotypes and the comparison with non-disabled peers result in feelings of worthlessness and inadequacy, making it challenging to advocate for oneself and seek help when needed. She noted her experience of stigmatization as a student with LDs in the following:

I often experience low self-esteem and an impaired sense of self-worth. I sometimes mistakenly feel that I am less intelligent than my non-disabled peers. Because of these challenging obstacles to learning, I remain likely to be hyper-self-critical and evaluate myself as 'worthless' or 'slow' based on academic comparisons with others. (Jasper, 135)

Clearly, Jasper conveys the impact of his learning challenges, expressing low self-esteem and feelings of inferiority when comparing himself to non-disabled peers. These experiences result in hyper self-criticism and self-assessment as "worthless" or "slow," emphasizing the reflective impact of academic comparisons on his sense of self-worth.

While Valentina sheds light on the misconception surrounding ADHD, particularly as a "silent" disability, "I find it is a "silent" disability, especially given my gender and age,"

concluding the situation as the intersectionality of gender and age in stigmatization (Valentina, 119). She also argues that ADHD is often associated with stereotypes related to gender and age, emerging numerous hidden challenges. As she noted:

I have encountered a sense of indecent and helplessness due to misconceptions about students with LDs being labeled lazy or incapable. This has led to feelings of loneliness. These challenges stem from others' perceptions that often do not align with the reality of LDs and hinder my experience in post-secondary education. (Valentina, 124)

The disconnect between perceptions of others in society and the reality of LDs creates barriers to accessing support and accommodations, exacerbating the challenges of navigating post-secondary education for students with LDs.

So, experiencing labeling and stigmatization, as described by Valentina and repeated in Martin's fear of stigma, "Many students with LDs feel shy and embarrassed and feel that others will laugh at their difficulties so that they do not disclose their learning disabilities to others" (Martin, 196), exemplifies the internal conflict many students with LDs face with. The desire to conform to mainstream expectations and the fear of being perceived as different often leads to reluctance to pursue academic assistance. This reluctance stems from a combination of self-judgment and the anticipation of adverse reactions from faculty, peers, and others on campus further perpetuating the stigma and isolation cycle.

While Arian's experience of peer stigmatization highlights the impact of external judgment and exclusion based on academic performance. Arian shares his feelings of stigmatization experienced as a post-secondary student due to having a learning disability:

Yes, it had happened, and one of my peers was the cause. This specific peer stigmatization happened due to my academic weaknesses by arguing why I did not

acquire the label associated with her/him during my education in the recent past. I am experiencing such feelings of stigmatization from time to time that I perceive it as a direct result of my learning disability. (Arian, 147)

Arian's accounts shed light on the notion that being labeled or questioned about the legitimacy of one's disability by peers exacerbates feelings of stigmatization and further isolates individuals with learning disabilities. While Denise's accounts illustrate how stigmatization manifests in peer interactions and group dynamics, as she noted:

Because of my ADHD, I often face stigmatization in peer groups, being labeled as an individual with ADHD. For example, my insights on various topics are disregarded within the peer groups, creating a sense of exclusion and undermining my contributions in discussions. (Denise, 173)

Denise further shares their feelings of stigmatization and says that being disregarded or excluded from discussions due to their disabilities undermines their sense of belonging and diminishes the value of their contributions, continuing feelings of exclusion and marginalization. Students with LDs experiences collectively underline the persistent issue of labeling and stigmatization in post-secondary education. Therefore, the need for awareness and support among a cross-section of parties in post-secondary institutions is palpable.

Academic and Related Accommodations. The study found that students with LDs experience numerous academic difficulties and the areas that are problematic for them as a direct result of learning disability during post-secondary education. On the questionnaire, nine (9) participants reported that they face academic difficulty in reading, writing, spelling, math, note-taking, attention, and memory related issues. Some of them struggle with more than one area at the same time ranging from “mild to severe” challenges because of their learning disabilities. For

example, questionnaire responses showed that a portion ranging from 10% to 30% of the participants experienced “mild” challenges in reading, writing, spelling, math, note-taking, attention, and memory related issues. Another segment, from 20% to 40%, encounters “moderate” difficulties in all these areas. Approximately 10% to 50% of the participants noted they have “no trouble” in all mentioned learning areas. For a subset of 10% to 20% of participants, learning difficulties are notably “really bad” in all areas. Lastly, a range of 10% to 50% faces challenges classified as “severe”.

Students who have difficulties, specifically, reading, writing, and spelling in high schools continue to be challenging in their later educational careers (Fullarton, 2016). This is much concerning given that information, evaluations, and learning materials in higher education are highly text-based (Hollins & Foley, 2013). Difficulties in reading emerge because higher education involves a high volume of reading materials. In the case of students with LDs, they have the struggle to correctly interpret the significance of text-based materials due to reading miscues, leading to negatively impacting their academic performance.

So, the relatively higher reliance on text-based learning in higher education poses significant challenges for students who were unprepared for this transition and have difficulties in reading, writing, and math. Although many students with LDs feel that their secondary school systems have prepared them academically to undertake the demands imposed by the post-secondary education institution, one study by Mireles et al. (2011) noted, “students with LDs are one of the most “underprepared” populations increasingly enrolling in the post-secondary education” (p. 12).

In this respect, Valentina's experience of struggles related to unpreparedness for higher education is exemplary. Her struggle at York University, Canada, where she initially started with

an undecided major but eventually left due to undecided subject choices, exemplifies the difficulties faced by students with LDs in adapting to the academic demands of higher education.

She stated:

Higher education relies heavily on text-based learning. Had my ADHD been diagnosed in secondary or high school, these obstacles might have been avoided. For instance, my experience at York University, where I started with an undecided major but eventually quit after about a year, exemplifies these challenges. (Valentina, 124)

Valentina's experience highlights the critical need for early intervention and support for students with LDs. Without timely diagnosis and accommodation, individuals face overwhelming barriers to success in higher education.

The academic challenges faced by students with LDs often stem from difficulties in time management and organization, as illustrated by Jasper and Arian. Jasper's reading difficulties compounded by the high volume of reading materials at the post-secondary level highlight the struggle to keep up with academic requirements. She stated that "The high volume of reading materials at a post-secondary level led to more challenges for my situation as I have severe difficulties reading texts" (Jasper, 132). While Arian's account of organizational challenges, including the cycle of delay in task completion and distractions affecting focus, highlights the impact of time management and organizing tasks on academic efficiency and stress levels. As he stated:

Organizing numerous assignments poses a challenge at my post-secondary level. I encounter time management difficulties, often feeling like I have a lot of time for assignments but need help to start. Thus, resulting in a recurring cycle of insufficient time to finish tasks. Besides, distractions, including staring at classroom walls, disrupt my

focus. These challenges impact my ability to manage time effectively and navigate the demands of post-secondary education. (Arian, 172)

Arian's experience highlights the complex challenge of managing academic responsibilities in post-secondary education. The recurring cycle of time mismanagement and distraction impedes effective task completion, highlighting the complexity of time management for students like him.

As evidenced by Martin and Lindsay's experiences at post-secondary education, reading and note-taking present significant challenges for students with LDs. Martin shares that his slow reading and learning difficulties hinder his ability to understand the depth of subject matter, affecting his academic progress. He stated:

I need to improve in reading voluminous texts although I am a slow reader and learner.

As higher education is highly text-based, students need to read a high volume of texts, and if someone is slow in reading and unable to understand the depth of the subject matter. Therefore, I stay caught up in pulling up the insights of reading materials compared to other students who have no difficulties like me. (Martin, 193)

While Lindsay's frustration at the lack of note-taker services in her school reflects the additional barriers faced by students who require such accommodations. She explains:

“Sometimes the post-secondary disability services office does not have note-taker services for students with LDs and other related disabilities. In this case, I have to search by myself, taking notes in the classes. If I am lucky, I may get someone. Otherwise, I need to continue classes without these services. I became frustrated and developed a kind of helplessness”. (Lindsay, 217)

Described by Lindsay, limitations in support services such as reader and note-taker lead to feelings of helplessness and further aggravate academic challenges of students with LDs.

Besides, unclear assignment expectations create significant barriers for students with LDs, as highlighted by Kelly's experience, "Not always understanding what is expected of me for an assignment because directions are unclear to me. Feeling as though you are the only student that doesn't understand is embarrassing and brings about feelings of shame" (Kelly, 119). Kelly further contends that the embarrassment associated with not understanding assignments has a deep emotional impact on students like her, which further complicates her academic progress.

Transition From Secondary to Post-secondary Institution. The transition from high school to post-secondary education marks a significant shift for many students, bringing many challenges that can impact academic success and future endeavors. Extending transitional support to students with disabilities are important issues reported in the literature that have been found to lead to success for students with LDs. Tremblay and Belley (2017) specify that "the individualized education plan (IEP) constitutes a legal right" (p. 3017) and an Individualized Transition Plan (ITP) is a required component of IEP. Students on IEPs who are 14 years of age and older require a transition plan as part of their IEPs to plan for post-secondary transitions (Tremblay & Belley, 2017).

Although there exists a significant difference between secondary and post-secondary labels in terms of availability of necessary accommodations and academic services, only two participants in this study have ITP. This difference also revealed from the participants' accounts that disparities in providing and accessing accommodation services for students with LDs between secondary and secondary education are significant. But some participants are positive about academic accommodations at post-secondary level.

For example, Genevieve highlighted the introduction of technological support at the university level, lacking during their K-S4 years (Genevieve, 180), Others like Arian and Jasper

emphasized substantial differences in spaces and resources between K-S4 and post-secondary education (Arian, 43 and Jasper, 131). The observations show the varying availability of support systems across educational transitions. Some participants, however, engaged in a distinct discussion, debating the adequacy of service provisions in both K-S4 and post-secondary education and supporting their arguments regarding service provisions one over the other (e.g., K-S4 vs. post-secondary).

Participants' accounts in this study demonstrated complex challenges they faced during their transition from high school to post-secondary institutions. As highlighted by Norman, his struggle with time management and organization arises from the less structured nature of post-secondary education schedules. The lack of control over schedules and varying timings for different tasks makes maintaining a consistent study routine challenging for him, leading to significant academic challenges. As Norman stated:

Transitioning from high school to post-secondary education introduced several obstacles. In high school, classes followed a structured schedule, whereas in post-secondary institutions, schedules can be unpredictable, leading to time management and organization difficulties. (Norman, 112)

Denise resonates Norman's concerns about time management and organization, emphasizing the demotivating effect of managing personal matters alone. As Denise noted:

Managing personal matters alone often demotivates me, affecting my studies. Although deadlines are flexible, strict deadlines for written work submission often demotivate my continued studies at this level. (Denise, 173)

Denise further explained that the result-oriented communication with faculty, peers, and service providers poses challenges in many situations, slowing their academic progress. They

also added that the strict deadlines for assignment/written work submission and the need for effective communication with Faculty peers further complicated their adjustment process at post-secondary level.

Valentina highlights the reliance on text-based learning in higher education and the impact this has on students with ADHD who may not have received adequate support in secondary school. She argued that the lack of early diagnosis and intervention for these students leave them unprepared for the demands of post-secondary education, potentially leading to academic setbacks. As she explained “One of the challenges includes being unprepared for the transition. Higher education relies heavily on text-based learning. Had my ADHD been diagnosed in secondary or high school, these obstacles might have been avoided” (Valentina, 124).

Arian raised concern about the increased workload and emphasized writing assignments in post-secondary education. For students with difficulties in writing and reading, such as Arian, present significant obstacles to academic success and stated that “the workload is higher than secondary level because post-secondary education is highly text-based, and I need to prepare for many short and long writing assignments (Arian, 144). He further explained that this is particularly problematic for him as he has severe difficulties in writing, including moderate levels of difficulty in reading.

Additionally, the emotional challenges of transitioning away from home compound the difficulties of adapting to a new educational environment for him.

Ethan discusses the challenges of securing academic accommodations independently at the post-secondary level, which she felt an increased responsibility placed on her as a student

with LDs. Because she needs to navigate complex eligibility criteria for support services adds an additional layer of stress to the transition process. As she stated:

The transition from secondary to post-secondary education has presented a distinct set of challenges for me, particularly as a student with LDs. In the earlier stages, it was the school management's responsibility to secure academic accommodations, whereas, at the post-secondary level, I was required to navigate and obtain these accommodations independently (Ethan, 157).

Ethan's account also highlighted the issue of increased academic costs, including tuition and living expenses away from home, which posed financial challenges for her. Additionally, she mentioned that the absence of previously received secondary-level academic support necessitates navigating complex criteria for assistance at the post-secondary level. This adjustment demands coping with both financial pressures and the need to meet set eligibility criteria, impacting the smooth continuation of my studies in higher education.

Genevieve speaks to the emotional impact of negative comments from high school peers and the challenge of proving oneself in a new academic environment. As he stated "Negative comments from my high school peers, doubting my success, have significantly impacted my confidence. Overcoming this emotional difficulty and proving myself capable has been challenging" (Genevieve, 84-85). Additionally, he discusses that adapting to the increased academic demands and navigating the complexities of a new educational environment also poses barriers.

The lack of specialized support for students with LDs at the post-secondary level, particularly compared to the accommodation provided in secondary education has been explored by several participants. For example, one participant states:

In comparing post-secondary and secondary educational experience, educators at the secondary level have special plans for me to overcome my challenges in reading and writing as I have no issues in mathematics. This initiative may rarely be feasible at the post-secondary level. (Martin, 193).

Besides, Martin is concerned about the shift in learning styles and the added responsibility of managing finances independently, further contributing to the difficulties faced during this transition. As he explained, he was not ready for the learning styles and patterns at the post-secondary level, which is different from the secondary level; he needs to adapt to a concrete routine and does things individually as he is away from home. Also, he points out that the highly text-based reading materials brought many challenges for him since he has reading difficulties. Additionally, managing finances while away from family became a significant issue in his case. Because he noted that until the secondary level, “I was with my family, currently alone managing the costs remains a more significant issue” (Martin, 195).

The transition from high school to post-secondary education presents numerous challenges for students with LDs. However, these challenges can be overcome with the right support and accommodation. For instance, providing additional time for assignments or offering alternative assessment methods can help students with LDs demonstrate their knowledge and skills more effectively. But addressing these issues requires a combined effort to improve training for educators, enhance the flexibility of teaching methods, and foster a more accommodating and supportive environment for all students.

Interactions with Faculty, Peers, and Families. Participants were asked if their interactions with faculty, peers, and families were affected as a direct consequence of their

learning disability; they reported their interactions with faculty, peers, and families to have been both positively and negatively impacted.

Interactions with Faculty. Nine (9) participants in this study expressed mixed feelings about their interaction with faculty members inside and outside class for academic purposes. For example, Norman expressed anxiety about asking for extensions and self-advocacy due to his ADHD-related challenges. He struggled with seeking help, citing difficulties in time management, recognizing the potential for improvement, and being organized enough to seek assistance on time (Norman, 105). Valentina mentioned requesting extra time or accommodations but felt that their relationship with faculty members could have been more directly impacted (Valentina, 118).

Denise's testimony sheds light on the challenges faced by students when faculty members are initially unaware of their learning disabilities. As Denise noted:

In post-secondary education, faculty members initially unaware of my learning disability perceived me as lazy. However, understanding grew as they became aware through our interactions, enabling me to seek accommodations like extra exam time and a quiet environment for written exams. (Denise, 170)

Denise's experience highlights the importance of raising awareness among educators to prevent misperceptions that can negatively impact students with LDs academic journeys. The theme of misperception continues in Denise's account, as they express frustration with faculty and peers overlooking her learning limitations and attributing her challenges to laziness:

Faculty and peers often perceive me as lazy, overlooking my learning limitations. I feel that they are not taking my struggles seriously. For example, in my digital art degree

program, presentations are crucial, but faculty members often do not listen attentively during mine. It demotivates me, impacting my learning pace. (Denise, 173)

This lack of understanding leads to demotivation and affects their learning pace, particularly in areas like presentations where faculty members fail to engage attentively. Though participants' experiences in this respect varied, other participants reported that most faculty members accommodated their needs, but one participant particularly reported that they did not follow my accommodation plans (Lindsay, 202). Genevieve mentioned that some faculty members schedule extra classes for him because of his learning disability while Kelly mentioned that her direct communication style, stemming from her learning disability, was sometimes misinterpreted as "rudeness or abrasiveness" (Kelly, 214).

The narratives shared by participants in this study emphasize the complex dynamics between students with LDs and faculty members in post-secondary education. While some faculty members exhibit understanding and provide necessary accommodations, others need to be made aware of the challenges faced by these students. Norman's struggle with self-advocacy due to ADHD-related challenges, Valentina's desire for a more direct impact on their relationship with faculty, and Denise's experience of being unfairly perceived as lazy highlight the need for increased awareness and understanding about learning disabilities among educators.

Interactions with Peers. Participants were asked about their experiences of interactions with peers who reported their interactions to have been negatively affected. The study reported that six (6) participants interact with their peers on different occasions more frequently for academic and social purposes. Norman expressed suspicion about the possibility of his disability affecting their social interactions but acknowledged that it could be a factor (Norman, 105). Most participants such as Denise, Jasper and Genevieve, however, shared their difficult encounters,

such as being laughed for their reading abilities, being perceived as thoughtless or overdramatic, and facing challenges in making friends due to their learning disability.

In this respect, Jasper's testimony illustrates the initial struggle of disclosing his learning disability to peers, fearing rejection and stigmatization. As she noted:

I had difficulty telling my peers about my learning disability because some did not believe I had one and thought I did not belong in their group or needed extra help. This made me feel lonely, hopeless, and stigmatized. (Jasper, 133)

Jasper's experience reflects the persistent misconceptions about learning disabilities and the impact they can have on peer relationships. Arian reiterates Jasper's reactions, highlighting the negative influence of non-disabled peers on his educational journey and noted in the following:

My difficulties in learning are not readily perceptible as other disabilities, for example, physical and visual impairments, as LDs on many occasions remain "invisible" or "hidden". Non-disabled peers' misconceptions of learning disabilities develop many negative connotations that impede my involvement in their group, and so does my learning. (Arian, 145)

Arian further added that the lack of understanding from peers regarding his learning difficulties exacerbates feelings of frustration, low self-esteem, and emotional distress. Arian's experience features the need for greater awareness and acceptance of diverse learning needs among peers to mitigate the harmful effects of misconceptions and exclusion.

Denise and Genevieve's accounts shed light on the pervasive issue of peer exclusion experienced by students with LDs. Critical peers' avoidance and disbelief in their limitations hinder mutual understanding and inhibit meaningful connections. Denise noted:

Critical peers avoid including me in study groups, assuming I take advantage of my learning limitations. The invisibility of my limitations leads to disbelief, hindering mutual understanding and making it challenging to forge connections with peers” (Denise, 170 – 171).

Similarly, Genevieve's exclusion from educational activities due to her learning differences, though well-intentioned, underscores the challenge of full inclusion for students with LDs. He explains that non-disabled peers tend to avoid me from educational games often excluded me from competitions. This exclusion stems from a well-intentioned desire to prevent frustration but can be isolating. While it arises from consideration, it highlights the challenge of being fully included in peer activities due to my learning differences. These narratives highlight the importance of promoting an inclusive peer environment where differences are embraced rather than overlooked.

Martin's testimony, however, delves into the internalized stigma and embarrassment associated with learning disabilities when interacting with non-disabled peers. “I was embarrassed by my learning disabilities and often tried not to disclose my difficulties among non-disabled peers” (Martin, 205). Martin further contends that he often time avoid conversations with peers without a disability and have the feeling about how non-disabled peers would feel or think of communicating with a person having a learning disability. Martin’s reluctance to disclose his difficulties reflects the fear of judgment, demonstrating the prevalent societal stigma about learning disabilities.

Students with LDs narratives highlight the multifaceted challenges faced by them in navigating peer interactions within educational settings. From fear of rejection and stigma to

experiences of exclusion and misunderstanding, students with LDs face a range of emotional, psychological, and social challenges.

Interactions with Families. Participants' interactions with family members shed light on the challenges they face within their families regarding support and understanding, particularly in the context of their educational pursuits. Each navigates distinct yet interconnected issues that underscore the complexities inherent in familial dynamics, especially concerning education and personal development.

Additionally, participants in this study reported that their interactions with family members reflect a range of positive and negative consequences where positive interactions include instances where students with LDs had to explain their disabilities to family members and received support and care in navigating academic challenges; and negative impacts are evident in deteriorated relationships due to academic performance disparities or misunderstandings about the nature of disability.

One participant speaks about the discrepancy between the support he receives from his family and the understanding of his unique challenges in graduate-level education. While his family undoubtedly offers great support, the participant contends with feelings of isolation when their expectations differ from the reality of managing his learning difficulties. The participant stated his feelings in the following:

While family members provide strong support, there are times when they underestimate the unique challenges I face in graduate-level education. This leads to feelings of isolation when their expectations do not align with the reality of managing my learning difficulties. (Norman, 110)

This disagreement underlines a common struggle many students with LDs face which is the gap between familial support and a nuanced comprehension of the specific challenges they encounter in their academic settings. Besides, other participants have similar connotations in this respect. Denise's narrative delves into the difference between their family's emphasis on academic achievement and their challenges with learning limitations as Denise noted:

My parents highly value reasonable achievements (e.g., good grades) in exams and find it challenging to understand and support my struggles. This declines our relationship as they prioritize academic success rather than understanding my learning limitations” (Denise, 171).

The difference between their parents' prioritization of conventional markers of success, such as good grades, and Denise's need for understanding and support creates tension within their relationship. This tension underlines the societal pressure on academic performance and the challenges they face when their abilities differ from conventional expectations of academic successes.

Genevieve expresses the experience of being overprotected by his family, which demonstrates as limitations on his autonomy, particularly in public settings. Though their concern stems from genuine care and support, Genevieve finds that this overprotection restrains his growth and independence, particularly within the context of post-secondary education. As Genevieve noted:

My family is overly protective, even limiting my speech in public. Their concern stems from genuine care, yet it hampers my autonomy. This dynamic in post-secondary education can inhibit my growth and independence, affecting how I engage with my family. (Genevieve, 183)

Genevieve's narrative signifies the balance between familial support and the need for autonomy critical for his self-development, particularly during educational experiences at the post-secondary level.

The narratives of students with LDs mentioned above highlight the complex interplay between familial support, understanding, and individual autonomy in education. They illustrate the diverse ways familial care and support can strengthen and impede educational pursuits, underscoring the importance of promoting open communication and mutual understanding within families.

Finally, the diverse experiences of students with LDs, from challenges in self-advocacy to the need for better faculty-student relationships, reveal the critical areas where improvements can be made. These students' emotional and social challenges in peer interactions also call for more inclusive and supportive educational environments. Notably, the study highlights the dual role of familial support, which can aid and hinder educational success. This underscores the need for open communication and understanding within families, which can significantly contribute to creating inclusive educational environments.

Social, Emotional, and Psychological. Participants in this study reported experiencing challenges related to the features of learning disabilities, which are described in the *DSM-5* (Fiedorowicz et al., 2015) and the Definition of Learning Disability Association of Canada (LDAC, 2015b). These features occur in the social, emotional, and psychological domains and can have negative consequences. The study participants articulated their respective struggles and challenges encountered during their transitions into post-secondary education. Each narrative offers a unique perspective on the emotional and psychological obstacles faced during this critical period of personal and academic growth.

One participant recounts the difficulties he faced in navigating interactions with faculty due to a later diagnosis of a learning disability during his post-secondary education. His experience is compounded by social anxiety, which presents barriers to seeking academic accommodations or support services. As the participant noted:

Having a later diagnosed learning disability during post-secondary education made interactions with faculty challenging. Social anxiety further hindered seeking academic accommodations or services, potentially impacting academic success. (Norman, 110)

Norman's narrative highlights the intersectionality of learning differences and mental health challenges, underscoring the complexities involved in advocating for one's needs within an academic environment.

While Arian shares the emotional challenges of transitioning to a post-secondary institution, particularly the feelings of loneliness and disconnection from family members experienced during the move to residence facilities. He described his feelings as “when I transitioned from home to post-secondary residence facilities, I felt lonely, lost, and alone because of being away from my family members, which continues” (Arian, 147). He contends that these emotional and psychological issues continue to impact his studies, highlighting the ongoing nature of the transition process and the importance of addressing emotional well-being alongside academic success in post-secondary education.

Ethan reflects on the social and emotional challenges inherent in transitioning from secondary to post-secondary education, particularly the sense of isolation and segregation experienced in the new environment. As she noted:

The transition to post-secondary education brought forth social and emotional challenges due to being away from home and the dissimilarity of the environment compared to the

secondary level. Interaction barriers emerged as non-disabled peers seemed unwilling to engage, leading to feelings of isolation and segregation. (Ethan, 160)

Ethan's narrative underscores the importance of social inclusion and support networks in mitigating feelings of alienation during the transition process. Additionally, Ethan's account sheds light on the disparities in social dynamics between secondary and post-secondary settings, highlighting the need for increased awareness and understanding of the diverse experiences of students during this transition period.

Genevieve discusses the emotional difficulties encountered during the transition from high school to post-secondary education, including negative comments from peers that have impacted his confidence. His narrative speaks to the persistent nature of self-doubt and the importance of resilience in overcoming external challenges to academic success, as he noted that "Negative comments from my high school peers, doubting my success, have significantly impacted my confidence. Overcoming this emotional hurdle and proving myself capable has been challenging" (Genevieve, 184 – 185).

Participants' emotional difficulties linked to learning disabilities manifest in various ways, impacting each participant differently. For example, Norman's experience of helplessness and feeling overwhelmed during his undergraduate studies highlights the challenges of meeting personal expectations due to difficulties regulating himself, which was exacerbated by the late diagnosis of ADHD (Norman, 104). While Valentina, whose ADHD was also diagnosed at a later part of her educational journey, faced frequent overwhelming conditions; she, however, suggests it as a situational challenge rather than chronic distress (Valentina, 117).

Nonetheless, Genevieve's hopelessness regarding his future suggests a pervasive anxiety about long-term prospects affected by his learning disability (Genevieve, 178). While Denise's

constant feelings of unworthiness they think result from the daily challenges of navigating academic tasks affected by a learning disability (Denise, 166).

These experiences illustrate how learning disabilities intersect with emotional well-being, developing feelings of hopelessness, helplessness, and unworthiness. Their perspectives also underscore the varied psychological impacts, including anxiety, depression, hypersensitivity, and low self-confidence, derived from the challenges posed by learning disabilities, potentially compounded by a lack of early diagnosis and academic struggles.

Remote or Online Learning Challenges. Challenges of students with LDs in the context of remote or online learning are diverse and based on their learning differences. Students with LDs each narrative sheds light on the multifaceted obstacles encountered in virtual educational environments and signifies the need for best-suited support and accommodations to address the diverse needs of students with LDs.

Valentina's account illuminates the struggles she faces with hyper-focus and ADHD-driven thought patterns in the remote learning environment. The lack of structure and accountability at home exacerbates her challenges, leading to distractions and difficulties engaging with course material. She noted:

My struggle with hyper-focus becomes pronounced as the home environment lacks the structure and accountability needed to stay engaged in class. With the flexibility, my ADHD-driven thought patterns lead me astray; I end up searching the web instead of focusing on lectures. The asynchronous nature of online courses exacerbates this, with time slipping away unnoticed. (Valentina, 125)

These obstacles, as she mentioned hinder her learning experience and highlight the need for strategies to counteract the impact of her learning disabilities in the context of online

education. While Jasper expands on the theme of distraction and focuses on difficulties in remote learning, particularly for students with LDs. She notes the challenges of maintaining focus without the physical presence of instructors to supervise and support students, as she mentioned:

I have experienced being distracted even in a classroom, and remote learning puts a more significant challenge to keep me focused on schoolwork. Because, unlike a traditional classroom, faculty members cannot walk around the room to supervise students. Most students with LDs can get easily distracted, so they will need help to grasp what the faculty is teaching online, which resonates with my reading disability. (Jasper, 136)

She also mentioned that the technical issues further compound these challenges, with accessibility barriers such as the lack of closed-caption options and connectivity problems impeding meaningful participation in online classes. In this respect, Jasper's narrative underscores the importance of addressing both technological and cognitive barriers to ensure the inclusivity of remote learning environments.

Denise articulates the profound impact of the remote learning setting on their well-being as students with LDs. They said that the absence of real-world interactions and the isolation of learning from home exacerbates feelings of depression, compounding the social and emotional difficulties of remote education on students with LDs. They noted, "It is terrible! Online learning posed significant challenges for me as a student with LDs. The lack of real-world feelings, minimal interactions with teachers, and the absence of a classroom environment intensified my challenges. (Denise, 173 – 174). Denise also contended that the remote learning settings worsened their depression being always at home.

While Martin reflects on the challenges of concentration and accessibility in online courses, particularly for students with attention deficit disorders. He noted that "I have

experienced challenges attending courses offered remotely or online because I cannot concentrate due to my attention deficit; too many faces at a time distract me from concentrating and learning” (Martin, 196). Martin also contended that the overwhelming nature of virtual classrooms and the lack of accessibility features such as auto-captioning contribute to difficulties in learning and engagement for students specifically who experience attention deficit.

Students with LDs testimonies underscore the urgent need for targeted interventions and support mechanisms to address the unique challenges faced by them in remote or online learning environments. From the cognitive barriers of distraction and focus difficulties to the technological obstacles of accessibility and connectivity, the narratives highlight the intersectional nature of the challenges faced by students with LDs in virtual educational settings.

Summary

This section analyzed the challenges post-secondary students with LDs face in higher education. The participants in this study indicated that they were required to move away from home to study, adapt to the new academic and social demands of post-secondary education life, and develop a support system that could sustain their academic endeavors.

Despite the absence of traditional support structures such as friends and family, students with LDs in this study found that they need to learn to live independently, adapt to a new living environment, and manage their social and educational challenges independently. For example, one participant struggled to make friends due to their social anxiety. At the same time, another found it difficult to keep up with the academic workload due to her/his learning limitations. Such independence led them to rely on new friends and community resources to obtain the required academic help, demonstrating their strength and determination.

Despite the challenges faced by most students with LDs, several students in this study had been diagnosed with learning disabilities at the later stages of their educational careers and faced added challenges. Students who were aware of their learning disabilities before their enrollment in post-secondary institutions contacted the office of the disability service upon their arrival to ensure access to accommodation services. However, students whose LDs were diagnosed later were not aware of the availability of these accommodations and related academic services well ahead. This lack of awareness due to later diagnosis significantly contributed to these students' challenges in post-secondary education life.

Students had to comprehend and accept the fact that they had a diagnosed learning disability to adapt to their new reality. This was very difficult for some of the participants because the label of learning disability did not fit their perceptions of themselves. Students with LDs discussed being stigmatized by their families, peers, and faculty members as learning disabilities are considered "hidden" or "invisible" disabilities. Unless the individual self-identifies, one cannot "see" the disability. Since their disability is not "visible," students expressed that, in many instances, faculty members and peers demonstrated a certain lack of understanding of their academic needs.

Some individuals in the post-secondary education community were described as creating attitudinal and educational barriers for these students, which made social interaction and academic preparation more complex and tough for them. Students in this study felt that peers discriminated against them in group activities and social situations. While faculty members lacked understanding of the accommodation process and, on several occasions, made the participants feel uncomfortable in the classroom environment.

Students in this study had little time for activities outside of class and expressed resentment at the excessive time they spent studying compared to their non-disabled peers. When they got involved in campus activities, these activities were often tied to charitable acts, such as volunteering at the campus disability office, tutoring other students with learning disabilities, and attempting to help others with learning disabilities. However, these acts were driven by their personal experiences and the desire to make the post-secondary institution a more inclusive and supportive environment for all students. It is important to note that like other marginalized groups of students in post-secondary education institutions, students with LDs responded to their challenges and were motivated to help others overcome them.

Factors that Contribute to Academic Success

Participants in this study have been successful in their academic endeavors, and number of them are close to program completion. Some of the participants, at the time of the study, were completing their undergraduate degrees (three-to-four-year programs), postgraduate degrees (two years programs) and two participants were near completion to doctoral degrees (four to five years programs).

In navigating post-secondary education, students with LDs face unique challenges that require best-suited interventions and academic accommodations on a case-by-case basis. In this study, participants identified many factors related to academic interventions and related accommodations services by their faculty, peers, families, and service providers that they felt significantly contributed to their academic success. So that understanding these factors that contribute to academic success for post-secondary students with LDs is crucial. One of the objectives of this study is to uncover the factors they identify and why it becomes instrumental for continued academic successes of students with LDs.

Table 8

Themes related to successes, including participants relevance to the themes

Themes related to successes	Participants
Awareness of disability services	2
Significance of self-identification	4
Adaptive academic accommodation	6
Positive interaction and engagement	
• Positive interactions with faculty members	5
• Positive interactions with peers	5
• Positive interactions with families	5
• Positive interactions with service providers	4
Personal attributes for success	5
Navigating remote/online learning	4

Themes Related to Successes

Awareness of Disability Services. The academic journey for students with LDs is challenging; they often need help understanding complex course material, managing their time effectively, and advocating for their needs. Besides, longer completion times and a lower graduation rate are among the challenges they face. Despite these difficulties, students with LDs demonstrate a remarkable resilience and determination to graduate, driven by personal goals, societal expectations, and aspirations for success in their life.

The study reported one critical factor that significantly impacts the educational journey is awareness of available disability services among students with LDs at post-secondary settings. Because it emphasizes the importance of creating a supportive and inclusive environment for students with LDs, where they can access the necessary resources and support to succeed academically. To illustrate further, the study delved into the personal experiences of students with LDs who have navigated the complexities of learning disabilities. Their experiences served as a

lens to understand the importance of this awareness and its positive influence on students' continued success in post-secondary education.

For instance, Arian, a student navigating the complexities of learning disabilities, underlined the pivotal role of faculty members in making students aware of the disability services on campus. Arian noted that one of the faculty members directed him to secure academic and related accommodation services from Humber College's Accessible Learning Services Office. "Faculty members directed me to secure academic and related accommodation services from Humber College's Accessible Learning Services Office" (Arian, 145 - 146).

This simple act of guidance demonstrated the potential for change in Arian's academic journey. As he realized that when faculty members are aware of available support services, they become the lead source of information, connecting students with the needed resources to overcome their challenges. Arian's journey toward accessing accommodations was facilitated by this awareness. He was able to schedule an appointment with the Accessible Learning Services Office, at Humber College, where he was assessed for his specific needs and provided with the necessary accommodation. This process allowed him to thrive academically.

Norman's journey of awareness and access to disability services further emphasizes their significance. He mentioned that he first became aware of the disability service office through campus advertising during an orientation session. However, despite this initial awareness, he was reluctant to seek their support due to a later diagnosis of ADHD. Norman said:

I became aware of the disability service office through their advertising on campus, and I first learned about their services during the orientation session. However, I did not initially seek their support due to a later diagnosis of ADHD. It was only after struggling

with my coursework and feeling overwhelmed that I decided to reach out for help.

(Norman, 111).

Norman's narratives, however, underlined the complexity of awareness—it is not simply about knowing that services exist but also about recognizing their relevance to one's unique needs. Eventually, Norman accessed the disability services office, emphasizing the impact of awareness on student utilization of available resources.

While further sharing his experience, Norman pointed out that securing academic and related support was relatively easy, and he was thankful to the administrative staff in his faculty. Because the disability services office provided him with a range of support, including extended time for exams, note-taking assistance, and access to assistive technology. Norman argued that their neutrality and assistance played a crucial role in his case, accessing necessary support. He noted:

Securing academic and related support is relatively easy for me. Besides the disability services office, I have found the administrative staff in my faculty to be neutral and helpful in providing tips and assistance in accessing the necessary support for my academic needs at my post-secondary institution. (Norman, 111)

As from Norman's point of view, this broader network of support—beyond specialized disability services—is not just beneficial; it is indispensable. Participants' positive experience exemplifies the critical need for a collaborative effort for student success, where students with LDs awareness of disability services on campus remain paramount.

Significance of Self-identification. This study, conducted with a diverse group of participants, found the unique and individual perspectives of those who have shown resilience in sharing their experiences regarding the significance and impact of self-identification of their

learning disabilities. In addition, the study provided valuable insights into the complexities and challenges of self-identifying and seeking accommodations as students with LDs that was explored through participants' accounts and narratives.

A much deeper understanding of the emotional and practical aspects accompanying self-identification, including the stigma, discrimination, and fear participants face had been highlighted from their narratives. For example, Arian, a student with dysgraphia, a specific learning disability that affects writing ability, emphasized the importance of self-identification as he noted:

My first self-identification experience was when I needed to submit a learning disability assessment document during the enrollment process. Self-identification, in this context, refers to the voluntary disclosure of a learning disability to an educational institution. Initially, I was reluctant to self-identify with faculty members and Dean to secure academic accommodations. Overall, I have mixed feelings to say about self-identifying, as some find self-identifying stigmatizing, others find it empowering, and some may have specific strategies associated with self-identifying their learning disabilities in order to secure accommodations. (Arian, 146)

In Arian's explanations, he acknowledged that knowing how to tackle situations related to his learning disability is crucial. His first self-identification experience ensued during the enrollment process when he needed to submit a learning disability assessment document. Initially hesitant, Arian disclosed his disability to faculty members and the Dean to secure academic accommodations. However, he admitted to having mixed feelings about self-identifying. Although some perceive it as stigmatizing, others find it empowering. Additionally, Arian recognized that specific strategies, such as preparing a self-advocacy plan or seeking

support from disability services, are associated with self-identifying to secure necessary accommodations.

While Denise places excellent value on self-awareness, asserting, "No one knows you better than yourself." (Denise, 172). For Denise, self-identifying as a student with a learning disability is not only crucial but also empowering. As they noted:

Self-identifying as a student with a learning disability is crucial. It ensures timely access to essential accommodations best suited to individualized needs. Self-identifying my learning disability empowers me to navigate my academic journey with the necessary support, effectively recognizing and addressing my specific learning requirements. (Denise, 172)

From Denise's perspective, it is crucial to note that navigating the academic journey becomes more effective when specific learning requirements are recognized and addressed. Besides, Denise's perspective highlights the empowering aspect of self-identification.

The study also delved into the importance of seeking appropriate accommodations, such as extra time on exams or access to assistive technology, and the instrumental role that self-identification plays in this process. In this respect, Martin's experience found it significant to self-identify his disability to the Office of Disability Services, faculty members, and peers. He realized that the self-identification process offers concrete academic benefits, including higher course grades; for example, students can quickly receive academic and related accommodations such as extra time on exams or access to assistive technology by contacting the disability office. As he noted:

The self-identification process brings many academic benefits, including higher course grades. For example, students could quickly receive academic and related

accommodations by contacting the disability office, extension for assignments submissions by contacting faculty members, and extra reading and learning support involving non-disabled peer groups. (Martin, 195)

Martin's experience stresses the practical advantages of self-identifying, emphasizing the importance of accessing necessary support. While Lindsay, a female participant, emphasizes the significance of self-identification in the context of learning disabilities. She felt comfortable self-identifying her learning disability to access academic accommodations. However, she acknowledges that some students with learning disabilities may have mixed feelings about the mandatory nature of self-identification at post-secondary institutions. As she noted:

I was comfortable to self-identify my learning disability to secure academic and related accommodations. It is worth mentioning that if someone has a disability must self-identify their disabilities in order to register with the Office of Disability Services at a post-secondary institution. However, I believe that many students with LDs have mixed feelings about why it is mandatory to self-identify as having a learning disability. (Lindsay, 206 – 207).

Participants' narratives regarding the significance of self-identification in this study advances a comprehensive and insightful aspect into the experiences of those navigating learning disabilities and the transformative role that self-identification plays in their academic journey. They expressed that self-identification is not just central in supporting them, but it also leads to positive outcomes and advances a reflective sense of hope and confidence. Furthermore, it empowers them to seek appropriate accommodations, navigate their academic paths effectively, and address specific needs.

Adaptive Academic Accommodation. The study found that adaptive academic accommodation plays a critical role in the academic success of post-secondary students with LDs. This type of accommodation, in many cases, meets the specific needs of each student, ensuring that they have equal access to educational opportunities and can effectively demonstrate their knowledge and skills. Examining the participants' narratives, several key factors illustrate the significance of adaptive accommodations in facilitating academic success for post-secondary students with LDs.

Firstly, personalized accommodations empower students with LDs to overcome their unique challenges, such as slow writing, reading difficulties, or attention deficit hyperactivity disorder (ADHD). For instance, Arian's access to a private room for exams to avoid distractions, "I maintained a strong relationship with the Dean of my Department to secure permission for extra time for in-class exams, including a private room to avoid distractions." (Arian, 146) and Jasper's ability to receive exam papers in advance on a computer and enlarge them for easier reading, are not just accommodations, but tools that enable her to perform to the best of her abilities. As Jasper noted:

During my time in post-secondary institutions, I received great assistance to help me succeed. One of the accommodations I received was extra time to complete exams. In addition, the faculty members gave me the exam paper in advance on the computer and enlarged it to a size that was easier for me to read due to my reading difficulty. These types of support were essential in helping me achieve success in higher education. I am grateful to the Disability Service Centre for accommodating my reading difficulties, which significantly impacted my exam performance. (Jasper, 134)

It means that adaptive academic accommodations promote inclusivity and create a supportive learning environment conducive to success for students with LDs. One other participant highlights the importance of extended test time, note-takers, and alternative test formats in assisting her learning experience.

I am receiving some assistive learning materials and academic accommodations services that are effective and appropriate. As I need help with slow writing, I currently have access to the computer lab to transcribe recorded lectures using speech-to-text software. Nonetheless, facilitated by faculty members Accessible Learning Services Office approved and arranged extra time for test-taking, including a private, quiet exam room based on my needs. (Ethan, 146)

This accommodation ensures sufficient time and resources to engage with course materials, access comprehensive notes, and understanding these learning materials effectively. It means that by catering to diverse learning needs, adaptive accommodations foster a more inclusive educational environment that values and respects the diversity of learners. Clearly, the process of securing necessary accommodations is a collaborative effort, with proactive advocacy and communication between students, disability services offices, faculty, and peers.

Ethan's experience of liaising with the Disability Service office to secure crucial accommodations, such as note-takers and extended exam time and Denise's appreciation of the value of proactive communication and collaboration, highlight the integral role in meeting individual needs effectively. "I have been granted additional time for exams and assignments, and I appreciate the quiet environment to minimize distractions, which aligns with my needs" (Denise, 172).

Additionally, the ongoing nature of adaptive academic accommodations provides a continuous safety net for students with LDs. Valentina's experience, where extended deadlines for assignments were provided even after completing coursework due to an ADHD diagnosis, demonstrates the commitment to preventing their disability from hindering their academic performance, and the reassurance that support is always available. Valentina explained that her ADHD diagnosis came after she finished her PhD coursework, even though accommodations were more crucial during that period, as she noted:

I have been granted extended time for assignments submission like comprehensive exams and thesis proposals. This accommodation has been relevant and helpful in meeting deadlines and producing quality work. They align with my needs and provide the necessary flexibility, ensuring that my learning disability does not hinder my academic performance. (Valentina, 123).

Some other participants' accounts also revealed the fact that adaptive academic accommodation plays a crucial role in the academic success of students with LDs. Lindsay's academic success in this respect is a testament to the impact of personalized accommodations in post-secondary institutions. These accommodations, such as note-takers, audio memory support, extra time for assignments, and private exam rooms, align with her needs and significantly contribute to her studies. Lindsay noted:

Receiving note-takers and audio memory support services provided by the disability service office contributed much to my studies. Besides, an extension of assignments approved by faculty members was also supportive. Fifty (50) percent extra time, including the provision of arranging a private room during the exam, is/was helpful. (Lindsay, 207).

Lindsay's suggestion to involve students in accommodation decision-making further highlights the importance of this issue. It underscores the need for personalized, inclusive accommodations adapted to individual needs, fostering a supportive learning environment where students with LDs can thrive academically.

Certainly, adaptive academic accommodations remain a critical factor for the academic success of post-secondary students with LDs by addressing individual needs, promoting inclusivity, fostering a supportive learning environment, facilitating proactive advocacy and collaboration, and ensuring ongoing flexibility and responsiveness. However, it is important to acknowledge that there may be challenges or limitations in their implementation. Meeting these challenges, both faculty members, peers, and service providers play a significant role in this respect.

Positive Interaction and Engagement. The study found that positive interaction and engagement with faculty, peers, families, and service providers are essential supports for the academic success of post-secondary students with LDs. These interactions create a supportive learning environment that promotes confidence, motivation, and a sense of belonging among students with LDs, enabling them to navigate academic challenges effectively. For example, faculty members who provide adaptive academic and motivational support, peers who offer crucial encouragement and collaboration, and families who offer persistent support and motivation contribute significantly to the academic journey of post-secondary students with LDs.

Positive Interactions with Faculty Members. Firstly, the transformative influence of positive interaction with faculty members is not just about navigating academic challenges effectively, but also about empowering students with LDs towards their success. A thorough

analysis of participants' narratives in this study revealed that faculty members' positive attributes and willingness to give importance to the learning challenges of students with LDs were instrumental in their success in post-secondary education.

For example, Arian emphasizes the willingness of faculty to accommodate students with LDs, attributing this to their experience or training in handling such students. As he noted:

I experienced that faculty members are more willing to accommodate students with LDs than they are willing to accommodate students with emotional problems or students with other disabilities. The reason may be that the faculty has experienced or received training on handling students with LDs, which may not be the case for other disabilities. It also may be possible that the faculty has experience dealing with students who only have LDs and face more academic challenges than other students with disabilities. However, the support from the faculty not only reduced barriers, but also made my learning more accessible, facilitated my positive achievements, and continued strong support connecting to the disability services office and administrators to secure academic accommodations.

(Arian, 149)

Arian further explained that this positive interaction not only reduces his learning barriers and makes learning more accessible but also empowers me by securing necessary accommodations, thereby facilitating academic achievements. Similarly, Ethan acknowledges constructive interactions with faculty members, who readily offer support and guidance toward necessary resources for academic progress, further empowering me. She noted "My interactions with faculty have been constructive, especially when addressing my learning disability-related academic requirements" (Ethan, 157 - 158).

Additionally, the role of faculty members in facilitating a supportive learning environment is emphasized through the experiences of Denise and Jasper. Denise, for instance, shares experiences of initial misunderstanding from faculty, but as awareness grows through interactions, they become supportive of allowing accommodations like extra exam time. As Denise noted:

In post-secondary education, faculty members initially unaware of my learning disability perceived me as lazy. However, understanding grew as they became aware through our interactions, enabling me to seek accommodations like extra exam time and a quiet environment for written exams. (Denise, 170)

Jasper, on the other hand, emphasizes the importance of consistent communication with faculty members in accommodating their learning limitations and adapting teaching methods to suit their needs. She noted that "I maintain consistent communication with my faculty members contributed much to my success" (Jasper, 132). Similarly, Kelly mentions positive relationships with professors, indicating the supportive learning environment that advances her towards academic success.

While Valentina acknowledges the significant contribution of her PhD supervisor and course faculty to her educational achievements, emphasizing the importance of their understanding, non-judgmental attitudes, and accommodations for limitations. She noted:

Faculty members have proven understanding, are non-judgmental, and are accommodating of my limitations. For instance, they allowed an extended period during the PhD comprehensive exam (e.g., theory and methodology) without my request, which was immensely helpful. (Valentina, 122).

According to Valentina, the faculty assessed my performance on theory and methodology questions in a just and unbiased manner, even though I received a conditional grade in one of the assessments. Such attributes significantly facilitate my post-secondary education, creating an environment that supports growth and success. Besides, I felt that this recognition highlights the value and respect that faculty members can instill in students with LDs.

Positive interaction and engagement with faculty remain crucial factors for the academic success of post-secondary students with LDs. These interactions foster a supportive learning environment, promote access to necessary accommodations, facilitate self-advocacy and empowerment, and contribute to overall academic achievements.

Positive Interactions with Peers. The personal experiences shared by participants, such as Jasper, Lindsay, Martin, Norman, and Valentina, distinctly illustrate the crucial role of positive interactions and engagement with peers in the academic success of post-secondary students with LDs. Their narratives bring to light several key factors that underscore the significance of peer support in navigating the challenges associated with students with LDs in higher education.

Firstly, peer support promotes a sense of belonging and acceptance for participants like Jasper, whose initial difficulties in disclosing her learning disability led to feelings of loneliness and stigmatization. However, finding peers who understood and assisted her eased these negative emotions and created a supportive environment where she felt valued and accepted for who she was. As Jasper noted:

I had difficulty telling my peers about my learning disability because some did not believe I had one and thought I did not belong in their group or needed extra help. This made me feel lonely, hopeless, and stigmatized. However, some peers understood and

assisted me with reading, analyzing, and understanding the large amount of text I found challenging. (Jasper, 133)

Similarly, Lindsay's experience demonstrates how classmates' awareness and accommodation of her disability facilitated the development of meaningful friendships, reinforcing the idea that positive peer interactions contribute to a sense of belonging and inclusion. She cited an example of how her fellow peers helped her because she has comorbid hearing difficulty with a learning disability:

I experienced that many non-disabled peers in my classes supported students with disabilities. On one occasion, the FM System was turned on in the class, which made huge noises. A classmate had asked me to turn it off as she thought my FM system was a cellphone playing music. Another classmate was aware of my disability and use of an FM system, and they told this other student it was an FM system, not a phone. This way, my classmate understood my challenges and became a good friend of mine. (Lindsay, 206)

This highlights how peer support enhances learning experiences by providing practical assistance for individuals with varied limitations. In other examples, Ethan and Martin highlight how their peers offer guidance and resources to overcome academic challenges related to their disabilities. Whether it is helping with math calculations or breaking down complex text materials into more accessible units, this way, peer assistance enables them to engage more effectively with the curriculum, thus enhancing their academic performance.

My non-disabled peers are very supportive of me. They never discriminated against those having a learning disability; instead, they helped me by providing digital materials, finding library resources suitable for my learning, and pulling out significant insights

from text materials for ease of my understanding of the specific subject matter. (Martin, 194)

This clear improvement in academic performance, thanks to peer support, is a testament to its effectiveness. The extent to which peer encouragement and motivation remain crucial in promoting resilience and perseverance for students with LDs has been realized in Valentina's narratives.

I have found that engaging with my peers while managing my learning disability has been a positive experience. Their constant support and encouragement, particularly during moments of helplessness and loneliness, have significantly impacted my learning. Their fascinating positive attributes towards my limitations and understanding of my learning difficulties have created a positive environment for shared experiences in my post-secondary education. (Valentina, 122)

Valentina's experience underscores the significance of peer support in moments of helplessness and loneliness. The knowledge that they have peers who believe in their abilities and are willing to offer encouragement during challenging times can significantly impact students' confidence and self-efficacy. This, in turn, empowers her to navigate obstacles, stay focused, and make the most of educational opportunities, thereby promoting academic success and personal growth. This resilience and determination, stimulated by peer support, is truly inspiring.

Additionally, positive peer interactions contribute to developing social and communication skills essential for academic and personal success for students with LDs. This has been evidenced in Norman's narrative, where he emphasizes the importance of building friendships and seeking study groups based on shared interests. Norman noted:

Having a learning disability during post-secondary education does not matter too much when interacting with peers. While it presents some challenges, many students are understanding and supportive. Building friendships, seeking study groups, and focusing on shared interests lead to positive peer interactions regardless of my learning differences. (Norman, 110)

Participants' narratives revealed the fact that engaging with peers in collaborative learning environments not only facilitates academic progress but also enhances social integration and networking opportunities. Through interactions with supportive peers, students with LDs develop effective communication strategies, advocacy skills, and self-advocacy skills, valuable assets in both academic and professional settings. Besides, interactions and engagement with peers play a multifaceted role in the academic success of post-secondary students with LDs.

By promoting a sense of belonging, providing practical assistance and accommodations, offering encouragement and motivation, and promoting social and communication skills, peer support creates an inclusive and supportive learning environment where students can thrive despite their learning differences. As illustrated by the experiences shared by Ethan, Jasper, Lindsay, Martin, Norman, and Valentina, the collective efforts of peers in understanding, accepting, and supporting students with LDs not only enhanced their academic performance but also developed their overall educational experience, empowering them to achieve their full potential.

Positive Interactions with Families. Positive interactions and engagement with families are paramount for the academic success of post-secondary students with LDs. The study found that family members play a crucial role in providing motivation, financial support, and emotional assistance, essential factors for academic success of students with LDs. As Arian shared, "Family

members contributed much in terms of motivation and financial and emotional support to my educational success” (Arian, 144). Arian's expression underscores the significant impact of family support on his overall academic achievements.

The study found that parental support and guidance are not just important, but crucial elements that contribute to the academic success of post-secondary students with LDs. Parents' continuous positive support and direction are vital in enhancing the educational success of students with LDs, which is further emphasized by the participants, with Arian stating:

The most common source of this support is my parents' continuous positive support and direction to continue my education. They extend emotional and psychological support the most before and during my in-class exams and assignment submissions. In short, my parents are a benefactor in helping me manage my post-secondary educational journey.

(Arian, 149)

This underlines the influence of parental encouragement on the student's academic journey. Arian's statement demonstrates how the extent of the emotional and psychological support offered by family members, even from a distance, plays a significant role in the student's overall well-being and academic success. It is important to note that maintaining emotional well-being and a supportive family environment is not just beneficial, but crucial for the academic progress of post-secondary students with LDs.

Several other participants also highlighted the importance of familial cooperation in recognizing and addressing the challenges faced during their educational journey. Ethan mentioned, “Their continuous assistance is not just helpful, but a cornerstone for my emotional and psychological well-being, especially since I am away from home.” (Ethan, 158 – 159). This

support contributes to her ability to focus on their studies and navigate academic challenges effectively, as further expressed by Ethan:

During my post-secondary education, my bond with my family members strengthened. Their support and understanding remain more rigorous despite being away from them. They provide psychosocial and emotional assistance, recognizing the challenges I face. This ongoing familial cooperation significantly contributes to my overall well-being and academic journey. (Ethan, 158)

The study also found that intrinsic motivation and family influence drive post-secondary students with LDs toward academic success. Participants expressed how their belief in the value of education and parental encouragement motivated them to pursue higher studies, one participant highlighted this by stating, “My parents' encouragement and my personal belief in the value of higher education drove me to pursue post-secondary education. I recognized that it would enhance my knowledge and career prospects, ensuring a job after graduation” (Genevieve, 182). This motivation, promoted by family support, is crucial in shaping my educational aspirations and achievements, a testament to the power of personal drive.

It can be argued that balancing independence with a supportive family environment creates an optimal setting for academic success among post-secondary students with LDs. Because most participants in this study emphasized the importance of a balanced level of support that promotes self-reliance while ensuring that assistance is available when needed. One participant highlighted this by stating,

My family offers a balanced level of support, not overly intrusive. Their encouragement provides a stable foundation, allowing me to navigate post-secondary education with independence and confidence. This balance helps foster self-reliance while knowing

support is available when needed, creating a conducive environment for academic success. (Norman, 111)

This balance allows students to develop self-reliance while knowing support is available when needed and that helps their academic performance. As participants expressed, families provide a sense of stability and belonging, even when they are away from home for their studies. Knowing their families are there for them offers reassurance and helps them feel supported, which is crucial for maintaining focus and motivation. They also argue that the unified family dynamics, characterized by solid understanding and encouragement, advance their academic resilience.

Participants also shared how their families remained supportive and unaffected by challenges posed by their disabilities, enabling open communication and a sense of unity within the family. One participant expressed this sentiment: “Our interactions remain unaffected by any challenges posed by my learning disability” (Valentina, 122). This understanding encourages open communication where students feel accepted and valued despite their challenges that underscores the crucial role of family support in fostering a sense of belonging.

Therefore, positive interactions and engagement with families serve as crucial factors in the academic success of post-secondary students with LDs by providing essential support, encouragement, stability, and adaptability to their unique needs.

Positive Interactions with Service Providers. The study reported that positive interactions and engagement with service providers are crucial to the academic success of post-secondary students with LDs. Arian's experience, for instance, is a powerful testament to this. He shares, “Service providers are always helpful” (Arian, 158), creating a supportive environment where students feel valued and understood. The adaptive academic resources offered by service

providers further enhance this positive atmosphere, ensuring students' needs are met while adhering to institutional policies. Arian's account of his interaction with service providers, "They offer the necessary resources tailored to my needs, although they adhere to the institution's policies" (Arian 158), underscores the instrumental role of their support in navigating the challenges posed by his learning disability. It enriched his educational journey within the framework of the institution's guidelines.

Service providers' proactive and supportive attitude, as highlighted by their ready availability for discussions on academic accommodations and commitment to following established policies and procedures, demonstrates a proactive approach toward assisting students with disabilities. However, the need for flexibility is also evident, as strict adherence to procedures can sometimes hinder the seamless progression of post-secondary education for students with LDs.

In this respect, Ethan noted, "The need for flexibility in academic accommodations is crucial, as it can sometimes hinder the seamless progression of post-secondary education for students with LDs" (Ethan, 159). However, she acknowledges service providers' helpfulness in facilitating personalized accommodations, such as extra time in exams and quieter spaces. This dedication to supporting students with learning challenges is a testament to the importance of service providers in the academic success of students with LDs. Their role is not just supportive but instrumental in ensuring a positive learning experience for students with LDs. One other participant also shared a similar experience and noted:

I have experienced service providers who are easily accessible and remain attentive to understanding my educational challenges, which positively impact my post-secondary education. Their helpfulness facilitates a conducive learning environment for my case. I

have been receiving extra time in exams and submitting assignments; much quieter space is being allocated for me during the exam, and recommended other accommodations deemed necessary for my learning challenges. (Denise, 171)

Denise's statement demonstrates the fact that for post-secondary students with LDs, personalized support from service providers is not just beneficial but empowering. Some other participants in this study also indicated this testimony.

As expressed by Norman, customized schedules, early arrangements for peer support, and prompt accommodations provided by service providers ensure that students receive the necessary support effectively. These measures reflect a commitment of service providers to inclusivity and equal access for all students, regardless of their learning differences. Norman further noted, "Customized schedules and early arrangements for peer support are not just helpful, but crucial. This ensures that students with LDs receive the accommodations they need promptly and effectively, enhancing their academic experience" (Norman, 110). These measures reflect the extent to which service providers are committed to inclusivity and equal access for all students, irrespective of their learning differences.

One other participant shared her experience, with a strong focus on her positive interactions with service providers, particularly the Office of Disability Services at Ontario Tech University. She was particularly impressed by their professionalism, which not only caught her attention but also significantly enhanced her overall experience. She noted:

Interacting with service providers has been positive, notably with the Office of Disability Services at Ontario Tech University. Their professionalism not only stands out but also enhances my experience. (Valentina, 122)

Valentina's recognition of the Office of Disability Services' support and value underscores the crucial role of effective and respectful communication between service providers and individuals utilizing their services, especially in contexts related to disability support. This statement not only reflects her feeling of being supported and valued but also potentially indicates a broader commitment to inclusivity and accessibility within the institution.

In her discussion, Valentina also mentioned that although her university is relatively small now, she is uncertain about the future of disability services as it rapidly grows. However, at this moment, interacting with service providers, particularly those known for their professionalism and dedication, like the Office of Disability Services at Ontario Tech University, not only enhances the overall experience for students with LDs but also provides a sense of reassurance about the future. Valentina believes that maintaining the current standards of service provision, especially professionalism and dedication, is vital for fostering a positive academic environment.

The participants' testimonies in this study underscore the importance of a supportive environment and the proactive attitude of service providers. Their insights into the potential limitation of strict procedure adherence raise a crucial point. But they also stress the importance of customized support, which is a testament to the professionalism of service providers. Therefore, individualized need-based academic and accommodation support is not just important, but truly indispensable for students with LDs' academic success and inclusivity in post-secondary education.

Personal Attributes for Success. The study found that participants' attributes like self-determination, self-confidence, and effective communication with others play a crucial role in the academic success of post-secondary education. For example, self-determination drives the

commitment to overcome challenges. In contrast, self-confidence empowers them to deal with academic challenges. One participant explored this attribute in the following manner:

Success in post-secondary education can be driven by personal attributes like determination, which fuels the commitment to overcome challenges—persuasion skills aid in advocating for accommodations and support. At the same time, self-confidence empowers one to tackle academic hurdles, and effective communication fosters understanding with peers, faculty, and service providers. These attributes collectively create a foundation for navigating the complexities of higher education, maximizing learning, and achieving desired academic goals. (Ethan, 162 – 163)

Ethan's explanation highlights the importance of clear and effective communication with service providers, faculty, and peers on campus for succeeding in higher education. She also added that by mastering this crucial skill, students can easily connect with their peers, faculty, and service providers and confidently navigate the complexities of academic life. It is important to note that prioritizing concise and articulate communication allows students to express their needs and receive the necessary support to achieve their academic goals. As Ethan argues, poor communication can hold students back from receiving academic accommodations necessary for success, so prioritize effective communication to unlock the doors for students with LDs toward their academic success.

Genevieve, however, argues that personal attributes like hard work, perseverance, and dedication are essential for success in post-secondary education. He noted that “Attributes like hard work, perseverance, and dedication are pivotal for success in post-secondary education” (Genevieve,187). He further explained that these qualities empower students to overcome

challenges, stay focused on their goals, and consistently strive for excellence throughout their academic journey.

Besides, most participants emphasized effective connections with faculty, peers, and service providers and expressed the need for advocacy skills of students with LDs as crucial for success in post-secondary institutions. In this respect, Lindsay noted:

To overcome their challenges in post-secondary education, students with LDs must have well-rounded communication and advocacy skills to demand their needs and priorities from the Office of Disability Services, institutional authorities, and faculty members.

They should have skills combating challenges in continuing their studies; for example, if in the future educational institutions are forced to remote learning or courses that are often offered online, students with LDs need to demand their online learning features, for example, auto-captions, text to reading software, resources digitally accessible for all learners, readily available. (Lindsay, 209)

Clearly, students with LDs must have well-rounded communication and advocacy skills to meet their needs and priorities and ensure access to necessary accommodations and support. As Lindsay contended, self-confidence and self-determination, like the “I can do it” approach, are paramount to overcoming their challenges.

Described by many participants that resilience and positivity are critical personal attributes that foster confidence and a proactive mindset in overcoming challenges. As Valentina noted “Resilience is key, fostering confidence through the assurance of overcoming challenges. Positivity amplifies this, shaping a mindset conducive to success in post-secondary education. Embracing these personal attributes cultivates a proactive approach, enabling effective problem-solving and adaptation” (Valentina, 125). She argued that embracing these attributes enables

students to adapt, solve problems effectively, and maintain a positive outlook beneficial to success in post-secondary education. One other participant stated that students with LDs should have a dream for success, including self-determination, consistency, and patience, stay focused, and never give up, attributes crucial for academic success (Martin, 97).

The study underscores the critical role of students with LDs' attributes in the academic success of post-secondary education. Participants emphasis on effective communication highlights its significance in connecting with peers, faculty, and service providers, which is essential for navigating higher education complexities. They stress the importance of hard work, perseverance, and dedication in overcoming challenges and striving for excellence. They also underscore the need for advocacy skills, particularly for students with LDs, to ensure access to accommodations and support services. Additionally, students with LDs highlight resilience and positivity as promoting confidence and proactive problem-solving, which are crucial for success. Most participants in this study also expressed the importance of having a dream for success, self-determination, consistency, patience, and focus. Therefore, a combination of positive attributes like effective communication, perseverance, advocacy, resilience, positivity, and determination forms a strong foundation for academic progress in post-secondary education, facilitating academic success and empowering students with LDs

Navigating Remote or Online Learning. The study on the experiences and needs of students with LDs in remote/online learning environments has yielded significant findings. Key among these is the crucial role of navigating remote/online learning platforms, including developing skills in this respect, in their educational interventions or related academic accommodations. The study uncovered narratives from participant responses that provide

insights into the various strategies, supports, and accommodations deemed essential for students with LDs in navigating remote/online learning environments.

By examining participants' perspectives, the study gained a deeper understanding of the specific needs and experiences of students with LDs in virtual education settings.

For example, one participant mentions that online/remote courses are appropriate for students with LDs, especially those with difficulties in writing and note-taking. They can record lectures online and transcribe them promptly using speech-to-text software. As the participant noted:

Students with LDs who have difficulties in writing and note-taking can record lectures online and transcribe those promptly using speech-text software readily available on any online platform. While lectures recorded in a classroom environment sometimes remain inaudible due to external noises. (Arian, 148)

Arian's observation highlights the remarkable adaptability of students with LDs. He further notes that when classes transitioned from in-person to remote learning, students with LDs were not only able to cope but also excelled in online courses. This resilience is a testament to their determination and ability to overcome challenges.

As expressed by Ethan, a remote learning platform provides essential support for students with LDs, including extending class time slots to accommodate varied learning paces and allocating dedicated consultation time with instructors for personalized guidance. She noted that "essential support for students with LDs in remote/online learning includes extending class time slots to accommodate varied learning paces. Allocating dedicated consultation time with instructors allows personalized guidance" (Ethan, 163). However, she emphasizes the importance of ensuring that online learning does not hinder collaborative learning, as synchronous interaction promotes understanding. In her opinion, combining these supports helps students with

LDs navigate virtual education platforms effectively which facilitates their success in post-secondary education despite the challenges posed by the online format.

While Genevieve stresses the importance of offering personalized classes for remote/online learning to ensure a thorough understanding of the content, as he explained, "For remote/online learning, offering personalized classes is crucial. This ensures a thorough understanding of the content. Additionally, incorporating educational games and activities into lessons can enhance engagement and comprehension, supporting students with LDs to excel in their post-secondary education" (Genevieve, 187). Genevieve argues that integrating extracurricular activities into online lessons is imperative to ensuring the success of students with learning disabilities in their post-secondary education. However, several other participants see remote/online learning as a one of the academic success factors for students with LDs from different lenses.

As Jasper discusses equipping students with LDs for remote/online learning by providing institution-provided laptops and related accessories and assisting in text-to-speech software installation. "Equipping students with LDs for remote/online learning involves providing institution-provided laptops and related accessories and assisting in text-to-speech software installation" (Jasper, 138). These supports according to Jasper ensure students with LDs accessibility in remote/online learning since it helps in information processing and engagement to a greater extent.

Martin advocates for the need to have the auto-caption feature always on, making resources digitally accessible for all learners and providing longer time for question-and-answer sessions. Valentina highlights the importance of engaging with professors for assistance, building connections with peers, and breaking assignments into manageable segments in remote learning.

Engaging with professors for assistance, building connections with peers, and breaking assignments into manageable segments is crucial in remote learning. Tracking progress gradually and holding oneself accountable also contribute to success. In remote/online learning, these supports ensure that students with LDs can navigate challenges effectively, maintain a structured approach, and measure their achievements, ultimately achieving their academic goals. (Valentina, 126)

The insights provided by the participants underscore the significance of adapted approaches and adaptive accommodations in facilitating the success of students with LDs in remote and online learning environments. Strategies such as personalized instruction, extended time slots, access to assistive technologies, and opportunities for collaborative learning emerge as critical factors in supporting the diverse learning needs of students with LDs in the case of remote/online learning. From the participants' narratives, they acknowledged that by prioritizing these skills and accommodations, post-secondary educational institutions can create more inclusive and accessible virtual learning environments that would empower students with LDs to thrive academically. As higher education continues to navigate the evolving platforms of remote and online learning, it is imperative to pay attention to the voices of students with LDs and ensure that their unique perspectives and needs remain central to discussions surrounding educational interventions and academic accommodations.

Summary

The above findings narrate the experiences of students with LDs and their journey through the post-secondary education system, focusing on the identification, support, and personal attributes that contributed to their academic success. The narrative highlights the late

identification of learning disabilities in participants and the crucial role of support services and positive faculty interactions in their educational achievements.

The study's most notable finding was the late identification of learning disabilities in many participants, typically around the end of high school or during their post-secondary years. This finding challenges the widely held belief that early identification is crucial for providing timely support. The late diagnosis, however, had unintended positive consequences. These individuals, unknown to their parents and school personnel, were often held to higher expectations, which may have influenced their persistence and eventual success in higher education. It is important to note, however, that late identification may have also had negative implications on their mental health and self-esteem, as they had to navigate their academic drive without the formal support and understanding of their learning disabilities to others. This aspect presents an exciting opportunity for future research on disability and education.

One of the primary challenges faced by students with LDs is the stigmatization that often accompanies the diagnosis. This stigma can manifest in various ways, such as being labeled as 'lazy' or 'slow,' facing discrimination in academic and social settings, and feeling isolated from their peers. Stigmatization can lead to lower expectations from faculty and peers, slowing the individual's academic performance and self-esteem. However, for the participants in this study, the lack of early identification meant they were not subjected to these lowered expectations. Instead, they were often driven to perform at the same level as their peers, reinforcing their drive and participation in post-secondary education.

Support and accommodation services provided by the Office of disability services at the post-secondary institutions were highlighted as crucial factors of the participants' academic success. These services included learning support service providers, who helped the students

develop effective study routines and coping strategies best suited to their needs. For instance, they were given extra time during exams, access to assistive technology, and personalized study plans. The availability of technological aids for remote/online learning also played a significant role in these students' academic performance. The participants, by embracing their disabilities and understanding their strengths and limitations, were able to use these resources, thereby facilitating their academic achievements effectively.

The study underscores the critical role of support services and positive faculty interactions in the academic success of students with LDs. For example, faculty members who were supportive and involved in the accommodation process were seen as key to their success. These faculty members were approachable, willing to help, and attentive to the students' needs, which made a substantial difference in their educational experience. Their role in promoting a supportive learning environment cannot be overstated.

Additionally, teaching and learning methods that adhered to universal design for learning (UDL) principles, such as reading slides word-for-word during lectures and giving lecture slides weeks before remote/online classes, were particularly beneficial for students with LDs. These methods ensured that students with LDs could follow along more quickly and understand the material more effectively.

The study revealed the personal attributes of the participants that were instrumental in their academic success. Attributes such as determination, perseverance, and a hopeful outlook on the future were repeatedly mentioned as integral to their achievements. For example, their determination to succeed despite their learning disabilities often led them to seek additional help and resources. These individuals showed assertiveness, took the initiative, and often had a strong desire to prove others wrong, which forced their drive to succeed. They also mentioned the

importance of having a survival instinct and a sense of humor, which helped them navigate the challenges they faced. Their ability to adapt to different learning environments and their resilience in the face of setbacks were also critical factors in their success.

Interestingly, most participants found that their learning disabilities became a source of motivation and helped define their career interests. Their personal experiences and the challenges they overcame inspired them to help others with similar difficulties. This desire to give back and support others with learning disabilities was not just a result of their success but a driving force in their academic drive. They felt that their firsthand knowledge and experience made them uniquely qualified to assist others in navigating the post-secondary education system and achieving success. This sense of social responsibility and empathy towards others with learning disabilities was a common theme among the participants, further underscoring the importance of these values in their academic success.

Support services provided by university disability offices, positive interactions with faculty members, and effective teaching and learning methods were crucial to their success. Additionally, the participants' attributes, including determination, perseverance, and assertiveness, played a significant role in their achievements. Lastly, the ability to turn their disability into a source of motivation and a desire to help others with similar challenges was a noteworthy finding. This comprehensive understanding of their experiences highlights the importance of support, positive reinforcement, and personal resilience in overcoming the challenges associated with learning disabilities.

Faculty Perspectives on Challenges and Successes of Students with LDs

Many themes of challenges and successes of students with LDs that were discussed above align with the faculty members' viewpoints. The study, however, finds it significant to explore their perspectives to comprehensively understand their experiences supporting students with LDs. This includes identifying the faculty members' most effective learning strategies, their comprehension of students with LDs needs for academic success, and the ongoing challenges students encounter.

Self-identification and Accommodations shape Students Academic Success

The narratives of faculty members from several perspectives revealed on how self-identification and disclosure of disability present challenges to the academic success of post-secondary students with LDs. For example, Julian, a faculty member, with a clear sense of empathy, explained that the level of comfort in discussing learning disabilities varies depending on the type of learning disability and the individual student, as he stated, "It really depends on the type of LD and the student's level of comfort in discussing their LD" (Julian, 124). This highlights the individualized nature of the challenge. Julian also mentions that the specific characteristics of their learning disability might make disclosure more complex, potentially impacting their ability to access necessary accommodations and support. One other faculty member, Samir, also showing empathy, noted that students with LDs are often hesitant to discuss their disabilities due to the sensitivity of sharing personal information and the fear of appearing to request less rigorous academic training compared to their peers:

Based on my experience, I think there can be a hesitancy among students to discuss their disabilities and advocate for accommodations. I think this may be because that in addition to the issues associated with sharing very personal information, they do not want to

appear to be requesting less rigorous academic training compared to their peers. (Samir, 127)

Clearly, this indicates a broader social and academic tension that discourages students from disclosing their learning disabilities because they do not want to be perceived as seeking an unfair advantage or as less capable.

One other faculty member, Nina, mentioned that by the time students reach her program, most are comfortable with disclosure, but there are still a few who are reluctant and wait until major difficulties arise. Nina contends that disclosure is more likely if students have a good relationship with their professors, as she stated:

Students also tell me that they disclose easily to those professors who they have a good relationship with, and they are less likely to disclose if they don't have that relationship in place or have a sense that the prof will be receptive. (Nina, 131)

Therefore, trust and rapport with faculty, crucial in any academic setting, play an even more significant role in whether students feel comfortable disclosing their learning disabilities. It is important to note that reluctance to disclose until difficulties are severe can delay the provision of necessary support, thwarting academic success.

Faculty member, Steve, however, has different perspectives as he mentioned that comfort with disclosure varies; some students are shy or ashamed, while others might be perceived as lazy. "Some are, some are not. I think because they are shy or ashamed. Or just lazy" (Steve, 133).

Faculty member, David, observes that students have become more comfortable discussing their learning disabilities. However, there is a nuanced view regarding

accommodations, particularly around mental health conditions, which can affect perceptions of fairness:

On the whole, though, I would say that students have become surprisingly comfortable discussing their challenges, and not only with faculty members. However, I will make a point here not strictly relevant to LDs but to accommodations, generally. While the general student body is very supportive of LDs, there is some skepticism and resentment concerning accommodations for other sorts of conditions, including in particular anxiety. (David, 137)

The statement contends that the broader context of accommodations for various conditions, including mental health issues, can influence perceptions of fairness and adequacy, potentially affecting students with LDs' views on their accommodations.

Nonetheless, faculty narratives explored that self-identification and disclosure of learning disabilities are complex challenges for post-secondary students with LDs. They are influenced by individual comfort levels, fear of stigma, the quality of relationships with faculty, and broader dynamics around the fairness of accommodations. They feel that addressing these challenges is not just a matter of policy, but a call for a nuanced and supportive approach to foster an inclusive academic environment.

In exploring students academic and related accommodations as one of the challenges, faculty members acknowledge this as a significant challenge faced by students with LDs in navigating academic accommodations at post-secondary level. This challenge is due to the diverse range of support required by students with LDs, as revealed in faculty narratives. Students with LDs receive extensive accommodation, such as extra time for tests and assignments, specialized exam settings, access to assistive technologies, and peer support. The

role of faculty in providing these accommodations is crucial and their support is highly valued in this process.

Although these accommodations are undeniably beneficial, it is crucial to recognize the significant efforts students with LDs demonstrate in making the most of them. Their resilience is evident in the way they manage the additional time provided, even when it sometimes leads to time pressure and the need to reduce course loads, impacting their academic success. This is particularly evident in courses emphasizing critical reading and precise writing, where exceptional academic performance may be hindered by the need to devote significant effort to expressing fundamental meaning of specific subject or topic.

In this respect, one faculty member, David noted:

The additional time spent writing exams, reading, doing homework, etc., can mean they are under significant time pressure or must reduce their course load per semester.

Additional time is helpful but in courses like my own which reward careful critical reading and precise elegant writing, students who must devote significant effort to grasping or expressing elementary meaning tend to have a lower ceiling and only occasionally produce outstanding or excellent written work. (David, 135)

The struggle with multiple assignments across various classes can be overwhelming, especially when additional time is already allocated for task completion. As Nina observed from her working experience with students with LDs, “time management, particularly in terms of organizing and juggling multiple assignments across multiple classes”, always remains a challenge for students with LDs.

Faculty member Nina further stressed the need for students to actively organize and prioritize tasks for academic success, underscoring the importance of receiving accommodation

and developing strategies to manage workload efficiently. It's crucial to note that the success of these strategies ultimately relies on the active involvement and responsibility of the students themselves, as they are the ones who manage their time and workload.

Academic accommodation for students with LDs, while essential, requires a balanced approach. The narratives of faculty members underscore the dual-edged nature of these supports, providing crucial aid but also introducing significant time management issues. As Nina highlighted, the need for students with LDs to struggle with multiple assignments becomes even more evident with additional time allocations. This underscores the critical role of effective time management and organizational strategies for academic success of students with LDs, and the need to balance accommodations with the development of these skills.

Students Transitioning Challenges and the Need for Better Support

The study found that students with LDs, despite often facing significant difficulties due to the heavy demands of reading and writing in post-secondary education, demonstrate remarkable resilience. These academic requirements, which can disadvantage students with LDs who need more time to process information and produce written work, are met with determination and perseverance. As one faculty, Nina notes, "The high reading load which privileges students who can read large amounts quickly, while the high writing load in some programs/courses which privileges students who can produce written text quick" (Nina, 130).

Some other faculty narratives also underscore a lack of understanding among university staff, faculty, and peers regarding the specific needs of students with LDs. This gap can affect various aspects of the educational experience, from communication and course design to the physical infrastructure of the campus. One faculty in this respect noted, "A lack of understanding on the part of university staff, faculty, and students about the needs of students with LD and how

these can best be addressed or accommodated in communications, courses, and building infrastructure" (Nina, 130). The traditional teaching methods that lack flexibility and differentiation can further exacerbate these challenges, making it difficult for students with LDs to succeed, as one faculty said, "Traditional teaching approach that don't allow for differentiation - similarly courses where flexibility is not built into the syllabus" (Nina, 130).

A recurrent issue explored in the faculty members' narratives is the urgent need for more training for instructors on how to accommodate students with LDs effectively. They argue that the lack of preparedness can result in students not receiving the necessary support and accommodation to thrive academically. Faculty members' statements in this respect are evidenced, for example, Julian stated, "Lack of training by instructors on how to accommodate students with LDs" (Julian, p.124). Similarly, some other faculty members expressed their sentiments in the following:

I can't think of any that I have attended although I know the U of O has offered several inclusive and UDL-focused teaching sessions for professors. (Nina, 131)

I don't recall getting any such training. (Julian, 134)

I have attended hour-long pedagogical workshops once every year or two on issues related to inclusion, accommodation, support, etc... But I would not describe this as 'training' exactly. (David, 138)

Faculty members consistently report a lack of comprehensive training and insufficient workshops in this respect. As Julian indicates, "I assume Teaching and Learning Support Service (TLSS) offers such training, but I don't recall being invited to one, for example" (Julian, 125). This deficiency suggests that existing efforts, such as those at the University of Ottawa, for example, must be more adequate or better communicated (Nina, 130). In addition, Nina raises

concerns and notes that a lack of understanding on the part of university staff, faculty, and students about the needs of students with LDs and how these can best be addressed or accommodated in communications and courses pose significant barriers related to education and learning of students with LDs in post-secondary education. (Nina, 130).

One other faculty member spoke about the post-secondary institutional culture that challenges students with LDs in self-advocating. Since the expectation that students with LDs should have developed coping strategies by reaching post-secondary education creates additional challenges. This expectation, combined with an institutional culture that may not fully support self-advocacy, makes it difficult for students with LDs to obtain the accommodations they need.

As Samir noted:

Compared to the K-12 education system, I think the culture in post-secondary institutions is catching up to the reality of appropriately accommodating students with learning disabilities. I believe there is somewhat of an expectation that by the time a student has reached post-secondary level, they have already found ways to address the issues associated with their learning disabilities. As well, I think the culture in post-secondary institutions can make it less comfortable for students with learning disabilities to advocate for themselves and obtain the accommodations they may need to learn successfully (Samir, 127).

Clearly, post-secondary institutions are beginning to better accommodate students with LDs, but challenges persist. It is crucial to understand that their role in fostering a supportive institutional culture is vital, as this environment may impede students with LDs ability to learn effectively, and the support provided may not fully address their needs.

Faculty Insights on the Challenges in Interactions with Students

Faculty narratives in this respect revealed that one of the critical hurdles students with LDs face is effectively interacting with faculty to obtain the necessary support and accommodations. Their narratives explore the specific challenges related to interactions with faculty, several students with LDs highlighting the key areas where these interactions fall short and impact their academic success.

One faculty member draws attention to the urgent issue of communication barriers affecting the academic performance of students with LDs. He points out the struggle of students with LDs to communicate their academic needs clearly and promptly to their instructors can lead to significant delays in receiving the necessary accommodations, thereby impacting their academic performance (Julian, 124).

As faculty member, Samir emphasizes the need for a supportive institutional culture that not only encourages students to seek the support they need but also fosters an environment of inclusivity and understanding. He states,

We need to foster a culture in post-secondary institutions that not only normalizes students seeking the support they need, but also celebrates their unique strengths.

Students should feel not just comfortable, but empowered and supported in advocating for any accommodations they may need to learn successfully (Samir, 127).

This statement explores that the current institutional culture may make students with LDs hesitant or fearful of approaching instructors for help, leading to unmet needs and increased academic challenges. One other faculty underscores the necessity for faculty and peers to have a better understanding of learning disabilities. She suggests,

...they need faculty and peers who have some understanding of LDs, requirements on the part of professors to provide accommodations, more varied accommodations suggested by university support services (not just extra time!) and informal university-provided supports to connect with other students with LDs (Nina, 130).

This indicates that a lack of awareness and understanding of the needs of students with LDs from faculty can result in inadequate support for students with LDs, making it harder for them to thrive academically.

Nevertheless, faculty member, Steve speaks about students with LDs who lack organizational skills and confidence approaching academic accommodations. He points out that many students with LDs lack organizational skills or confidence to approach learning services or professors to request accommodations. He notes, "Being organized and brave enough to approach our learning services dept and to speak with professors to ask for accommodations. Many are too shy or disorganized" (Steve, 133). This can prevent them from accessing the necessary resources and support to succeed academically since the combination of shyness and disorganization further complicates their ability to advocate for themselves effectively.

Faculty narratives reveal that effective interactions with faculty remain a significant challenge for students with LDs in post-secondary education due to several interrelated factors. Communication difficulties, cultural barriers within institutions, a lack of understanding and awareness from faculty, and personal challenges such as shyness and disorganization all contribute to these students' struggle to obtain necessary support and accommodations.

Faculty Insights on the Students Challenges in Online Learning

Several faculty members shed light on the challenges that students with LDs face in the post-secondary online learning environment. They express concern that the transition to online

learning can exacerbate issues of time management, focus, and organization, which are already significant challenges for these students. The reduction in personal interactions with educators and peers is seen as a further obstacle. The faculty's insights, shared with a genuine desire to improve the situation, provide a comprehensive understanding of the challenges faced by students with LDs in online learning contexts.

Faculty member, Nina highlights that the online learning environment can intensify time management and focus issues for students with LDs. She states,

I think some of the time management and focus aspects can be magnified online when there are so many more distractions and fewer opportunities to check in with peers and professors if they don't understand something (Nina, 131).

Faculty member, Steve, on the other hand, suggests that students with ADHD could benefit from software prompts to help them stay organized and meet deadlines. He notes, "With ADHD students at least, being organized and on time with their assignments is tough when there is no real, face-to-face contact" (Steve, 133). His suggestion of using software prompts to encourage timely submission of assignments is a practical solution.

Faculty member, David underscores the vital role of personal contact with teachers and support staff for students with LDs. He emphasizes, "I would imagine that students with LDs stand to benefit immensely from the personal contact with teachers and support staff and are more at risk of 'falling through the cracks' in the generally less personal online environment" (David, 137).

David further highlights the relational aspect of education, stating, "I take a strongly relational view about education, and students who are facing more challenges or who are more vulnerable in general stand to gain or lose more when the quality of the relationship with the

educator is diluted" (David, 138). While acknowledging that online connections can be meaningful, David argues that it is generally easier to establish and maintain personal connections in a face-to-face setting. He calls for careful consideration and strategies to enhance personal relationships in online education to better support students with LDs, stating, "careful reflection on how to enrich the personal relationship in an online setting would seem to be needed" (David, 138).

The faculty narratives reveal that remote and online learning presents significant challenges for students with LDs at the post-secondary level. These challenges include heightened difficulties in time management, focus, and organization, exacerbated by the lack of personal interaction and support in an online setting. The insights from faculty narratives underscore the urgent need for deliberate efforts to create a supportive and connected online learning environment. They feel that by addressing these issues, educators can help ensure that students with LDs do not fall behind and receive the necessary support to succeed academically.

Faculty Strategies are Crucial for Supporting the Success of Students

The study found that faculty members play a crucial role in providing insights into the strategies and accommodations they use to address the unique needs of students with LDs. They demonstrate that educators are key in creating an inclusive learning environment that enhances the academic performance of these students. By implementing structured support mechanisms, utilizing multi-modal content delivery, and adopting universal design principles, educators can significantly contribute to the academic success of students with LDs. This analysis synthesizes the narratives of faculty members to underscore the pivotal role of educators in providing appropriate accommodations.

Faculty member, Nina, a strong advocate for structured support mechanisms, emphasizes their importance in promoting academic success for students with LDs. She underscores that “frequent smaller deadlines can support students in completing work” and suggests design strategies like to-do lists, calendars, and well-structured online courses to help students stay organized (Nina, 131). She also highlights the value of multi-modal content delivery, stating that a “mix of video/audio/text to explain concepts and go over course and assignment expectations” can provide to different learning preferences and reinforce understanding (Nina, 131). Moreover, Nina reiterates the crucial role of availability, noting that “lots of availability on the part of the prof or TA to meet with students individually” is essential for providing personalized guidance and support (Nina, 131). It is through the dedication and expertise of educators like Nina that these accommodations can be effectively implemented, making them feel valued and integral to the process.

Faculty member, David, also acknowledges the importance of adaptive accommodation but from a slightly different point of view. He provides additional time for assignments, noting that “I provide additional time and opportunities for students to take small assignments outside normal class time, where appropriate” (David, 135). David also implements universal design principles by “providing slides and supporting materials in advance of lectures” and varying assignment types to accommodate different abilities (David, 135). Despite not having specific training for working with LDs, David offers one-on-one support to help students develop critical literacy and writing skills. He consciously designs slides to be “fairly sparse – little text, revealed piece-by-piece, against a noise-free clear background” to enhance readability and concentration (David, 135).

Additionally, David makes assignments available early in the semester to help students plan their workload efficiently, although he recognizes the need to balance this to avoid overwhelming students (David, 135-136). David believes that adaptive academic accommodations are not just beneficial; they are pivotal in supporting the academic success of students with LDs in post-secondary education.

Summary

The narratives of faculty members underscore the effectiveness of various strategies, from structured deadlines and multi-modal content delivery to individualized support and universal design principles. These accommodations not only address the specific challenges faced by students with LDs but also significantly enhance the overall learning environment. By providing these appropriate accommodations, faculty members can empower students with LDs to reach their academic potential, thereby ensuring a more inclusive and equitable educational experience. The benefits of these accommodations are clear; they enhance academic success and foster inclusivity in the learning environment.

Chapter 5: Discussion and Implications for Practice

Research in the field of disability and higher education has revealed that a growing number of students with learning disabilities are enrolling in post-secondary education in Canada. However, a significant gap in literature remains crucial for informing higher education institutions to address the challenges faced by students with LDs and to develop mechanisms for how students could overcome these challenges and achieve success. This gap, which pertains to a comprehensive understanding of the challenges faced by students with LDs, is of utmost importance. The depth of these challenges from students with LDs' perspectives and the key factors that drive their success in post-secondary education are areas that need immediate attention. This study, which focuses on the experiences of challenges faced by students with LDs in post-secondary Ontarian institutions, aims to fill this gap and provide valuable insights for policymakers and educators.

The study findings resonate with the Social Model of Disability by highlighting societal and institutional barriers as the main challenges for students with LDs. It calls for comprehensive support systems, such as accessible learning environment and materials and personalized academic accommodation services to remove these barriers. It also suggests increasing awareness and understanding of LDs among faculty, staff, and students to create a favorable learning environment for students with LDs. Combined with three theoretical models — Nora and colleagues' Student Engagement Model, Tinto's Student Integration Model, and Astin's Inputs-Environments-Outcomes (I-E-O) College Impact Model — this study uncovers the essence of challenges faced by post-secondary students with LDs based on the principles of the Social Model of Disability.

This chapter thoroughly examines the critical challenges faced by a small group of post-secondary students with learning disabilities (LDs). It introduces distinctive strategies that have proven effective for the students with LDs who participated in this study, thereby offering a new perspective to the existing literature on providing disability services in higher education institutions. Although the study findings are not intended to be generalized, the chapter then explores the implications for professional practice and proposes guidelines for future research, with the aim of inspiring hope and motivation for higher education institutions and highlighting the potential impact of this research on future studies.

Concealing Learning Disability to Escape Being Seen as Different

The phenomenon of students concealing their learning disabilities (LDs) in academic settings is a multifaceted issue grounded in the fear of stigmatization. For instance, some students might avoid using certain academic accommodations or technologies that could reveal their learning disabilities. Others might avoid asking questions in class or seeking additional help, even when they need it. Participants in this study acknowledged that they often hide their learning disabilities during their post-secondary education to avoid being perceived as different. The primary concern for these students was the potential for differential treatment or negative labeling. They feared being seen as being lazy or having difficulty communicating with others. One participant worried that the faculty might doubt her ability to complete assignments, reflecting a broader anxiety about academic credibility and competence. This refers to the perception of being capable and knowledgeable in an academic context.

As highlighted by Majoko (2018), stigmatization arises when individuals are treated differently based on perceived characteristics. This differential treatment stems from societal perceptions and biases, leading to the development of 'stigma theories,' which are frameworks

that explain how and why specific characteristics become stigmatized. These theories, as posited by Goffman in 1963 (Bos et al., 2013), function to rationalize and explain the perceived inferiority of labeled individuals. They suggest that stigmatization is a social process that is not inherent in the characteristics but rather in the social meanings attached to them. The 'labelling theory' suggests that the act of labelling someone as 'different' or 'abnormal' can lead to their stigmatization (Sjöström, 2017). Research by Wood et al. (2014) corroborates these findings, indicating that students with LDs often worry that critical peers perceive them as challenging to talk to, lazy, responsible for their condition, and dangerous. Similarly, Gow et al. (2020), Grimes et al. (2017), and Majoko (2018) suggest that the fear of being perceived as incapable of handling regular educational tasks, including timely submission of assignments, is a significant constraint for students with LDs when considering whether to disclose their condition to faculty members.

The decision to conceal a learning disability is not made lightly; it involves weighing the potential benefits of disclosure, such as access to accommodations and support services that can enhance academic success, against the risks of stigmatization. For many students, the ability to conceal a non-visible disability offers an excuse for negative labeling. The participants in this study expressed a sense of relief at being able to keep their learning disability hidden during post-secondary institutions. However, this concealment comes at a cost. While it may defend students from immediate prejudice, it also limits their access to necessary accommodations and support services. This can lead to increased stress, lower self-esteem, and academic underperformance, as students struggle to cope without the necessary academic accommodations and supports.

Despite their fears, the participants' firm determination to succeed in their academic pursuits often overshadowed their concerns about being stigmatized. This remarkable courage, a testament to their eagerness for acceptance and solid commitment to academic excellence, is truly inspiring. Some participants courageously chose to disclose their learning disabilities to faculty, peers and friends, whom they found to be supportive and non-judgmental. This selective disclosure underscores the importance of a supportive social network in mitigating the adverse effects of stigma. It also underscores the need for educational institutions to advance an environment where students feel safe and supported in disclosing their disabilities.

The findings of this study carry significant weight in higher education. They underscore the urgent imperative for educators and administrators to create an inclusive environment that normalizes the presence of LDs and highlights the strengths and abilities of all students. This can be accomplished through awareness campaigns, Faculty staff training, and the implementation of policies that safeguard the privacy and rights of students with disabilities. The urgency of this task is clear, as it directly impacts the academic and social experiences of students with LDs.

Concealing a learning disability is a common strategy among students who fear stigmatization and differential treatment. This study underscores the reflective impact of stigma on students with LDs' academic and social experiences. While concealment can temporarily relieve negative labeling, it also poses significant challenges by restricting access to essential support services. The current findings highlight the need for educational institutions to create more inclusive and supportive environments where all students can thrive without fear of being perceived as different. By addressing the root causes of stigma and providing adaptive support, post-secondary institutions can help students with LDs achieve their full potential.

The findings of this study resonate with Nora and Colleagues' Student Engagement Model by emphasizing that social and academic integration of students with LDs promotes their persistence in higher education institutions (Nora et al., 2011). The significance of inclusive environments for student retention is highlighted in the Tinto's Student Integration Model, aligning with the challenges faced by students concealing their learning disabilities and staying away from essential academic and related services (Chrysikos et al., 2017). Astin's I-E-O model explains that institutional inputs and their environments positively influence students' academic performance (York et al., 2015). However, the prevalent stigma towards invisible disabilities limits their engagement and access to disability-related support services. Collectively, these three models resonate with this finding, "Concealing learning disability to escape being seen as different," and highlight the significance of promoting supportive higher education institutions enabling students with LDs to succeed in education.

Students with LDs Self-Imposed Sense of Stigma Remains a Challenge

Post-secondary students with LDs face challenges that resonate with the emotional complexity of navigating self-imposed sense of stigma and external stigma. It is crucial to understand these emotional challenges; because participants internalized stigma, often influenced by societal misconceptions, leads to self-doubt, feelings of inadequacy, and their reluctance to seek academic and related support services.

In this respect, one participant, Valentina, specifically describes her experiences that have brought forth "complex emotions, specifically a self-imposed sense of stigma" (Valentina, 120). She argues that it remains challenging to accept her learning disability, resulting in feelings of self-judgment and internal stigmatization.

Some other participants assert that their internal struggle is deeply intertwined with external perceptions. This makes their academic journey challenging, which is further exacerbated by external stigma, making it more difficult. For example, misunderstandings from peers, faculty, and the educational environment reinforces their feelings of isolation and inadequacy. Participants in this study further report skepticism regarding their need for accommodation or feel pressured to prove their intelligence despite their learning challenges.

This finding of this study resonates with Nora's Student Engagement Model. Because Nora's Student Engagement Model emphasizes the importance of validating experiences to foster student persistence. However, stigma could prevent students from feeling recognized and supported by faculty and peers, leading to disengagement. Similarly, Tinto's Student Integration Model emphasizes the need for social and academic integration, which can be disrupted when stigma discourages students from seeking accommodations or fully participating in academic and campus life, increasing their risk of dropping out. Consequently, Astin's I-E-O College Impact Model highlights the role of involvement in student development and success, yet stigma may cause students to withdraw from class discussions, extracurricular activities, and institutional support systems, limiting their overall engagement.

Self-Concept, Self-Awareness, and Confidence Help Achieve Academic Success

Self-concept is a fundamental construct in psychology and education. It is commonly defined as the totality of an individual's thoughts and feelings, referencing oneself as an object (Zhang et al., 2020). This concept suggests that individuals' perceptions of themselves are significantly shaped by how they believe they are perceived by significant others (HANÁKOVÁ et al., 2023). These authors descriptions underscore the idea that self-concept encompasses an individual's entire set of thoughts and feelings about themselves. As Schat (2023) argues that

individual's successes and failures are often tied to how they perceive themselves and their interactions with others.

In the present study, participants demonstrated positive self-worth, self-image, and self-esteem, though they noted the development of a positive self-concept was gradual. Sinclair et al. (2019) argue that individuals are not born with a self-concept; it develops over time and through various life experiences. Regarding individual experiences of developing self-concept, one female participant, Valentina's academic journey, underscores the significant impact of self-awareness and adapted support in academic success, particularly for students with ADHD. Her experience reveals a deepened understanding of personal learning strengths and weaknesses, especially following her late ADHD diagnosis, can transform educational outcomes.

After her diagnosis, Valentina's commitment to her studies intensified as she recognized and acknowledged her unique learning profile. This personal awareness allowed her to identify specific strengths and weaknesses, enabling her to develop customized learning strategies catering to her needs. Thereby, she could leverage her strengths to build confidence and address her weaknesses with approaches best suited for her academic success. This process enhanced her comprehension and retention and optimized her overall academic performance. Her grades improved significantly, and she was able to participate more actively in class discussions.

Some other participants in this study also highlight the transformative power of self-esteem, self-determination, and self-confidence in achieving academic success. They argue that these attributes are not only transformative in terms of personal growth but also essential for navigating the complexities of higher education. For instance, Arian's success is a testament to his passion, self-determination, and hard work. These attributes have empowered him to stay committed to his academic goals despite challenges. He attributes his achievements to his

“Passion for success; Self-determination; and Hard-working” (p. 49). His determination ensures that he remains focused and persistent in his academic endeavors. This narrative is a powerful testament to the transformative potential of self-determination and belief in one's abilities.

Ethan emphasizes the role of determination and self-confidence. She notes, "Success in post-secondary education can be driven by personal attributes like determination, which drives the commitment to overcome challenges—persuasion skills aid in advocating for accommodations and support" (pp. 62-63). Self-confidence enables her to tackle challenges, while effective communication facilitates understanding and collaboration with peers and faculty. This underscores the importance of resilience and the positive impact of supportive educational environments.

In addition, participants' recollections of their high school years, marked by negative experiences related to their learning disabilities, underline their resilience. These reflections emphasize the significant role that educational environments play in shaping self-concept. Despite initial setbacks, such as feeling helplessness or being discouraged from pursuing higher education, the support they received, and their own resilience enabled them to overcome these challenges. For instance, one participant, Ethan, shared how she was often misunderstood by his teachers and peers due to his dyslexia, but she was able to overcome these challenges and excel academically.

As they transitioned to post-secondary institutions, participants began to place less importance on the opinions of others and more on their self-assessments and achievements. This shift in perspective is a promising sign for the development of a positive self-concept. The more inclusive and accommodating higher education environment played a significant role in this transformation, offering hope for students with learning disabilities.

Narratives of participants in this study demonstrate that self-esteem, self-awareness, and confidence are crucial for academic success. They show how personal attributes like self-confidence, awareness, and self-concept, combined with supportive learning environments impact their educational journey toward success, making the study findings more evident and relevant.

The finding "Self-concept, self-awareness, and confidence help achieving academic success" resonates with Nora's Student Engagement Model, Tinto's Student Integration Model, and Astin's I-E-O Model. For example, Nora's Student Engagement Model resonates with this finding as it explains that the role of academic and social engagement is crucial for promoting students' success because students' successes and failures are linked to how they perceive themselves, their engagement with environments, and their interactions with others (Nora et al., 2011). Secondly, the significance of self-concept and resilience is crucial to integrate students both academically and socially, which has been widely discussed in the Tinto's Student Integration Model (Chrysikos et al., 2017). The model argues that students' self-concept and resilience play a pivotal role for their retention and help achieve their academic success. Thirdly, Astin's I-E-O argues that students' personal inputs, for example, their self-awareness and confidence along with the supportive educational environment is significant as these factors influence students' academic success (York et al., 2015). These three models demonstrate how students' self-concept, self-awareness, and their confidence help achieving academic success.

Departing from the One-Size-Fits-All Approach enhances Academic Success

Departing from a one-size-fits-all approach in recommending accommodations for students with LDs enhances their potential for academic success as this strategy could ensure support services aligning with the distinct academic needs of students with LDs. In this respect,

one participant argues that a collaborative, team-based framework that includes inputs from students with LDs, including their family medical professionals, therapists, and/or psychologists, facilitates informed decision-making in recommending academic and related accommodations (Valentina, 125). Valentina further reports that a team-based framework allows post-secondary institutions to assess each case comprehensively, leading to implementing interventions that address specific challenges of students with LDs. A similar essence was uncovered by reviewing the narratives of some other students with LDs, specifically those whose learning disabilities were diagnosed at a later stage.

It is therefore that recommending academic and related accommodations based on thorough assessment and expert recommendations, most importantly recommendations from students with LDs' family medical professionals or psychologists, facilitates a more supportive and empowering educational setting that enables them to achieve their full potential towards success.

Combat Challenges Through Resilience

Students with learning disabilities face various challenges in their academic journey, including difficulties in processing information, organizing tasks, and managing time effectively. Despite these challenges, many students exhibit resilience, which enables them to navigate obstacles and achieve their academic goals.

Gee (2021) notes that challenges or hardships threaten satisfying basic human needs and acquiring competencies to carry out valued social roles. These challenges or hardships may appear when individuals experience a threat to satisfying basic human needs that include physical safety, a sense of self-worth, efficacy, and belonging to a positive social network. One of the participants, Norman, whose ADHD was diagnosed later, shared a deeply personal

experience. He felt that he was not performing up to his potential, comparing himself to his peers and feeling inadequate. He expressed this sentiment in his own words:

All through undergrad, I believed that I was underperforming compared to my expected abilities and that this was because I lacked some trick or ability to get things done just like other students were; however, I did not suspect this to be a "learning disability." Finally, at the start of the pandemic, when I was in the 3rd year of a 2-year master's degree, I started to believe again that I had ADHD; however, again, I did not see it as something that "needed to be dealt with". (Norman, 102)

Norman was often hard on himself and sometimes experienced times of severe emotion around helplessness, being overwhelmed, and feeling like a failure due to his learning disability. However, as time passed, he overcame the feeling by completing assignments before the deadline. Norman accepted that he was smart but had to work harder than his peers to succeed. One other participant, Valentina, also with ADHD, on the other hand, demonstrated her adversity and resilience when she articulated:

Resilience is key, fostering confidence through the assurance of overcoming challenges. Positivity amplifies this, shaping a mindset conducive to success in post-secondary education. Embracing these personal attributes cultivates a proactive approach, enabling effective problem-solving and adaptation. (Valentina, 125).

Valentina encountered a sense of indecent and helplessness due to misconceptions about her being labeled lazy or incapable and different from her peers. However, as time passed, she overcame these adverse feelings by realizing that she learned differently from others. As she mentioned above, "Resilience is key, fostering confidence through the assurance of overcoming challenges" (Valentina, 125). Studies also correspond with this connotation and refer to

"resilience" as a person's positive response to stress and adversity. This coping mechanism may cause the person to "bounce back" to a former average functioning level or provide a "steeling effect," causing the person to perform better than expected. Resilience is most frequently viewed as a system rather than a personal trait (Manivannan & Venkataraman, 2022, p. 53)

Thapa et al. (2022) indicate that some students with LDs in higher education show great persistence and keep pursuing their goals despite challenges. These students often believe they want to conform to mainstream methods, thinking, "I should do it like everyone else" (Valentina, 125). Valentina admitted that later diagnosis of her learning disability is sometimes challenging in her academics. While Jasper reflects on peer discouragement as "Some of my peers telling me I cannot make it," (Jasper, 131), emphasizing the psychological features of external negativity. She articulated that when she went through a critical time, she pushed herself and got through it.

One other participant, Ethan, stated that she often spent more time organizing and managing her studies while she knew that her non-disabled peers were having a good time on campus. As a student with learning challenges, Ethan felt that success in post-secondary education is driven by personal attributes like determination that push the commitment to overcome challenges, as persuasion skills aid in advocating for accommodations and academic support. Additionally, she exhibits resilience by advocating for accommodations and academic support, as well as by fostering effective communication with peers, faculty, and service providers. These attributes collectively develop a foundation for navigating the complexities of higher education, maximizing learning, and achieving her desired academic goals.

The analysis suggests that students with LDs overcome many of their academic and related challenges through resilience by embracing their differences, proceeding through adversity, and seeking support when needed. This study shows that students pursue significant

resilience and determination, adapting their strategies to achieve their academic goals. Notably, these students often need to work harder than their peers without learning challenges, but their determination and adaptability improve their chances of success.

This finding resonates with Nora's Student Engagement Model because the model demonstrates that through resilience students can continue their academic and social engagement within their educational settings thus leading to their academic success (Nora et al., 2011). Although the significance of overcoming challenges of students to achieve education towards their success and social integration has been explored in the Tinto's Student Integration Model, however, students' resilience, highlighting in the Astin's I-E-O Model, as a significant input shaping students' behavior and interactions plays a pivotal role leading to their improved success (Chrysikos et al., 2017; York et al., 2015).

Challenges in Encouraging Students with LDs to Utilize Accommodations

Accommodation of students with disabilities at the post-secondary level in Canada is not subject to the same detailed legislative structures as at the primary and secondary levels. It is governed by the Charter of Rights and Freedoms and provincial human rights statutes (OHRC, 2024). Therefore, post-secondary Canadian institutions have developed various delivery methods and structures to meet these obligations, providing specialized facilities, policies, equipment, or services for students with disabilities. In Canada, the publicly funded post-secondary institutions have centers or offices that provide or coordinate services and support for students with disabilities (OHRC, 2024). As service delivery models vary widely, students with disabilities at post-secondary Canadian institutions must “manage considerable complexity and absorb social and financial costs to receive accommodations” (Waterfield & Whelan, 2017, p. 986). Besides,

they need to advocate for themselves to access necessary academic and related support services at post-secondary level.

The present study found that a small number of students with LDs successfully navigate the complex post-secondary education system despite their lack of self-advocacy skills. Jacques and Abel (2020) define self-advocacy as expressing one's needs, which are made possible by knowledge of self, the ability to make independent decisions, and an empowered psychological state. Although self-advocacy skills are important to presenting the need for accommodations, “many students with learning disabilities find themselves entering post-secondary education without these skills” (p. 87). So, navigating the educational journey remains a complex process, particularly for students who require additional support due to various reasons.

It is undeniable that accepting support for students with LDs plays a pivotal role in shaping their educational experiences while pursuing higher education. This study delves into the journey of participants who initially faced challenges in accepting support, exploring the factors contributing to their reluctance and the eventual transition towards embracing assistance.

Among the studied participants, extended time for exams was the most common accommodation used by them. Secondly, recording the lecture online and in class was also frequently used by six to eight participants in this study. While initially reluctant to request accommodations, one participant noted that she has been granted extended time for assignment submissions, such as comprehensive exams and thesis proposals. This accommodation has been relevant and helpful for her in meeting deadlines and quality work. Evidently, the accommodation played a great part in the participants' academic success. Most participants pointed out that signing up for accommodation in the Office of Disability Services at the respective institutions was not challenging.

The study, however, recognized that participants initially faced challenges in accepting support despite their needs. They were hesitant to embrace assistance due to past experiences. This reluctance stemmed from comparing the support received in different educational settings. It means that participants were initially reluctant to accept support, as they highlighted the disparity in support between their current and previous educational experiences. As one participant mentioned, “I have received more support in post-secondary institutions than from earlier educational institutions” (Lindsay, 205).

Despite initial hesitancy, participants in the study eventually embraced the support provided in post-secondary institutions. This transformative shift in their attitudes, from reluctance to appreciation, signifies a hopeful transition. They acknowledged the academic assistance and its positive impact on their post-secondary educational journey. One participant expressed, “During my time in post-secondary institutions, I received great assistance to help me succeed” (Jasper, 134). This shift indicates a transition towards accepting and appreciating the support received. The participants in the study eventually embraced support as they recognized the beneficial assistance received in post-secondary institutions, indicating a positive shift in their attitude towards support.

The role of academic support in the success of students with LDs in post-secondary education cannot be overstated. The accommodations and assistance provided in these institutions significantly enhance their academic performance. This is evident from the participant's *comment*, “My post-secondary education differs notably from my previous schooling due to enhanced academic support” (Genevieve, 182). This recognition of enhanced academic support underscores the shift towards embracing the assistance provided to meet their needs.

Participants expressed appreciation for the accommodations and support received in post-secondary institutions, for example, they valued the additional time for exams and assignments and the encouraging learning environment provided. One participant mentioned, “I have been granted additional time for exams and assignments, and I appreciate the quiet environment to minimize distractions, which aligns with my needs (Denise, 172). This appreciation reflects a positive acceptance of the support offered. The participants' appreciation for the accommodations and support indicates a transition from reluctance to acceptance, as they acknowledged the alignment of support with their needs and its positive impact on their academic performance.

The drive of students with LDs in accepting support in post-secondary institutions is a testament to the transformative power of assistance. Despite initial reservations, these students eventually recognize and embrace the support provided. This transition in attitude not only highlights the importance of necessary support in facilitating academic success but also emphasizes the significance of personalized assistance in meeting individual needs. The narrative of these participants serves as a powerful illustration of the reflective impact of support in fostering a beneficial learning environment and empowering students to thrive academically.

This finding resonates with Nora’s Student Engagement Model as it highlights the significance of the faculty-student relationship for students' success in education (Nora et al., 2011). Because positive interactions with faculty make it easy for students to use accommodations, and at the same time, faculty can encourage students to use alternative accommodations when necessary. Tinto's Student Integration Model resonates with this finding as well because interaction of students with faculty in formal and informal academic settings motivates students to accept accommodations (Chrysikos et al., 2017). It is important to note that students initially hesitate to ask for support but gradually adapt to academic and social settings

when relationships with these actors are favorable. Importantly, Astin's I-E-O Model explains that the support from institutions and faculty plays a pivotal role in exploring accommodations and encourage students to use them for their academic performance, even when they hesitate first (York et al., 2015).

Students with LDs Reports Various Perspectives Interacting with Faculty Members

Most of the participants in this study have a range of mixed feelings about their faculty members. One participant indicated that she experiences a generally non-judgmental attitude from many faculty members towards learning disabilities (LDs) and appreciates their understanding of students with varied learning limitations. Evelyn highlights the benefits of faculty members' willingness to give time and be approachable beyond class hours, which has helped her obtain necessary accommodations. She further articulated:

Faculty members willingness to extend supports foster effective communication and enhance my post-secondary educational journey. However, this is only the case sometimes; it does mean that faculty members needing more awareness of LDs might impede progress, necessitating improved understanding and support for a more inclusive learning experience. (p. 158)

Other participants conveyed that their faculty members were helpful and made sure they received their requested accommodations. One participant noted that initially, faculty members misunderstood their LDs and perceived them as lazy. However, when they were aware of our learning challenges through our interactions, their perception of our limitations changed, and they were willing to assist whatever our needs and priorities. As Denise explains, "However, understanding grew as they became aware through our interactions, enabling me to seek accommodations like extra exam time and a quiet environment for written exams" (p. 70). The

study recognized the participants did not readily ask their faculty for extended time on exams or for assignments because they feared that the faculty would think they were incapable of handling the course work.

Faculty members have given different perspectives on accommodating students with LDs. Some faculty members respond positively, providing whatever accommodation is requested. One faculty member says that it may be harder for students with LDs to build the type of relationships with faculty that are necessary for the effective provision of accommodations (Samir, 128). Samir also notes that students with LDs are hesitant to discuss their disabilities and advocate for accommodations. He thinks this may be because in addition to the issue associated with sharing very personal information, students do not want to appear to be requesting less rigorous academic training compared to their peers.

Nevertheless, responses of faculty members reveal that majority of them are willing to accommodate students with LDs; however, one faculty member argues that the culture in post-secondary institutions make it less comfortable for students with LDs to advocate for themselves and obtain the accommodations they may need to for their successful academic performance. One other faculty member notices that they struggle with “traditional teaching approach that don’t allow for differentiation, similarly course where flexibility is not built into the syllabus” (Nina, 130).

Lightfoot et al. (2018) argue that an effective and informed faculty cannot simply have a positive, non-judgmental view of LDs; they need to be aware of the educational challenges students encounter. Faculty members' positive attributes towards disability significantly address students' unique learning needs, such as extended time on exams and alternate exam formats. Several participants express that some of their faculty gave them extended test time, made

allowance for them to copy their lectures notes, audio recordings of class lectures and frequently meetings between the faculty and students took place during faculty members office hours.

One participant informs that her interactions with faculty have been constructive, especially when addressing her learning disability-related academic requirements. It is worth mentioning that only when she requires specific assistance due to her learning disability, she approaches faculty members, who readily offer support and guide her toward the necessary resources to ensure her academic progress. However, faculty members sometimes have lower academic expectations for students with LDs than for students without disabilities. For example, one participant with ADHD explains that in their digital art degree program, presentations are crucial, but faculty members often do not listen attentively during their presentation. It demotivates them, impacting their learning pace. Additionally, peers occasionally exclude them from group discussions and mock presentations, favoring others. This demoralizing condition significantly affects their studies at the post-secondary level (Denise, 173). Another participant in this study did not want to reveal that she had a learning disability to her faculty. She expressed concerns about her faculty looking at her and perceived her as lazy.

Findings from this study suggest that faculty members' high awareness of unique needs and priorities is crucial for academic success of students with LDs (Marshak et al., 2010). As students have more frequent interactions with faculty than others in post-secondary institutions (Walker, 2016). Lechtenberger et al. (2012) contend that faculty members should be more sensitive towards disability issues and deal with disabled students' learning needs from the students' perspectives.

While examining students with LDs perspectives interacting with faculty members through the lens of Nora's Student Engagement Model, it becomes clear that faculty members'

positive interactions with students' support play a critical role in promoting student success (Nora et al., 2011). This model highlights that the presence of supportive faculty can significantly enhance the engagement and retention of students with LDs. Similarly, Tinto's Student Integration Model emphasizes that positive faculty-student relationships are central to the academic and social integration of students with LDs. Because these relationships can mitigate the challenges faced by students with LDs (Chrysikos et al., 2017).

Passion for Success, Determination, and Perseverance Influence Academic Success

In examining the participants' narratives, which were collected through in-depth interviews and analyzed using thematic analysis, it is evident that personal attributes such as passion for success, self-determination, hard work, and perseverance significantly impacted their success. These attributes played a crucial role in their achievements and overall experiences within the study.

Participants' passion for success emerged as a driving force behind their achievements. For example, one participant expressed, "I have always had a burning desire to excel in everything I do. This passion pushes me to set high goals and work tirelessly to achieve them" (Arian, 144). According to Duckworth et al. (2021), "Passion is a critical component of grit, which significantly correlates with long-term success" (p. 982). Meaning that the true motivation derived from passion leads to sustained effort and persistence.

Another key attribute that influenced success was self-determination. The study revealed that the participants didn't just wait for success to come to them; they actively set personal goals and took ownership of their paths. As one participant put it, "Self-determination means not waiting for others to pave the way for you but taking the initiative to create your own opportunities" (Lindsay, 109). This response aligns with Deci and Ryan's (2008) self-

determination theory, which emphasizes that self-governing motivation enhances performance and well-being. This active role in shaping students' success is empowering, as it shows that success is not just a matter of chance or circumstance, but something that can be actively pursued and achieved.

The significance of hard work was evident in the participants' accounts of their experiences. One participant recounted, "There were many late nights and early mornings, but I knew that my hard work would pay off in the end" (Genevieve, 187). Credé et al. (2017) found that "hard work, characterized by persistent effort and time investment, is a strong predictor of academic and professional success" (p. 1275). This demonstrates that participants understood success required more than talent or luck but required sustained effort.

Perseverance, as a vital attribute, was not just a word in the participants' narratives but a testament to their resilience. One participant shared their journey, saying, "There were moments when I felt like giving up, but I reminded myself why I started and kept pushing forward" (Martin, 197). This resilience, as highlighted by Maddi et al. (2017) is a component of psychological hard work that enables individuals to withstand stress and maintain performance under pressure. The participants' ability to persist despite adversity is not just a characteristic of their success but a source of inspiration, showing that setbacks are not the end but a part of the journey.

Participants' success in the study was significantly influenced by their passion for success, self-determination, hard work, and perseverance. These personal attributes collectively contributed to a strong framework supporting their efforts and achievements. Participants' experiences, supported by recent literature, provide valuable insights into how these attributes drive success. Since passion ignites motivation, self-determination furthers passion, hard work

ensures sustained effort, and perseverance enables resilience, which are crucial components in achieving one's goals.

While examining the passion for success, self-determination, hard work, and perseverance in the lens of Nora's Student Engagement Model, it becomes clear that these characteristics of students with LDs increase their motivation and involvement in learning (Nora et al., 2011). In this respect, Tinto's Student Integration Model indicates that student's passion for success, self-determination, hard work, and perseverance help them persist through academic and social integration, leading to their optimum success in education (Chrysikos et al., 2017). While Astin's I-E-O Model highlights those students with LDs personal drive interacts with educational inputs help generating their positive academic outcomes (York et al., 2015).

Collectively, these models describe how students' dedication, hard work and perseverance play a pivotal role in overcoming their challenges.

Remote Learning Being Seen as Both an Advantage and a Challenge

Remote learning presents both opportunities and obstacles for students with learning disabilities (LDs) and their instructors. This study integrates perspectives from students with LDs and faculty to highlight the flexibility and accessibility benefits as well as the increased distractions and lack of direct support.

Students with LDs who struggle with note-taking and writing benefit significantly from the ability to record lectures. This allows them to revisit the material and use speech-to-text software for accurate transcriptions. One student noted, "students with LDs who have difficulties in writing and note-taking can record the lectures online and transcribe those promptly using speech-text software" (Arian, 148). Online learning platforms can incorporate adaptive technologies, such as text-to-speech and OrCam Learn software, which support students with

reading differences and ADHD by providing alternative ways to process information. This is emphasized with, "Provision of adaptive resources, for example, text-to-speech software, OrCam Learn software that helps and empowers students of all ages with learning and reading differences" (Arian, 150).

Online learning can offer extended class times and dedicated consultation periods with faculty members, accommodating varied learning paces and providing personalized guidance. One participant mentioned, "Essential support for students with LDs in remote/online learning include extending class time slots to accommodate varied learning paces. Allocating dedicated consultation time with instructors allows personalized guidance" (Ethan, p. 163). Besides, several other students find that online learning allows for a structured approach to their studies, with the ability to break assignments into manageable segments and track their progress effectively. Valentina highlighted this by stating, "In remote learning, engaging with professors for assistance, building connections with peers, and breaking assignments into manageable segments is crucial" (Valentina, 126).

Despite these benefits of online/remote learning, participants shared number of challenges attending online courses, including increased distractions, lack of direct supervision, lack of technical and logistical, and absence of real-world interactions. These challenges create barriers to learning based on the learning differences among students with LDs.

In terms of distraction and focus issues, one participant mentioned that the home environment often lacks the necessary structure for students with ADHD, leading to increased distractions. Students often get distracted by non-academic activities. As Valentina described, "My struggle with hyper-focus becomes pronounced as the home environment lacks the structure and accountability needed to stay engaged in class. With flexibility, my ADHD-driven thought

patterns lead me astray" (Valentina, 125). While Jasper explains that unlike traditional classrooms where faculty can provide direct supervision, the remote setup makes it difficult for faculty members to observe students' engagement, further contributing to distraction issues. As she noted, "Because, unlike a traditional classroom, faculty members cannot walk around the room to supervise students. Most students with LDs can get easily distracted, so they will need help to grasp what the faculty is teaching online" (Jasper, 136).

In respect to technical and logistical challenges, participants indicate that high-speed internet, software installation, and the availability of closed-captioning options are significant obstacles. They often need additional technical support to navigate these issues effectively. One participant commented, "Technical issues in remote/learning also remain a challenge for me. For example, I need a high-speed internet connection and also need to know where to get technical support in case of connectivity problems" (Jasper, 136). The study found that students with LDs who belongs to low-income families face much greater challenges paying higher monthly fees for internet services, while students who have little knowledge about technical issues connecting institutional servers also face challenges, given the fact that some technological issues sometimes remain out of control of the institutions technical support department. In such a situation, students with LDs, including other students continue to wait sometimes to resolve their problems.

The lack of physical classroom interactions can exacerbate feelings of isolation and, in some cases, worsen conditions such as depression. For example, Denise shared, "The lack of real-world feelings, minimal interactions with teachers, and the absence of a classroom environment intensified my challenges. The remote setting worsened my depression being always at home" (Denise, 173-174). Notably, the lack of real-world feelings, minimal

interactions with faculty members, and absence of a classroom environment intensified challenges for students with LDs because these students often rely on direct, personalized support and a structured setting to thrive. Without face-to-face interactions, they fail to notice the immediate feedback and assistance that faculty provide. The absence of a social classroom environment also reduces opportunities for peer learning and emotional support. Being confined at home exacerbates their feelings of isolation and frustration, contributing to increased depression as students struggle to adapt to less engaging and supportive virtual learning settings.

As already discussed, establishing the necessary relationships with faculty for effective accommodations is more challenging in a remote learning environment. This can impact on the quality and timeliness of the support provided to students with LDs. One Faculty in this respect pointed out, "It may be harder to build the type of relationships with faculty that are necessary for the effective provision of accommodations" (Samir, 128). Importantly, building relationships with faculty is harder for students with LDs within remote settings because these relationships rely on regular, personal interactions to develop trust and understanding. In-person interactions allow faculty to better perceive and respond to students' needs, facilitating accommodations on time and appropriate.

Obviously, remote or infrequent communication lacks face-to-face encounters, making it difficult to convey specific challenges and receive appropriate support. Additionally, virtual interactions can be less engaging and more transactional, impeding the development of meaningful connections essential for effective support and accommodations for students with LDs.

In this respect, faculty members emphasize the importance of well-structured courses with detailed instructions, frequent deadlines, and a mix of multimedia content to help students

understand concepts better and stay organized. One faculty stated, "Frequent smaller deadlines can support students in completing work as well as design strategies like to-do lists, calendars, a really well-structured and detailed online course" (Nina, 131). Several other faculty members mentioned that frequent, one-on-one meetings with faculty or teaching assistants are crucial for providing personalized support to students with LDs. This approach is essential for helping students stay on track and address their unique challenges effectively.

One faculty member notes that students with ADHD particularly struggle with organization and time management in the absence of face-to-face interaction. He mentioned, "With ADHD students at least, being organized and on time with their assignments is tough when there is no real, face-to-face contact" (Steve, 133). For students with ADHD, being organized and punctual with assignments is tough without face-to-face contact because they often struggle with self-regulation and executive functioning. In-person classes provide structure and direct supervision, helping these students stay on track. The presence of teachers and peers offers immediate reminders and prompts, which aid in maintaining focus and meeting deadlines. Without this real-time interaction and external support, students with ADHD find it harder to manage their time and stay organized, leading to increased difficulty in completing assignments on schedule. The lack of physical classrooms removes critical support mechanisms that help these students succeed.

Remote or online learning offers significant advantages for students with LDs, particularly in terms of flexibility and accessibility through adaptive technologies. However, it also presents considerable challenges, such as increased distractions, technical issues, and the absence of direct supervision and interaction. Effective remote learning for students with LDs

requires a combination of well-structured course designs, personalized support, and adaptive resources to mitigate these challenges and enhance the learning experience.

When examining the remote learning platforms for students with LDs in the lens of Nora's Student Engagement Model indicate that personalized support and engagement of students with LDs impact their academic outcome (Nora et al., 2011). For example, this model suggests that remote learning platforms can enhance accessibility and flexibility for many students with LDs, but it also requires active faculty involvement to maintain students' engagement. While Tinto's Student Integration Model highlights the importance of social and academic integration (Chrysikos et al., 2017), which can be challenging in remote learning. Besides, the lack of in-person interaction limits the development of faculty-student relationships and peers' connections which is crucial for persistence and success. Astin's I-E-O Model in this respect point out that as inputs like adaptive resources and structured environments are crucial for students' success, the availability of appropriate technological resources along with a well-structured learning environment can significantly influence the academic outcomes for students with LDs (York et al., 2015).

Collectively, these models support the view that although remote learning platforms for students with LDs can enhance accessibility, they also require adaptive approaches to address distractions, technical issues, and the need for direct interaction and support.

Recommendations for Future Research

The study specified information about the experiences of ten (10) students with LDs at post-secondary Canadian institutions. The purpose of this study was to give an opening to students with LDs who desired to share their experiences addressing the challenges and successes they faced in post-secondary institutions. This section will outline recommendations for future research that emerged from this study. It is important to note that more research on the experiences of students with LDs in higher education within the broader context is essential for enhancing their services.

Research on the experiences of challenges and success of students with LDs is limited in the existing literature. The present study, a crucial step in this direction, will fill this gap in the literature, adding the experiences of challenges and successes of students with LDs from their perspectives. Future research holds immense promise in further illuminating students with LDs experiences in diverse educational settings. Longitudinal studies could shed light on the elaboration of their experiences. Such studies could investigate the efficacy of various strategies and interventions in reducing stigma and supporting students with LDs. This potential for deeper understanding and more effective interventions brings encouragement for a more inclusive and supportive educational environment. An in-depth understanding of these students' experiences will equip educators with more effective and empathetic approaches to promoting their academic and personal development.

Future research on this topic would further explore the earlier educational experiences of students with LDs before entering higher education to understand their needs at the post-secondary level. This would also ease their transition from high school to higher education. A study that includes secondary and high school participants, including their parents and guardians,

may provide valuable insights about what students with a learning disability should expect to face at the post-secondary level.

The replication of this study with a different student population will enrich the current literature. Students with other cognitive disabilities, such as intellectual disability, autism spectrum disorders, and severe, persistent mental illness, are likely to provide different results. As learning disability is considered an "invisible disability" and an individual's physical disabilities are apparent and would require different types of accommodations, the experiences of challenges would likely be different. The current study has some limitations; the study was carried out with a small sample size, and no ethnic diversity reflected in the sample size or ethnic background was reported. This lack of diversity may limit the generalizability of the findings to other student populations. Therefore, a study with a relatively larger sample size from different ethnic groups would likely generate different results. The methodology used in this study may have influenced the results.

Most studies have focused on post-secondary students with LDs who graduated from public or private high schools, a study of eSecondary (OES) high school students with LDs entering higher education could bring distinct results in a significant way. They may provide a potentially challenging perspective with their distinct experiences without peer pressure and other societal influences. This study could challenge existing notions of students with LD challenges and successes and contribute to a more comprehensive understanding of this phenomenon.

Faculty knowledge and their perspectives about students with LDs are central to their success in post-secondary institutions. Therefore, faculty members could be asked about their understanding of disability accommodations and legislation regarding the accommodation

process. This information will help policymakers and administrators design teaching and learning training that benefits faculty members who support students with LDs.

Additionally, research evaluating the principles of differentiated learning methods for students with and without LDs might help faculty members prepare more accessible classes, which would benefit all students. By identifying areas for improvement and providing better training for faculty, this study could significantly enhance the learning environment for these students, making it a vital area for future research.

Limitations of the Study

The study has some limitations; the study was carried out with a small sample size, and no ethnic diversity reflected in the sample size or ethnic background was reported. However, due to the qualitative nature of phenomenological research, the focus is often on in-depth, rich descriptions rather than generalizability. Arguably, with limited participants, the findings of this study may only represent part of the diversity of experiences among students with LDs across Canadian post-secondary institutions. This remains challenging the broader applicability of the study results in the larger population of students with LDs.

Access to students with LDs for interviews remains a significant challenge. In this study specifically, students with LDs often hesitate to self-identify or be available to participate in research studies, they instead prefer to fill out questionnaires and send them remotely. This limitation makes it challenging for this study, which is based on qualitative research and includes interviews to access a sufficient number of willing and eligible participants for interviews (face-to-face or remote). Notably, limited access to students with LDs affects the sample toward those with more visible or severe learning challenges, leaving out those with less apparent learning challenges. This eventually influences the findings of the study.

One limitation of this study is the absence of perspectives from students with LDs who did not succeed due to their learning challenges. It is important to note that including these students would have provided a more balanced understanding of their challenges and offered a comprehensive view of the structural and personal barriers to success. However, reaching this population proved challenging, as students with LDs who did not succeed in higher education may be less interested in participating in studies similar to the present study. Besides, many such individuals may not be interested in discussing their challenges due to their personal distress,

stigma, or desire to move beyond their academic experiences. Accordingly, this study primarily focuses on understanding the experiences of challenges faced by post-secondary students with LDs and how they overcome these challenges toward success, presenting a more optimistic view of post-secondary students with LDs. Future research could explore alternative methods to engage students who did not succeed, such as anonymous surveys, to understand better the challenges contributing to student attrition.

The data collection process and data analysis in this study remain time sensitive. The study involves a two-step data collection process, for example, participants screening and individual in-dept interviews. The process to include a detailed analysis to capture and interpret the essence of the challenges faced by post-secondary students with LDs remains time-consuming. This process also requires considerable effort and resources, which may limit its feasibility for larger-scale studies with strict timelines.

Research based on a phenomenological paradigm may influence data interpretation due to the researcher's biases and tools for analyzing data, which could be a limitation. However, this research approach illuminates an in-depth understanding of the lived experiences and challenges faced by students with LDs that may be restricted by adopting other research methods.

Finally, the reproducibility and generalizability of the study's findings may not be viable due to this study's involvement of a small group of students with LDs. Besides, students with LDs involved in this study were from different higher education institutions in Ontario and disability related services, policies, and programs supporting students with LDs also remain distinct. Due to the context-specific nature of different institutions, the findings may only be feasible in limited capacity in other settings or generalized to some post-secondary institutions in

Canada. This restricts the broader applicability of the study findings, particularly in diverse educational settings where institutional support and resources for students with LDs vary widely.

Conclusion

This study aimed to understand and make sense of the experiences of post-secondary students with learning disabilities. The study used qualitative research methods grounded within a constructivist paradigm. Ten (10) students with LDs participated in an in-depth interview to share their narratives with the researcher and completed a screening questionnaire. Five (5) faculty members responded in writing to a set of open-ended questions relevant to the topic. The participants' experience in their higher education journey was not always easy, but their outstanding resilience went through as they overcame most of their challenges. Their efforts of resilience were also evident in the narratives of faculty members.

The study found that students with LDs often face challenges at secondary and high school levels and higher education levels. Several students reported that they experienced concerns about being stigmatized and found it necessary to hide their learning disability. However, many students with LDs have shown remarkable resilience in overcoming these challenges.

The participants' positive interactions with faculty, peers, and service providers significantly influenced their academic success, underscoring the crucial role these interactions play in their academic journey. Participants' positive interactions with family members who were away from home significantly motivated them to achieve academic success, highlighting the importance of a supportive network in their lives.

The findings of this study underscore the immediate need for post-secondary Canadian institutions to critically review their higher education system, particularly in terms of how to positively enhance the learning experiences of students with LDs. The traditional teaching approach that does not allow for differentiation necessitates periodic training on differentiated

learning methods for faculty members. This highlights the immediate need for changes in teaching methods to better accommodate these students, emphasizing the need for and importance of these recommendations.

Additionally, the study identifies a crucial need for a dedicated full-time disability counselor or psychologist. Students with learning disabilities often hesitate to seek accommodations due to the fear of stigma. A psychologist can be crucial in disseminating information and providing support in this respect. This can be done through various channels such as electronic notifications, campus event representation, and faculty members' encouragement to reference the availability of campus disability services in class, as well as a section about learning disability know-how in their course syllabus.

Shifting away from one-size-fits-all approaches, the study suggests that post-secondary institutions could adopt a team-based method that involves collaborating with students' family medical professionals or therapists, incorporating their insights into accommodation decisions. Collaborating with all interested parties is essential to create an inclusive environment that promotes a rewarding learning experience for students with learning disabilities.

In remote/online learning platforms, the study found significant, engaging faculty members for assistance to a greater extent. Similarly, creating scopes connecting peers and breaking assignments into manageable segments were found effective for students with LDs toward their academic progress under remote/online platforms. Likewise, tracking academic progress regularly and holding students with LDs accountable for their optimum learning pace contributes to their success. These supports ensure that students with LDs can navigate remote/online learning challenges effectively, maintain a structured approach, and measure their achievements.

This study's contribution to raising the voices of post-secondary students with learning disabilities is significant. The study uncovered valuable insights that are unique for developing future policies and programs supporting students with LDs' academic achievements. While each student's journey was distinct, there were shared threads of resilience and success. By presenting these unique experiences and resilience to overcome challenges, this study enriches the existing literature on post-secondary students with learning disabilities.

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Appendices

Appendix A: Screening Questionnaire

Identification Code _____

Section A

Learning disability diagnosis: Yes No *Note: If yes, please answer the following questions.*

Type of learning disability: _____
(Please specify, if known)

Name: _____

Gender: Male Female Non-binary/third gender Prefer to self-described as _____

Email address: _____

Present Student Status: Full-time Part-time

16 years of age and over: Yes No

One to two hours commitment: Yes No

Post-secondary institution _____

Faculty of study _____

Area(s) of studies _____

Year of study _____

Identification Code _____

Section B

1. Participant's Knowledge of learning disability

1.1 In which grade level were you first aware that you have a learning disability?

1.2 In which grade level were you first formally diagnosed with a learning disability?

1.3 Which of the following areas were problematic for you as a direct result of this learning disability during grades K-S4?

Reading	<input type="checkbox"/>
Writing	<input type="checkbox"/>
Spelling	<input type="checkbox"/>
Math	<input type="checkbox"/>
Note-taking	<input type="checkbox"/>
Attention	<input type="checkbox"/>
Memory	<input type="checkbox"/>
Other	<input type="checkbox"/>
Please specify _____	

- 1.4. Which of the following areas are problematic for you as a direct result of learning disability during post-secondary education?

Measure of severity
<i>1=No trouble, 2=Mild, 3=Moderate, 4=Severe, 5=Really bad</i>

		1	2	3	4	5
Reading						
Writing						
Spelling						
Math						
Note-taking						
Attention						
Memory						
Other						
Please specify _____						

2. Participant’s meaning of their learning disability

Students often experience difficulties relevant to social, emotional, and psychological) due to their learning disabilities. If you encounter any of these difficulties that you think are linked to having a learning disability, please answer the following questions.

- 2.1. If you encounter *social difficulties* (e.g., difficulty making friends, maintain friendships, being teased, or bullied) that you think are linked to having a learning disability, please explain.....

- 2.2. If you encounter *emotional difficulties* (e.g., feelings of hopelessness, helplessness, unworthy, feeling unable, and/or feeling overwhelmed) that you think are linked to having a learning disability, please explain.....

- 2.3. If you encounter *psychological difficulties* (e.g., depression, anxiety, low-self-esteem, low self-confidence, and/or poor self-concept) that you think are linked to having a learning disability, please explain.....

3. Participant's meaning to personal interactions with others

- 3.1. Do you think having a learning disability impacted your interactions with family members as a post-secondary student?

Yes No

If yes, please explain....

- 3.2. Do you think having a learning disability impacted your interactions with teachers or professors as a post-secondary student?

Yes No

If yes, please explain....

- 3.3. Do you think having a learning disability impacted your interactions with peers as a post-secondary student?

Yes No

If yes, please explain....

3.4. Do you recall specific individuals who supported you that directly contributed to your educational success in post-secondary education?

Yes No

If yes, please explain....

4. Participant’s educational interventions, participation, and academic management

4.1. Did you have a formal individual education plan (IEP) during the school years K-S4?

Yes No

If yes, in which grade ranges did you have an IEP introduced?

4.2. Did you have a formal individualized transition plan (ITP)?

Yes No

If yes, in which grade ranges was an ITP introduced?

4.3. Do you experience academic difficulty in post-secondary education because of your learning disability?

Yes No

If yes, please explain....

4.4. Do you currently use specific management strategies to help you succeed in post-secondary education?

Yes No

4.5. If yes, can you mention if you use any of the following management strategies as a post-secondary student:

- | | |
|--|--------------------------|
| Specific time management strategies | <input type="checkbox"/> |
| Technological support | <input type="checkbox"/> |
| Accommodations provided by the institution | <input type="checkbox"/> |
| Extra time for test-taking | <input type="checkbox"/> |
| Private testing area | <input type="checkbox"/> |
| Notetaker | <input type="checkbox"/> |
| Record lectures | <input type="checkbox"/> |
| Participation in the peer study group | <input type="checkbox"/> |
| Tutors | <input type="checkbox"/> |
| Other management strategies | <input type="checkbox"/> |
| Please specify _____ | |

5. Challenges and barriers

5.1. Do you experience challenges as a direct result of having a learning disability as a post-secondary student?

Yes No

5.2. If, in which contexts listed below, you have experienced challenges:

- | | |
|--------------------------------|--------------------------|
| School | <input type="checkbox"/> |
| Home | <input type="checkbox"/> |
| Relationships with family | <input type="checkbox"/> |
| Relationships with instructors | <input type="checkbox"/> |
| Relationships with peers | <input type="checkbox"/> |
| Other | <input type="checkbox"/> |
| Please specify _____ | |

- 5.3. Have you ever experienced labeling and stigmatization as a direct result of having a learning disability during post-secondary education?

Yes No

If yes, please explain....

- 5.4. Have you ever experienced being excluded from an area of study because of the need to disclose your learning disability for accommodations?

Yes No

If yes, please explain....

- 5.5. Do you find the accommodations available to you during post-secondary education are different from those available to you during the school years K-S4?

Yes No

If yes, please explain....

6. Challenges in the case of remote/online learning

For example, post-secondary institutions offer many courses remote/online.

- 6.1. As a student with LDs, do you face any challenges in the case of remote/online? If so, or if not, please explain.

- 6.2. As a student with LDs, do you have access to the technological and teaching aids during remote/online learning? If so, or if not, please explain.

- 6.3. What are the supports you would suggest enabling students with LDs to continue their education for remote/online learning? If so, please explain.

- 7. Any other comments**

Appendix B: Individual In-depth Interview

Identification Code _____

I am a graduate student at the Faculty of Education, University of Ottawa, Canada currently working on my thesis towards a doctoral degree in education. This interview aims to understand your experiences related to your post-secondary education. The interview will be recorded. You may choose not to answer any questions at any time during the interview process. You will receive a copy of the transcript of your interview(s). Any section you request to have deleted from the transcript of your interview will be deleted. You are free to withdraw from the study at any time, and you may request that the entire transcript of your interview be destroyed.

A. Personal educational views and experiences:

1. What motivated you to attend post-secondary education?
2. Could you please tell me your post-secondary educational experience that has contributed most to your educational success to date?
3. Would you please explain whether your post-secondary educational experience having a learning disability is similar to or different from earlier educational experiences? (e.g., diagnosis, accessibility, academic supports, and accommodations)

B. Interactions with others:

1. What does having a learning disability during post-secondary education mean for your interactions with faculty, peers, families, and service providers?
Faculty:
Peers:
Families:
Service providers:
2. What are some of the attributes of faculty, peers, families, and service providers that help or impede your post-secondary education?
Faculty:
Peers:
Families:
Service providers:

C. Academic accommodations and related support services

3. What led you to become aware of the disability service office in your institution?
4. How do you secure academic and related supports at your post-secondary institution?
5. If you need to self-identify, what does it mean for you to self-identify your learning disability to secure accommodation supports?
6. What kinds of academic accommodation have you received and/or have been receiving? Are those appropriate to your needs?

D. Challenges and barriers

7. Can you tell me about any challenges or barriers experienced at the post-secondary level? How do you perceive these challenges?
8. If you transitioned from high school to post-secondary education, can you tell me the type of obstacles/barriers that impede/affect continuing your studies?
9. What do you perceive as the challenges held by others that you have faced here at post-secondary education?
10. Would you describe any feelings of stigmatization you have experienced as a post-secondary student due to having a learning disability?
11. Could you please explain the reasons that many students with LDs prefer not to disclose their learning disabilities to others even it is for their academic and related accommodations?
12. Could you please explain the challenges you face/faced as a post-secondary student with LDs for remote/online learning since institution offers many courses online?

E. Successes and solutions

13. What do you think are the most appropriate educational interventions or accommodations to promote educational success for post-secondary students?
14. Do you think that having personal knowledge of learning strengths and weaknesses, and personal learning styles is essential for achieving academic success for students with LDs?
15. What skills, resources, or supports do you think are necessary for students with LDs to overcome challenges?
16. Who are the most important persons (for example, faculty, family, peers, service providers) for you to connect with during post-secondary education to lend support for increasing educational success? Why this person (e.g., faculty, family, peers, service providers)? Please respond to everyone's contributions separately, if applicable.
17. What personal attributes do you think can help you succeed at post-secondary education?
18. What are the supports you think are significant to enable students with LDs to succeed in their post-secondary education for remote/online learning?

F. Any other comments

Appendix C: Open-ended Questionnaire for Faculty Members

Identification Code _____

1. In your opinion, what are the challenges/barriers related to education and learning students with learning disabilities (LDs) encounter during their period in a post-secondary education? If so, please explain.

2. Do you have experience providing academic accommodations and supports to students having a learning disability? If so, please explain.

3. What was the most valuable learning strategy that you have implemented to improve the learning environment for students with LDs success in education? If so, please explain.

4. In your opinion, what do you think that your students with LDs need the most for their academic success in post-secondary education? Please explain.

5. Do you think that students with LDs feel comfortable discussing their disability and accommodations with faculty members? If so, or if not, please explain.

6. In your opinion, what are the challenges students with LDs experience to continue their studies online/remotely as institutions offer many courses remotely/online? Please explain.

7. In your opinion, what do you think that your students with LDs need the most during their remote/online courses effectively towards success? Please explain.

8. Did you attend/receive any training (short or long-term) on providing accommodations and supports to post-secondary students with LDs? If so, or if not, please explain.

Thank You!

Appendix D: Students with LDs Recruitment Text to Institution

Study Title: Left Out: Challenges Faced by Students with Learning Disabilities in Post-secondary Education at Ontarian Institutions

Researcher: *(Name of researcher)*

Researcher's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145 Jean-Jacques-Lussier Private
Ottawa, ON K1N 6N5, Canada

Supervisor: *(Name of supervisor)*

Supervisor's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145 Jean-Jacques-Lussier Private,
Ottawa, ON K1N 6N5, Canada

Attention:

Graduate Student's Association des étudiant.es diplômé.es (GSAÉD)
University of Ottawa in Ontario, Canada
601 Cumberland Street
Ottawa, ON K1N 7K3

Dear Sir/Madam:

I want to inform you of the research study I am undertaking to complete my Doctor of Philosophy in Education (PhD) degree at the Faculty of Education, University of Ottawa, Ottawa, Canada. I have obtained ethical approval from the *Office of Research Ethics and Integrity, University of Ottawa* to conduct this research study. This can be verified by contacting the *Office of Research Ethics and Integrity*, e-mail: ethics@uOttawa.ca. I am writing this letter or e-mail to ask for your assistance in recruiting potential participants for my research.

The study aims to understand how students with LDs make sense of their challenges in post-secondary Ontarian institutions. In this respect, the study will recruit post-secondary students diagnosed with learning disabilities registered either full-time or part-time through the Graduate Student's Association at the post-secondary education institution in Ontario, Canada, or involved with the Learning Disability Association of Canada (LDAC).

The first thirty (30) participants will receive a \$25.00 *Amazon Gift Card* as a token of my appreciation for the time spent participating in the study. The compensation will be provided as soon as participants consent to participate in the study and as they receive by date and time. Participants will keep the compensation even if they withdraw from the study at any time.

I ask your assistance in informing students with LDs about this research by forwarding the attached request for participant's letter to these students through your regular correspondence. I have attached a request for participant's letter that explains the research project and provides interested students with a contact e-mail address and telephone number. I am also wondering if it would be possible to post a request for student participant posters in the common area at your institution, which is included with the Students with LDs recruitment text.

With thanks and best regards,

(Name of researcher)

Master of Education (MEd)

Doctor of Philosophy Student, Faculty of Education, University of Ottawa

Appendix E: Students with LDs Recruitment Text

Study Title: Left Out: Challenges Faced by Students with Learning Disabilities in Post-secondary Education at Ontarian Institutions

Researcher: *(Name of researcher)*

Researcher's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145 Jean-Jacques-Lussier Private,
Ottawa, ON K1N 6N5, Canada

Supervisor: *(Name of supervisor)*

Supervisor's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145 Jean-Jacques-Lussier Private,
Ottawa, ON K1N 6N5, Canada

Dear Students:

I want to inform you of the research study I am undertaking to complete my Doctor of Philosophy in Education (PhD) degree at the Faculty of Education, University of Ottawa in Ontario, Canada. This participant recruitment text is attached to a letter of request for assistance to the Graduate Student's Association at the University of Ottawa in Ontario, Canada. In this letter, I have requested the Graduate Student's Association to share the information of this research study with post-secondary students with LDs by distributing the letter of request through their regular correspondence. I have obtained ethical approval from the *Office of Research Ethics and Integrity, University of Ottawa* to conduct this research study. This can be verified by contacting the *Office of Research Ethics and Integrity, e-mail: ethics@uOttawa.ca*.

The study aims to understand how students with LDs make sense of their challenges in post-secondary Ontarian institutions. I am looking for students with LDs as participants to assist me in this research study. The way that students with LDs will be selected for inclusion in the study is by identifying as having various learning disability diagnoses according to their psycho-educational assessments, being 16 years of age and over, currently enrolled either full-time or part-time at the post-secondary level, and commitment to participate in a 60-to-90 minutes for this study.

If you choose to participate in this study, you will answer a series of questions in the *Screening Questionnaire* and participate in an *individual in-depth interview (face-to-face or remote)*. The *Screening Questionnaire* has two sections: Section A and Section B. Questions in Section A consist primarily of *Yes* or *No* alternative responses, while questions in Section B require explanations. The time required to complete these questions will take approximately 30 – 50 minutes. You will then be invited to participate in an *individual in-depth interview (face-to-face or remote)*, taking approximately 30 -40 minutes to complete.

You will receive a copy of the transcript of your responses. Any section you request to have deleted/changed from the transcript will be deleted/changed. You will be given at least two weeks to change/delete the transcript. You are free to withdraw from the study at any time, and you may request that the entire transcript be destroyed. In addition, you may choose not to answer any questions. I will share major aspects of my preliminary analysis with you, and you will have the opportunity to provide feedback. I will be doing this by sending you a draft analysis of our conversation within a month of the interview date.

The study will be taking measures to protect your confidentiality and privacy. Your names and other identifying information will be systematically removed or altered to maximize confidentiality and privacy. In the transcripts, your name and other identifying information will be systematically eliminated. The identifying codes, if any, that could connect you with pseudonyms will be kept under lock and key. All digital files will be encrypted, and all raw data will be conserved for three years and deleted/destroyed after that.

The first thirty (30) participants (first come/first served basis) will receive a \$25.00 *Amazon Gift Card* as a token of my appreciation for the time spent participating in the study. The compensation will be provided as soon as participants consent to participate in the study and as they receive it by the date and time. Participants will keep the compensation even if they withdraw from the study at any time.

If you have any questions about the nature of this research study, please feel free to contact me. When communicating, please refer to the research title "Left Out: Challenges Faced by Students with Learning Disabilities in Post-secondary Education at Ontarian Institutions" in the email subject reference.

Thank you in advance for your time in this research study.

With thanks and best regards,

(Name of researcher)

Master of Education (MEd)

Doctor of Philosophy Student, Faculty of Education, University of Ottawa

Appendix F: Faculty members Recruitment Text

Study Title: Left Out: Challenges Faced by Students with Learning Disabilities in Post-secondary Education at Ontarian Institutions

Researcher: *(Name of researcher)*

Researcher's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145 Jean-Jacques-Lussier Private,
Ottawa, ON K1N 6N5, Canada

Supervisor: *(Name of supervisor)*

Supervisor's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145 Jean-Jacques-Lussier Private,
Ottawa, ON K1N 6N5, Canada

Dear Sir/Madam:

I want to inform you of the research study I am undertaking to complete my Doctor of Philosophy in Education (PhD) degree at the Faculty of Education, University of Ottawa, Ottawa, Canada. I have obtained ethical approval from the *Office of Research Ethics and Integrity, University of Ottawa* to conduct this research study. This can be verified by contacting the *Office of Research Ethics and Integrity*, e-mail: ethics@uOttawa.ca .

Your participation consists of filling out an open-ended questionnaire. The objective of this open-ended questionnaire is to understand your experience supporting students with LDs meaningfully. Your participation in this study will increase our knowledge of how students with LDs make sense of their challenges and successes in post-secondary education.

Your participation is very important in order to carry out this study. Your participation in this study is voluntary and completely anonymous. You could access the consent form and questionnaire, please follow the link.

Thanking you,

(Name of researcher)

Master of Education (MEd)

Doctor of Philosophy Student, Faculty of Education, University of Ottawa

Appendix G: Students with LDs Excluded from Interview Text

Study Title: Left Out: Challenges Faced by Students with Learning Disabilities in Post-secondary Education at Ontarian Institutions

Researcher: *(Name of researcher)*

Researcher's Contact Information:

Faculty of Education, University of Ottawa in Ontario, Canada
145 Jean-Jacques-Lussier Private,
Ottawa, ON K1N 6N5, Canada

Supervisor: *(Name of supervisor)*

Supervisor's Contact Information:

Faculty of Education, University of Ottawa in Ontario, Canada
145 Jean-Jacques-Lussier Private,
Ottawa, ON K1N 6N5, Canada

Dear Student:

Thank you for your participation in my research study. I appreciate your time and energy in responding to the questions in Sections A and B of the "Screening Questionnaire."

I have received a number of participants who completed the questions in Section A and Section B of the "Screening Questionnaire". Each participant's responses were carefully reviewed based on the criteria set for selecting participants in the individual in-depth interview.

Your responses are very insightful, and many of these insights will be considered for analysis in this study; however, participants whose responses better meet the objectives of this research study will be invited to the individual in-depth interview (face-to-face or remote).

I am very sorry to inform you that I will not be able to offer you to invite for the next phase of the data collection process, e.g., the individual in-depth interview (face-to-face or remote).

Please feel free to contact researcher if you have any questions or need additional information in this regard.

Once again, thank you for your participation in the study.

With thanks and best regards,

(Name of researcher)

Master of Education (MEd)

Doctor of Philosophy Student, Faculty of Education, University of Ottawa

Appendix H: Students with LDs Recruitment Text to LDAC

Study Title: Left Out: Challenges Faced by Students with Learning Disabilities in Post-secondary Education at Ontarian Institutions

Researcher: *(Name of researcher)*

Researcher's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145 Jean-Jacques-Lussier Private
Ottawa, ON K1N 6N5, Canada

Supervisor: *(Name of supervisor)*

Supervisor's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145 Jean-Jacques-Lussier Private,
Ottawa, ON K1N 6N5, Canada

Attention:

Executive Director, Learning Disabilities Association of Canada (LDAC)
851 Industrial Avenue No. 2
Ottawa, ON K1G 4L3, Canada

Dear Sir/Madam:

I want to inform you of the research study I am undertaking to complete my Doctor of Philosophy in Education (PhD) degree at the Faculty of Education, University of Ottawa, Ottawa, Canada. I have obtained ethical approval from the *Office of Research Ethics and Integrity, University of Ottawa to conduct this research study*. This can be verified by contacting the *Office of Research Ethics and Integrity, e-mail: ethics@uOttawa.ca*. I am writing this letter or e-mail to ask for your assistance in recruiting potential participants for my research.

The study aims to understand how students with LDs make sense of their challenges in post-secondary Canadian institutions. In this respect, the study will recruit post-secondary students diagnosed with learning disabilities registered either full-time or part-time and faculty members through the Graduate Student's Association at the post-secondary education institution in Ontario, Canada, or involved with the Learning Disability Association of Canada (LDAC).

The first thirty (30) participants (first come/first served basis) will receive a \$25.00 *Amazon Gift Card* as a token of my appreciation for the time spent participating in the study. The compensation will be provided as soon as participants consent to participate in the study and as they receive it by date and time. Participants will keep the compensation even if they withdraw from the study at any time.

I ask your assistance in informing students with LDs about this research by forwarding the attached request for participant's letter to these students through your regular correspondence. I have attached a request for a participant's letter that explains the research project and provides interested students with a contact e-mail address and telephone number. I am also wondering if it would be possible to post a request for student participant posters in the common area at your institution, which is included with the students with LDs recruitment text.

With thanks and best regards,

(Name of researcher)

Master of Education (MEd)

Doctor of Philosophy Student, Faculty of Education, University of Ottawa

Appendix I: Students with LDs Recruitment Poster

**Participants Needed for
Research Study on
Students with Learning Disabilities (LDs)
challenges in Post-secondary Education**

Do you experience any challenges continuing your studies in post-secondary education institutions? You may be eligible for this study to share your experiences of challenges.

You May Qualify If You

- Have a diagnosed learning disability
- Are 16 years of age and over
- Currently enrolled either part-time or full-time at the post-secondary level
- Commitment to participate in a 60-90 minute for the study
- Opportunity to reflect on your experiences, explore ideas and clarify thoughts on the subject

Potential Benefits**Participation Involves**

- Responding to a series of questions in the *screening questionnaire* takes approximately 30-50 minutes
- Participating in an *individual in-depth interview (face-to-face or remote)* takes approximately 30-40 minutes
- First thirty (30) participants (first come/first served basis) receive a \$25.00 *Amazon Gift Card*

Compensation

To access the questionnaire directly, follow this link ...

For more information:

Please contact (*Name of researcher*) at the Faculty of Education, University of Ottawa, Canada with refer to the above study.

Appendix J: Consent Form: Screening Questionnaire

Université d'Ottawa
Faculté d'éducation

University of Ottawa
Faculty of Education

Tel/Tél : 613-562-5804
Fax/Télé : 613-562-5144

145, Jean-Jacques Lussier
Ottawa ON K1N 6N5
Canada

www.education.uOttawa.ca

Study Title: Left Out: Challenges Faced by Students with Learning Disabilities in Post-secondary Education at Ontarian Institutions

Researcher: (*Name of researcher*)

Researcher's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145, Jean-Jacques Lussier,
Ottawa, ON K1N 6N5, Canada

Supervisor: (*Name of supervisor*)

Supervisor's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145, Jean-Jacques Lussier,
Ottawa, ON K1N 6N5, Canada

You are invited to participate in a doctoral thesis project mentioned above. This form provided information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you need help understanding, or if you want more information, please e-mail the researcher.

A. PURPOSE This study aims to understand how students with learning disabilities (LDs) make sense of their challenges in post-secondary Ontarian institutions. This study specifically aims to identify what students with LDs perceived as the challenges and successes at a post-secondary Canadian institution.

B. PROCEDURES If you choose to participate in this part of the study, you will answer a series of questions in the "Screening Questionnaire." The "Screening Questionnaire" has two sections: Section A and Section B. Questions in Section A consist primarily of *Yes* or *No* alternative responses, while questions in Section B require explanations. The time required to complete these questions in Section A and Section B will take approximately 30 – 50 minutes.

Based on the responses provided in Section A participants who do not meet the inclusion criteria will not be able to continue responding to

questions in Section B. Some of those who fill out Section B will be invited to participate in the “individual in-depth interview (face-to-face or remote).

C. RISKS AND BENEFITS Anticipation of risk to participants is not associated with this research project. While some may experience risks of affective states, for example, anxiety, feelings of fear of sharing personal information, loss of self-esteem, and mental stress. To mitigate any foreseeable risks or discomforts, participants will be provided a list of accessible psychological or emotional resources beforehand to use if needed without contacting the researcher. Potential benefits of participation in this part of the study include the opportunity to reflect on your experiences, explore ideas and clarify your thoughts on the subject.

D. CONFIDENTIALITY Any information obtained during this part of the study will be strictly confidential. Participants' identities will be linked to a code number during the initial participant screening process. This code will be attached to information obtained from the Screening Questionnaire – Section B and Individual In-depth Interview to ensure participant confidentiality and anonymity. All materials will be stored in a locked filing cabinet in my home office, which only I can access. Information collected in this part of the study will be aggregated on the emerging themes. If any quotes are cited, they will be attached to pseudo-names to protect the participant's identity. The master list containing participants' names and pseudonyms will be kept during the entire data conservation period to remove the data of participants who wish to withdraw from the study. All information and data of any form/kind related to this study will be conserved for five years following the completion of the study.

E. CONDITIONS OF PARTICIPATION You do not have to participate in this part of the study. It is purely your decision. If you do participate, you can stop at any time. There are no negative consequences for not participating, stopping in the middle, or withdrawing after submitting your responses to the questionnaire. If you withdraw from the study, your data will be destroyed unless I obtain your consent at the time of withdrawal to use them.

F. COMPENSATION The first thirty (30) participants (first come/first served basis) will receive a \$25.00 *Amazon Gift Card* as a token of my appreciation for the time spent participating in the study. The compensation will be provided as soon as participants consent to participate and as they receive it by the date and time. Participants will keep the compensation even if they withdraw from the study at any time.

G. PARTICIPANT'S DECLARATION By checking "I consent" below, I am agreeing with the terms and conditions of this consent form. I have had the chance to ask questions, and any questions have been answered. I agree to participate in this part of the study under the conditions described.

If you have any concerns or complaints about this project, you may contact the Research Ethics Coordinator at ethics@uOttawa.ca. You will be given a copy of this consent form to keep for your records and reference.

- I consent, begin the study
- I do not consent, and I do not wish to participate

Appendix K : Consent Form: Individual In-depth Interview

Université d'Ottawa
Faculté d'éducation

University of Ottawa
Faculty of Education

Tel/Tél : 613-562-5804
Fax/Télé : 613-562-5144

145, Jean-Jacques Lussier
Ottawa ON K1N 6N5
Canada

Appendix K: Consent Form: Individual In-depth Interview

Study Title: Left Out: Challenges Faced by Students with Learning Disabilities in Post-secondary Education at Ontarian Institutions

Researcher: *(Name of researcher)*

Researcher's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145, Jean-Jacques Lussier,
Ottawa, ON K1N 6N5, Canada

Supervisor: *(Name of supervisor)*

Supervisor's Contact Information:

Faculty of Education
University of Ottawa in Ontario, Canada
145, Jean-Jacques Lussier,
Ottawa, ON K1N 6N5, Canada

You are invited to participate in a doctoral thesis project mentioned above. This form provided information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you need help understanding, or if you want more information, please e-mail the researcher.

A. PURPOSE This study aims to understand how students with learning disabilities (LDs) make sense of their challenges in post-secondary Ontarian institutions. This study specifically aims to identify what students with LDs perceived as the challenges and successes at a post-secondary Canadian institution.

B. PROCEDURES If you choose to participate in this part of the study, you will answer a series of questions in an individual in-depth interview (face-to-face or remote) concerning your experiences of challenges and successes at different points of your educational journey. You can participate remotely or face-to-face; your choice will be respected. This part of the study will take approximately 30 – 40 minutes. You will receive a copy of the transcript of your responses.

www.education.uOttawa.ca

Any section you request to have deleted/changed from the transcript will be deleted/changed. You will be given at least two weeks to change/delete the transcript.

C. RISKS AND BENEFITS Anticipation of risk to participants is not associated with this research project. While some may experience risks of affective states, for example, anxiety, feelings of fear of sharing personal information, loss of self-esteem, and mental stress. To mitigate any foreseeable risks or discomforts, participants will be provided a list of accessible psychological or emotional resources beforehand to use if needed without contacting the researcher. Potential benefits of participation in this part of the study include the opportunity to reflect on your experiences, explore ideas and clarify your thoughts on the subject.

D. CONFIDENTIALITY Any information obtained during this part of the study will be strictly confidential. Participants' identities will be linked to a code number during the initial participant screening process. This code will be attached to information obtained from the Individual In-depth Interview to ensure participant confidentiality and anonymity. All materials will be stored in a locked filing cabinet in my home office, which only I can access. Information collected in this part of the study will be aggregated on the emerging themes. If any quotes are cited, they will be attached to pseudo-names to protect the participant's identity. The master list containing participants' names and pseudonyms will be kept during the entire data conservation period to remove the data of participants who wish to withdraw from the study. All information and data of any form/kind related to this study will be conserved for five years following the completion of the study.

E. CONDITIONS OF PARTICIPATION You do not have to participate in this part of the study. It is purely your decision. If you do participate, you can stop at any time. There are no negative consequences for not participating, stopping in the middle, or withdrawing after submitting your responses to the questionnaire. If you withdraw from the study, your data will be destroyed unless I obtain your consent at the time of withdrawal to use them.

F. COMPENSATION There is no further compensation for participating in this part of the study.

G. ACCEPTANCE I, (*Name of participant*), agree to participate in the above research study conducted by (*Name of researcher*) of the Faculty of Education, University of Ottawa in Ontario, Canada, which research is under the supervision of (*Name of supervisor*).

If you have any concerns or complaints about this project, you may contact the Research Ethics Coordinator at ethics@uOttawa.ca. You will be given a copy of this consent form to keep for your records and reference.

Participant's signature: _____ Date: ____/____/____

Researcher's signature: _____ Date: ____/____/____

Appendix L: Consent Form: Open-ended Questionnaire

Université d'Ottawa
Faculté d'éducation

University of Ottawa
Faculty of Education

Tel/Tél : 613-562-5804
Fax/Télé : 613-562-5144

145, Jean-Jacques Lussier
Ottawa ON K1N 6N5
Canada

www.education.uOttawa.ca

Appendix L: Consent Form: Open-ended Questionnaire

Study Title: Left Out: Challenges Faced by Students with Learning Disabilities in Post-secondary Education at Ontarian Institutions

Researcher: *(Name of researcher)*

Researcher's Contact Information:

Faculty of Education, University of Ottawa in Ontario, Canada
145, Jean-Jacques Lussier,
Ottawa, ON K1N 6N5, Canada

Supervisor: *(Name of supervisor)*

Supervisor's Contact Information:

Faculty of Education, University of Ottawa in Ontario, Canada
145, Jean-Jacques Lussier,
Ottawa, ON K1N 6N5, Canada

You are invited to participate in a doctoral thesis project mentioned above. This form provided information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you need help understanding, or if you want more information, please e-mail the researcher.

A. PURPOSE This study aims to understand how students with learning disabilities (LDs) make sense of their challenges in post-secondary Ontarian institutions. This study specifically aims to identify what students with LDs perceived as the challenges and successes at a post-secondary Canadian institution.

B. PROCEDURES If you choose to participate in this part of the study, your participation will consist of filling out an open-ended questionnaire to meaningfully understand your experience supporting students with LDs at different points of their educational journey. Your participation in this study will increase our knowledge of how students with LDs make sense of their challenges and successes in post-secondary education. This part of the study will take approximately 20 - 30 minutes.

C. RISKS AND BENEFITS Your participation in this part of the study does not involve any risk for you. Potential benefits of participation in this part of the study include the opportunity to reflect on your experiences, explore ideas and clarify your thoughts on the subject.

D. CONFIDENTIALITY Any information obtained during this part of the study will be strictly confidential. Your identities will be linked to a code number and attached to information obtained from the students with LDs to ensure your confidentiality and anonymity. All materials will be stored in a locked filing cabinet in my home office, which only I can access. Information collected in this part of the study will be aggregated on the emerging themes. If any quotes are cited, they will be attached to pseudo-names to protect your identity. The master list containing your names and pseudonyms will be kept during the entire data conservation period to remove the data of yours who wish to withdraw from the study. All information and data of any form/kind related to this study will be conserved for five years following the completion of the study.

E. CONDITIONS OF PARTICIPATION You do not have to participate in this part of the study. It is purely your decision. If you do participate, you can stop at any time. There are no negative consequences for not participating, stopping in the middle, or withdrawing after submitting your responses to the questionnaire. If you withdraw from the study, your data will be destroyed unless I obtain your consent at the time of withdrawal to use them.

F. COMPENSATION There is no compensation for participating in this part of the study.

G. PARTICIPANT'S DECLARATION By checking "I consent" below, I am agreeing with the terms and conditions of this consent form. I have had the chance to ask questions, and any questions have been answered. I agree to participate in this part of the study under the conditions described.

If you have any concerns or complaints about this project, you may contact the Research Ethics Coordinator at ethics@uOttawa.ca. You will be given a copy of this consent form to keep for your records and reference.

- I consent, begin the study
- I do not consent, and I do not wish to participate

Participant's signature: _____ Date: ____/____/____

Researcher's signature: _____ Date:
____/____/____

Appendix M: Certificate of Ethics Approval**Université d'Ottawa**

Bureau d'éthique et d'intégrité de la recherche

University of Ottawa

Office of Research Ethics and Integrity

03/03/2023

CERTIFICAT D'APPROBATION ÉTHIQUE | CERTIFICATE OF ETHICS APPROVAL**Numéro du dossier / Ethics File Number**

S-09-22-8343

Titre du projet / Project TitleLeft Out: Challenges Faced by
Students with Learning
Disabilities in Post-secondary
Education at Canadian
Institutions**Type de projet / Project Type**Thèse de doctorat / Doctoral
thesis**Statut du projet / Project Status**

Approuvé / Approved

Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)

03/03/2023

Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)

02/03/2024

Équipe de recherche / Research Team**Chercheur / Researcher****Affiliation****Role**

Md HOSSAIN

Faculté d'éducation / Faculty of Education

Chercheur Principal / Principal Investigator

Carole SÉNÉCHAL

Faculté d'éducation / Faculty of Education

Superviseur / Supervisor

Conditions spéciales ou commentaires / Special conditions or comments550, rue Cumberland, pièce 154 550 Cumberland Street, Room 154
Ottawa (Ontario) K1N 6N5 Canada Ottawa, Ontario K1N 6N5 Canada613-562-5387 • 613-562-5338 • ethique@uOttawa.ca / ethics@uOttawa.ca
www.recherche.uottawa.ca/deontologie | www.recherche.uottawa.ca/ethics

03/03/2023

Université d'Ottawa

Bureau d'éthique et d'intégrité de la recherche

University of Ottawa

Office of Research Ethics and Integrity

Le Comité d'éthique de la recherche (CÉR) de l'Université d'Ottawa, opérant conformément à l'*Énoncé de politique des Trois conseils* (2014) et toutes autres lois et tous règlements applicables, a examiné et approuvé la demande d'éthique du projet de recherche ci-nommé.

L'approbation est valide pour la durée indiquée plus haut et est sujette aux conditions énumérées dans la section intitulée "Conditions Spéciales ou Commentaires". Le formulaire « Renouvellement ou Fermeture de Projet » doit être complété quatre semaines avant la date d'échéance indiquée ci-haut afin de demander un renouvellement de cette approbation éthique ou afin de fermer le dossier.

Toutes modifications apportées au projet doivent être approuvées par le CÉR avant leur mise en place, sauf si le participant doit être retiré en raison d'un danger immédiat ou s'il s'agit d'un changement ayant trait à des éléments administratifs ou logistiques du projet. Les chercheurs doivent aviser le CÉR dans les plus brefs délais de tout changement pouvant augmenter le niveau de risque aux participants ou pouvant affecter considérablement le déroulement du projet, rapporter tout événement imprévu ou indésirable et soumettre toute nouvelle information pouvant nuire à la conduite du projet ou à la sécurité des participants.

The University of Ottawa Research Ethics Board, which operates in accordance with the *Tri-Council Policy Statement* (2014) and other applicable laws and regulations, has examined and approved the ethics application for the above-named research project.

Ethics approval is valid for the period indicated above and is subject to the conditions listed in the section entitled "Special Conditions or Comments". The "Renewal/Project Closure" form must be completed four weeks before the above-referenced expiry date to request a renewal of this ethics approval or closure of the file.

Any changes made to the project must be approved by the REB before being implemented, except when necessary to remove participants from immediate endangerment or when the modification(s) only pertain to administrative or logistical components of the project. Investigators must also promptly alert the REB of any changes that increase the risk to participant(s), any changes that considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project or the safety of the participant(s).

Germain ZONGO

Responsable d'éthique en recherche / Protocol Officer

Pour/For **Barbara GRAVES** Président(e) du/ Chair of the **Comité d'éthique de la recherche en sciences sociales et humanités / Social Sciences and Humanities Research Ethics Board**

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