

Optimizing Potential

A Needs Assessment and Literature Review concerning Screening and Assessment Services for Persons with Learning Disabilities

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Executive Summary

The Learning Disabilities Association of NL (LDANL) secured funding from the Government of Canada's **Investment Readiness Program** with the Community Foundations of Canada to conduct a needs assessment, a literature review (including the government policy context in Newfoundland and Labrador) and a feasibility study and business plan for a social enterprise to provide screening and assessment services, especially to support marginalized populations.

This volume, **Optimizing Potential: A Needs Assessment and Literature Review of Persons with Learning Disabilities**, provides the results of the literature review, a strategic analysis including a review of the government policy context and a bibliography of sources and the themes that emerged from the key informant interviews. It accompanies a second volume, **Optimizing Potential: A Feasibility Study and Business Plan for Community-based Screening and Assessment Services for Persons with Learning Disabilities**.

Learning Disabilities (LDs) are “a persisting problem, a life-long condition that evolves throughout the developmental continuum.”¹ Unidentified LDs can be a significant impediment to completing an education, retraining and/or securing gainful employment. The need for screening and assessment services for both K-12 students and adults was identified in the **Gap Analysis on Employment and Training Services Accessibility for Persons with Disabilities in NL**.² At least 52% of students with exceptionalities in this province have LDs, constituting 16% of the full student population, despite there being long wait lists to get diagnosed.³

A full 50 per cent of calls received by LDANL are assessment-related, in getting an assessment, in understanding assessment reports, or in getting accommodations in place. There is a high demand for faster assessment services in schools as waitlists are long. Adults, including early school leavers have no options except fee for service. Private assessments are costly and preclude the vast majority of unemployed or underemployed individuals. Having access to an assessment can be a game changer for many struggling individuals, children and adults alike. The proposed social enterprise initiative will help with the backlog of students needing assessment within the K-12 system and, for the first time, make such services available and accessible to adults at an affordable cost.

The needs assessment phase involved a literature/jurisdictional review and key informant interviews with over 110 individuals representing over 50 community organizations and government departments. What emerged is stark portrait of unmet needs, especially for marginalized populations.

1 Gerber & Reiff (1994)

2 <https://www.gov.nl.ca/isl/files/Gap-Analysis-Report.pdf>

3 https://www.gov.nl.ca/education/files/task_force_report.pdf

Dominant themes and key findings

- There is a stable demand from parents for private assessments who look to LDANL for direction. At present they are willing to pay \$3500 for an assessment. LDANL can offer private assessments for LDs at a significantly lower fee of \$2500 for children and \$2000 for adults.
- Young adults, including early school leavers have no options for assessment. Psychologists in the health authorities do not provide assessment services and while many psychologists provide assessments as side jobs, the cost is a complete barrier to this population.
- The province is experiencing a significant shortage of psychologists and that shortage is projected to grow as the psychology association raises entry level requirements to a doctorate. This shortage was exacerbated in 2019 when the Board of Examiners in Psychology stopped accepting the Masters of Counselling Psychology (Education) as a path towards registration. At present MUN produces a maximum of six psychologists a year.
- More than 1,200 NL students drop out of school each year.⁴ Approximately 2000 students are enrolled in ABE in the province at an annual cost of nearly \$10 million.⁵ Youth/adults who are attempting to resume their education experience the same learning challenges that led them to leave school in the first place and they have no greater understanding of it or awareness of how to accommodate it than they did in their adolescence.
- The more marginalized the student the lower the priority for an assessment. The majority of youth who have left school (youth in care, those at the NL Youth Detention Center, enrolled in ABE programs, as well as those accessing programs such as Choices for Youth, Thrive, etc.) have never been assessed, despite high visibility and displayed high risk for years.
- It is estimated that the incidence of LDs in the prison population may be as high as 77%.⁶ The local John Howard Society reports 90% of its clientele requires exploration of their learning needs to facilitate rehabilitation and support better transition to productive adult lives. An identical percentage of the clientele at HM Penitentiary are early school leavers.
- Nine youth-servicing agencies in Metro St. John's were asked about their current need for assessments. This partial, point-in-time survey identified approximately 1000 young adults currently needing assessments with no options available to them.
- The province's K-12 school system has re-focused its approach from requiring a clinical diagnosis to supporting learners with accommodations based on displayed need. The goal is to accommodate students through diverse

4 IBID

5 IBID

6 <https://www.csc-scc.gc.ca/research/forum/e073/e073g-eng.shtml>

learning strategies and monitor their success so as to inform whether an assessment is needed. This Responsive Teaching and Learning model is based on Response to Intervention (RTI),⁷ a model whose effectiveness is supported by extensive research.

- Evidence clearly demonstrates that by adopting an approach of “assessment for learning” (to inform instructional decisions and supports) versus “assessment of learning” (diagnostic and placement decisions),⁸ will work to triage the need for assessment while allowing students to experience immediate success.

The literature review examined multiple academic and multi-jurisdictional government reports concerning: 1) the needs of adult persons with LDs in the transition from school to work, and school to school to work and in later phases of adult life; 2) best practices in screening and assessments for diagnosing an adult who may not have been previously diagnosed; 3) the social and economic impacts of adults with LDs; and 4) models, procedures and services that are needed/can be implemented especially during the transition years (18-30) and beyond that will foster positive outcomes for adults with LDs, especially marginalized populations.

As the literature review shows, screening and diagnosis of persons with LDs leads to interventions (supports and accommodations) that help build a pathway to educational attainment and more productive, independent lives compared to those who have not had the benefits of such interventions. People with higher skills tend to work more, earn more, and work in higher skilled jobs. They have fewer and shorter periods of unemployment and are less reliant on government financial support. Failure to remove, reduce or alleviate barriers to education and employment will mean more people with LDs will slip into the cycle of poverty, dependence, poor mental health, addictions, food insecurity and homelessness.

This report lays out the evidence for LDANL to broaden its mandate and begin service provision to adults. We heard again and again that the block to employment and self-sufficiency is not just the absence of high school credentials but rather the initial block to learning that led to school leaving and started the cycle of poverty. Children experience this first in school, where frustration leads to disengagement, low self-esteem, mental health issues, addiction, criminality, and hopelessness. Adults attempting to complete their education/training face that block again with no greater awareness of it.

The research is clear that screening is an effective, fast, and economical way to identify accommodations and supports, within a responsive teaching model, that can immediately allow success. There is no other viable option to intervene. The province cannot find, retain, or afford psychologists who, while exceptionally well-qualified to assess, constitute over-paying for a simple procedure. Identifying learning supports does not require a clinical psychologist and assessing for LDs does not require a full psychological investigation. There is ample research, and proven practice, to support a screening approach. While some individuals may end

7 <http://www.rtinetwork.org/learn/what/whatisrti>

8 Earl, L.M. (2003)

up requiring a full assessment, it does not have to be the gate to support, rather a last resort after their needs have been triaged.

LDANL's proposed social enterprise is consistent with the Province's attempts to address pressing economic and social needs by developing social infrastructure that will allow community organizations to provide critical services that will contribute to better social outcomes and increased economic activity. This project aligns with the Way Forward priorities of strengthening the community sector and the **Social Enterprise Action Plan**⁹ which outlines a commitment to support the development, expansion and enhancement of social enterprises that benefit our province.

It connects with the **Adult Literacy Action Plan (Action 21)**¹⁰ which is working with the K-12 system to address early school leavers and with service and training providers to increase supports and options within adult literacy programs for people with disabilities. It intersects and supports Way Forward plans and actions in education, healthy communities, persons with disabilities, disengaged and at-risk youth, workforce force development and skills training.¹¹ It connects with the secondary system and allows a streamlined, fluid, effective and accessible way to support learning.

Citizens with stronger reading, math and communication skills have better economic security. Better economic security contributes to healthy child development, healthy families, and healthy communities. Healthy communities have strong economies and engaged citizens who have optimized their potential.

9 <https://www.gov.nl.ca/iet/files/TWFSocialEntActionPlan.pdf>

10 <https://www.gov.nl.ca/education/files/The-Way-Forward-on-Adult-Literacy.pdf>

11 <https://www.gov.nl.ca/thewayforward/>

What We Heard

About this report

From January to April 2021, 110 people representing 50 organizations and agencies were interviewed as part of a needs assessment and feasibility study for a community-based assessment centre for children and adults with LDs, with a particular focus on serving marginalized persons. The appendix contains the list of persons interviewed. The following report summarizes of the key themes, issues and information that surfaced.

There was great interest in this topic with requests for interviews quickly and enthusiastically accepted. Many youth-serving agencies reported that they had been waiting for a conversation on this topic for some time as it is an area with which they have long struggled. Participants from the Newfoundland and Labrador English School District (NLESD) also welcomed the conversation as meeting the assessment needs of the student population is top-of-mind for them. It was apparent early in these conversations that the need for assessment services for individuals with suspected LDs is topical in this province.

Not surprisingly there was a strong parallel between the literature review and what the key informants reported. In fact, very little of the following section is not supported by significant research, both nationally and internationally. These are not new struggles or obstacles but ones that have been well recognized but, in many ways, ignored – especially for adults, which is also reflected in research. The evolution of awareness, service and policy for children is clearly visible and the research maps how this has occurred. For adults it is, sadly, a completely different story.

Key themes and issues

When it works, it works well

There was wide perception that individuals who do receive a full assessment, and who receive appropriate accommodations, have more positive outcomes than those who do not. Student support services at both Memorial University (MUN) and College of North Atlantic (CNA) reported that there have been significant improvements in the number of students who are starting their first year with assessments in place, transition plans developed, and a list of required accommodations already established. Those students know their learning needs and are ready to self-advocate. This improved post-secondary preparedness has meant that the need for assessments in both institutions has diminished. MUN has the capacity to assess students who, for whatever reason, require an assessment or a re-assessment. CNA does not have the capacity and refer their students to private practice. Such referrals are infrequent.

Likewise, the individuals consulted reported that when an assessment was well done, it proved to be a game-changer for individuals and families. Knowing how a child learns, what accommodations are required, and how to help the students, leads to success. It reduces, or at least minimizes the secondary symptoms (see literature review) of LDs and empowers the student with the confidence to try and strengthen their sense of self-efficacy. The demand for assessment is being driven by parents and stakeholders who see the positive outcomes of students who are more empowered and self-confident because of having undergone a comprehensive assessment, especially early in their academic development.

There was widespread support for the Government of Newfoundland and Labrador's new special education program, Responsive Teaching and Learning (RTL)¹², which removes an assessment as the sole gateway to accommodations. Under the new RTL model, the instructional team will decide, based on student need, what accommodations might help the student succeed, introduces those supports immediately and monitors their success. That response to accommodation will then inform whether an assessment is needed.

The model clearly outlines that it does not preclude a formal assessment or diagnosis and, in fact, stipulates that if the supports continue to be needed, an assessment must be done. Most of those interviewed felt that this would lessen the pressure for an immediate, full-blown assessment and help triage priority needs. There was concern that some schools would use it as an excuse not to have to assess but data monitoring processes are in place to deal with this under The PowerSchool Parent/Student portal which provides parents/guardians and students with quick and easy access to their current marks, assessment information, attendance records, assignment due dates, and school announcements.

Relevant stakeholders also supported Government's plan to reactivate the Individual Support Services Plan (ISSP) for complex children, especially those under the care of the Director of Child Services. These children, who access supports from more than one system of care, must be a priority for a comprehensive assessment as they are at such profound risk of school leaving.

There was also, however, universal agreement that schools cannot meet the demand for assessments and many parents are frustrated with the lengthy wait lists. Approximately half of the calls that LDANL receives concern assessments – how to access an assessment, how to interpret the results or how to get recommended accommodations.

Marginalized youth are not a priority for assessment

While informed parents are increasingly active in seeking information, there was concern for children from more marginalized families. Youth care workers consistently reported that the more at-risk the student is, the lower their priority for an assessment. If the child is externalizing their frustration, does not have strong

12 <https://www.gov.nl.ca/education/k12/responsive-teaching-and-learning/>

parental advocacy, is skipping school or is otherwise proving to be a challenge, they are seldom assessed. The 2017 Task Force report **Now is the Time**¹³ identified that an average of 1,260 students a year leave school early and that another 4,500 are missing more than 20 percent of the time. Those students are leaving for a reason and learning challenges and disengagement are dominant factors.

Interestingly, every community center consulted reported that many of their children are never assessed. Youth agencies such as Choices for Youth, Thrive, Way Points, etc., reported the same finding. Each year about 20 students transfer from the district school to the Brother T. I. Murphy Center and few of them have been assessed despite long histories of significant need. At any given time, there are about a dozen students at the NL Youth Detention Center and almost none of those students have been assessed, despite having pronounced learning challenges and being highly visible in multiple government agencies for years. Even more telling, these students remain unassessed while at the center where they often have the most stable experience of their young lives and there is opportunity to assess. Likewise, it was reported that 90 percent of inmates at the Province's correctional facilities, including those receiving support from the John Howard Society, are described as early school leavers with learning challenges, but these citizens are never assessed while incarcerated.

An informal, point-in-time survey was completed with a small number of youth-serving agencies¹⁴ who were asked how many of their current clients would they refer today for an assessment, should such a service be available. The total identified was just under 1,000 students. **Now is the Time** reported that in 2017 there was 2,000 enrollments in Adult Basic in the province at a cost of nearly \$10 million¹⁵. At every juncture of the consultation process, the evidence was overwhelming that marginalized youth are not a priority for assessments. Furthermore, deprived of screening, assessment and documentation of a LDs, ABE students with undiagnosed LDs face the same barriers as school and are excluded from obtaining accommodations on the GED, in the workplace, and in postsecondary education, thereby limiting opportunities for meaningful participation in these pursuits.

The block to success

We heard repeatedly that the main barrier to employment and self-sufficiency is not just the absence of high school credentials, but rather it is the initial block to learning that led to school leaving and started the cycle of marginalization in the first place. Children with LDs experience this block first in school, where frustration leads to disengagement, low self-esteem, mental health issues, which then often lead to addiction, criminality, and hopelessness. Undiagnosed adults with LDs who are attempting to complete their education/training face that block again with no greater awareness of it.

13 https://www.gov.nl.ca/education/files/task_force_report.pdf

14 John Howard Society, T.I. Murphy Center, Thrive, Way Points, Choices for Youth, Stella's Circle and 7 community centers.

15 https://www.gov.nl.ca/education/files/task_force_report.pdf

This block crosses numerous government departments multiple times. It drives the cycle of addiction and mental health. It drives the cycle of poverty and it becomes the single biggest obstacle to self-sufficiency. Government pays a price for this multiple times.

High fees for private psychological service

Families with the means to access a private assessment are eager to do so, triggering a corresponding rapid growth in private practice in the province. This growth, however, brings significant concerns. Parents note that while Educational Psychologists are slow to complete assessments in the school system, most of them have private practices and can provide an assessment relatively quickly for a private fee. Likewise, it is rare for psychologists within the provincial health care system to provide assessments but many also have private practices where they are eager to provide this service for a fee. Conflict of interest policies, where they do exist, are vague and focus on disclosing the potential for conflict.

An additional concern is the cost of an assessment with \$3,500 being the most often-quoted fee. There is no rationalization for this fee excepting that psychologists have set their hourly fee at \$180 an hour. The Psychology Association reports that this fee is set at the AGM of the organization based on national averages. It is offered as a suggestion for the minimal fee for psychologists to charge. Such high fees are not an option for most families as well as for marginalized youth and under-employed or unemployed adults. Those who need an assessment the most can afford it the least.

One informant noted that if a person had to pay \$3,500 to get an MRI in this province, there would be outrage yet it is perfectly acceptable to have to pay a psychologist \$3,500 on the weekend to have an assessment. Another participant pointed out that LDs is a health issue that, unidentified, becomes a chronic health issue (and therefore more costly over the lifespan). The province's health authorities cannot continue to ignore this. It is at the core of homelessness, poverty, addictions, mental health and criminality.

While the fee of \$3,500 is consistently charged among psychologists, there is great variation in what constitutes an assessment. Some assessment reports are extensive with multiple instruments used and detailed interpretations with strong recommendations. Others have very little testing and scant interpretation yet the fees are the same. Unlike many other provinces, for example, Ontario, the NL Psychology Association provides no guidelines or standards for assessments and while psychologists must maintain annual credential upgrading, there is no expectation for a psychologist specializing in assessment to complete upgrading in that area.

This absence of criteria over what constitutes an appropriate assessment is especially problematic when assessments are done at a reduced fee, for example, for those funded by Income Support or federal employment agencies. Many of these assessments are only partially completed and the reports partially presented. More often than not, individuals walk away from the experience with no greater knowledge of their needs. Staff at youth servicing agencies are left to try their best to interpret

the report done by the psychologist and extrapolate possible accommodations and supports.

Concern was also expressed about the ability of psychologists to be prescriptive in recommendations around adapting instruction and curriculum needs. Psychologists, by the nature of their training, have no expertise in teaching and learning, especially in the K-12 system. They are not trained in the province's curriculum, pedagogical practices or instructional needs. While they are well-trained in assessment, their skill set is exceeded by the implications of how the scores can influence what happens in the classroom. This proves to be particularly problematic when a private assessment is done without collaboration with the school, including a review of the student's file and input from the teachers.

Finally, there is growing concern about the availability of psychologists themselves, especially in rural areas. A significant number of positions are currently vacant across the province and there is high turnover in positions. Informants reported a growing trend toward private practice where psychologists can earn a much higher salary. In 2019, the Board of Examiners in Psychology ceased accepting graduates of the Counselling Psychology program from the Faculty of Education for registration. The Board acknowledges that approximately half of the current psychologists in the province were graduates of that program. MUN now offers a Doctor of Psychology (Psy.D) program in psychology and accepts six students a year (admissions paused in 2020 due to Covid). Discussions are also underway to follow the Association of Canadian Psychology Regulatory Organization's recommendation of requiring a PhD as the standard for entry into psychology practice, in line with a national standard. At present, psychologists whether in public or private practice, cannot address the assessment needs of the province. Given the current shortage, limited training available in the province and the move towards higher entry credentials this deficit in service will expand. Harm is being incurred.

University partnership

MUN is the province's only university and, as such, has a unique responsibility to meet the training needs of the province. School counsellors, special education teachers and psychologists are trained there and, as such, they set the bar for assessment preparation in the province. The Faculty of Education formerly operated a Diagnostic and Remedial Unit where, as part of initial training, educators would provide assessments to students free of charge. That service, despite being highly regarded, was closed because of budget cuts in the early 1990s.

There is interest in resuming this service. The Doctor of Psychology (Psy.D) program requires their students to complete several assessments on adults and youth as part of their training. Likewise, the education program requires special education teachers and counsellors to also complete assessments. Initial conversations concerning both programs were promising, especially to serve marginalized populations who are in high need of an assessment but who have low means to access one. The Autism Society of NL is also interested in partnering with such a program which will help provide training in assessing students on the autism spectrum.

A need for a screening service

Assessing marginalized youth is a complex task given the prevalence of, and concern for, associated mental health issues, addictions, trauma, etc. Not all marginalized youth are ready for, nor require, “testing.” All such youth require support and direction.

This requirement for immediate support points to a need for accommodations more than a formal diagnosis. Many individuals consulted said that help was a greater priority than a clinical diagnosis. Many young adults in education/training programs will benefit from accommodations if they once they understand which supports will indeed help, and why. This would also help these youth self-advocate for such accommodations in further education and employment settings.

The Province’s new K-12’s model of Responsive Teaching and Learning was seen by the individuals consulted as an example of identifying supports to help individuals succeed without needing to be assessed. Many individuals present with needs that are so blatantly obvious that an assessment only confirms what is already strongly suspected. Seldom does an assessment produce surprising results and the vast majority of required accommodations are within the scope of good teaching practice. This model, internationally referred to as “Response to Intervention (RTI)”¹⁶ is exceptionally well supported by research.

Research also demonstrates that an approach of “assessment for learning” (to inform instructional decisions and supports) versus “assessment of learning” (diagnostic and placement decisions)¹⁷ will work to triage the need for assessment while allowing students to experience immediate success. It does not negate the need for assessment, but rather it informs an assessment with how the student responds to accommodations. If the student does not respond or show progress, more intensive supports may be needed, or a full assessment recommended. This approach is being well received in the provinces K-12 system and holds potential for adult learners. It is especially pertinent for marginalized youth who often require other supports such as counselling, medical, lifestyle support, before being stable enough to have standardized testing completed.

The practice of screening to identify supports is underscored by the limitations of testing for students older than 21 years. While the testing industry is substantial for the K-12 age group, it is remarkably thin for adults. Most tests are configured to the requirements of high school completion (up to 21 years of age at most). Few test instruments are designed for adults and this results in a truncated testing process which, by default, relies more heavily on case history analysis than test score results. The Wechsler Adult Intelligence Test and the Woodcock Johnson Tests of Cognitive Abilities, and their companion tests of achievement, are the standard. Social/emotional screens for adults are even more limited. This results in less than five hours of testing time at the outset.

16 <http://www.rtinetwork.org/learn/what/whatisrti>

17 Earl, L.M. (2003).

As a sound alternative, individuals consulted were greatly interested in a process of screening for LDs via an interview and case history analysis. While several screening instruments are available, most participants felt that a solid, well-structured client interview would help pinpoint the learning needs and, more importantly, narrow down which accommodations would help. This does not negate the need for formal assessment, but it does allow for faster accommodations especially for adults with limited options for a comprehensive assessment. Most accommodations that stem from a formal assessment such as assistive technology, extended time, use of a quiet room, audible/alternate format, etc., do not compromise the academic integrity of the curriculum and are readily available in a diverse, inclusive learning environment for anyone who would benefit, not just those with a formal diagnosis.

Screening was also topical when considering the secondary issues with which many youth/adults are dealing. High rates of mental health concerns, addictions, trauma, homelessness, and poverty raises concern for their readiness to be tested. Certainly, in triaging their needs, testing would not be paramount nor advisable. Many issues need to be addressed and stability must be established before standardized testing could be pursued. Screening would help mitigate the need to obtain test scores and focus on what is required now, based on displayed/reported need. All those consulted concerning adult learning programs and, to a large extent those individuals associated with the university and the college, reported leaning more on implementing proven accommodations than whether an assessment is available.

Concern for Red Seal exams

A comprehensive assessment is reported to be a gatekeeper to accessing accommodations on Red Seal exams within the skilled trades industry.¹⁸ Participants voiced significant frustration with the rigidity and lack of willingness to allow even simple accommodations without having an assessment in place, despite no options to obtain one. The Department of Immigration, Skills and Labor¹⁹ provides clear guidelines for exam accommodations on both block exams and Red Seal exams. It documents the application process, sets out time frames and offers examples of typical accommodations provided. Senior staff within that department confirmed that a sound screening process, by qualified and competent persons, would be accepted for accommodations in their programs. This is in keeping with recommendation #34 of the Skills Task Force (2007) that called for expanded strategies and supports to assist persons with disabilities in accessing employment opportunities and the development of a manual for employers to increase awareness of strategies to accommodate persons with disabilities in the workplace. A guide has been put in place outlining an application-driven process for students requesting accommodations for exams in the skilled trades which is needed three weeks in

18 The Program works directly with the skilled trades industry. They develop standards and exams for Red Seal trades. A tradesperson who passes the Red Seal exam receives a Red Seal endorsement. The Red Seal is proof that a tradesperson has met the national standard in their trade.

19 <https://www.gov.nl.ca/isl/app/exams/accomodations/>

advance. Approval of such accommodations requires documentation from accredited personnel concerning the disability and required accommodations.²⁰

A need for coaching

There was also a strong call for coaching and lifestyle counselling, especially for youth dealing with ADHD and/or mental health needs. It was felt that this population desperately needs support in understanding how these conditions manifest in their lives, the lifestyle and structure required to temper it, and the skills required to manage symptoms. In an absence of this service, individuals are left to rely solely on medication which helps many but does not prove to be completely successful. Given the high rate of comorbidity with LD, these issues are often as much an obstacle to success as the original learning issue. It was noted that such a service is completely unavailable in the province.

Second language learners

Surprisingly, there was not much call for formal assessment of second-language learners. As in the rest of Canada, immigrants to the province come from around the globe and many are highly skilled, meaning they have post-secondary education and training. The top countries of origin being the Philippines, Syria and China. They work in a variety of occupations and have settled in 78 communities throughout our province. In 2015, the province welcomed 1,122 immigrants. By 2022, Newfoundland and Labrador is aiming to welcome approximately 1,700 immigrants annually.²¹

While this population faces learning challenges formal assessment, other than pinpointing achievement levels, is not viewed as being required to help inform support plans. There was wide recognition that the language and cultural bias contained in standardized testing instruments would preclude use of testing for these individuals.

As outlined in **The Way Forward: Education Action Plan** (2018), based on the recommendations of **Now is the Time** (2017), the Premier's Task Force on Improving Educational Outcomes, multicultural education is a priority area, and Government has committed to working with school districts and schools to advance and implement recommendations from the task force aimed at enhancing multicultural education in K-12 schools. This includes several initiatives such as: (a) ensuring leadership provided for specialist teachers and classroom teachers receive the direction, support, and resources they need to teach multi-cultural students; (b) enhancing the enhance English as a second language (ESL) and the Literacy Enrichment and Readiness to Learn (LEARN) programs; and (c) appropriate education options to reduce school leaving.²²

20 <https://www.gov.nl.ca/isl/app/exams/accomodations>

21 **The Way Forward: Immigration Strategy**, 2019, pp. 4-5.

22 Ibid, pp. 19-35.

Itinerant service

There was discussion on the need for an itinerant assessment service, where the assessor goes to the youth servicing center. Many clients are skeptical of institutions and many have significant trauma issues. It was felt that these clients would be better served in a building or setting where they have established trust and comfort and where rapport can be more quickly established. For persons living with low income, there is also the very real challenge of transportation and access. This was particularly relevant for clients of the John Howard Society and Thrive but also relevant for families availing of support at community centers. Many of these parents have themselves experienced trauma in school and are hesitant to engage. LD has a strong genetic component and often the struggling child/youth is second or third generation LD.

Literature Review

Introduction

LDs are among the most common disabilities experienced in childhood and adulthood. Understanding of the nature of LDs has advanced significantly over the last forty years, reflected in the expanded definitions that have emerged, as well as in legislation and policies that have addressed the rights and need for services of the LD population (Brown, 2013). The field of LDs is constantly evolving, and it is one of the most active areas of special education and literacy research.

Despite this, research on adults with LDs is limited with growing calls for increased scholarship in this area (Grieg, 2012). As these children have aged, and education, human rights and labour legislation created legal requirements for equal access and opportunity, more attention has been paid to the developmental stages of adulthood. The large variability in life outcomes of adults with LDs, as described in this literature review, matches what is known about the complexity of the issue (Sharfi & Rosenblum, 2014).

Terminology and Definitions

The term “learning disability” has been used since 1963 when Sam Kirk, then a professor of special education at the University of Illinois, first used the term at a conference of parents and educators (Cullen Pullen et al., 2017). The term quickly became adopted, replacing the more stigmatizing terms such as “word blindness,” “brain injured,” “Mild brain injury” and “perceptual handicap.” Throughout the literature, the term “specific learning disabilities” (SLD) is used interchangeably with the term “learning disabilities” (LDs) (except in the UK and some European jurisdictions where the term learning disabilities includes intellectual disabilities).

Although the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) published by the American Psychiatric Association (APA) now uses the term “specific learning disorder,” research tends to use the term “learning disability” (Scanlon, 2013). There is no consensus on which of these terms is most accurate to use (Cullen Pullen et al., 2017). The term “learning disability(ies)” is used throughout this literature review. Other terms such as dyslexia (defined by the DSM-V as LD with impairment in reading), dysgraphia (LD with impairment in writing), and dyscalculia (LD with impairment in math) are often used to describe the types of LD (American Psychiatric Association, 2013).

Since the beginning of the use of the term “learning disabilities,” there has been a search for a universally accepted definition. Research generally agrees that LDs are neurological in origin, and are at least partially genetic (Eckert et al., 2005; Scerri & Schulte-Körne, 2010). Researchers, practitioners, policy makers, educators and advocates have proposed and debated numerous definitions (Hammill, 1993; Kavale, Spaulding & Beam, 2009). Most agree that LD is a neurological disorder that affects a student’s ability to read, write, spell, reason, and organize information

taught in conventional ways (Learning Disabilities Online, 2017). When given the appropriate classroom supports, students with LDs can become successful learners. In the United States (US), LD is recognized as one of the 13 categories of disability within the Individuals with Disabilities Education Act (IDEA), the comprehensive education law in the US. The first official federal recognition of LDs as a category of special education was signed into law in 1975 and the definition has remained fairly consistent over several reiterations of the IDEA, namely:

A disorder in one or more of the basic psychological processes involved in understanding or in using written and spoken language, which may manifest itself in an imperfect ability to listen, speak, read, write, spell or to do mathematical calculation. (Sec. 602 (30) (a) US Department of Education, 2004).

Although there is far from universal agreement on the definition, the modal definition (one used by most people definition) in use in North America is the most recent definitions articulated in the 2012 update to DSM-V. This switch to “specific learning disorders” has impacted daily clinical practice, clinical research, the educational system, professional organizations and advocacy groups for LDs, as well as on individuals with LDs, their families, and perceptions of LDs in the community.

Canadian Definition

The Learning Disabilities Association of Canada (LDAC) worked with researchers to adopt and operationalize a definition of LD based on the DSM (Harrison, 2005). In 2012, when the DSM was undergoing revision, a systematic review of the literature was undertaken in Canada to determine the current and best practices in the field of LD (Harrison & Holmes, 2012). Overall, no agreed upon definition of LD was identified, although core similarities in definitions were noted. Research also showed that many psychological assessments failed to adhere to any one definition when making the diagnosis of LD, and as a result the diagnosis may or may not reflect the presence of a permanent disability that impairs academic functioning (Harrison & Holmes, 2012).

In an effort to adopt a consistent, evidence-based approach incorporating best practices and appropriate criteria for the diagnosis of LD, the official definition adopted by LDAC in 2002 and re-endorsed in 2015 (based on the DSM-V). The definition is long but well-articulated and can be found at: <https://www.ldac-acta.ca/official-definition-of-learning-disabilities/> .

Prevalence

It is difficult to obtain an accurate estimate of the prevalence of LDs, particularly in adult populations, as data is considered to underestimate the true prevalence in the Canadian population (Kelm, 2016) and further underscored by long-waitlists for assessments. The under-estimation of LDs may arise from several factor: 1) reliance on self-reporting (some persons may not report an LD because of perceived stigma); 2) adults diagnosed in childhood may no longer self-identify as having LDs (the association of LD is with school rather than the workforce as noted by Gerber, 2012;

International Adult literacy Skills Survey Statistics Canada, 1995); and 3) some adults may not have been formally diagnosed/ identified with an LD despite struggles in school and in later life.

LD is diverse, complicated, poorly understood and often referred to as “invisible disabilities” because they affect not only cognitive functioning and academic achievement but also emotional and interpersonal experiences. They are “a persisting problem, a life-long condition that evolves throughout the developmental continuum” (Gerber & Reiff, 1994).

Nonetheless, LD is rather common, affecting 5-10% of Canadians, and comprising 50% of students receiving special education services (<https://www.ldac-acta.ca/>). In the US, LD similarly is estimated at 5-15% of people (American Psychiatric Association, 2013). Estimates of the global prevalence of LD range from 5-17% (Johnson & Webb, 2017).

A large Canadian study, **Putting a Canadian Face on Learning Disabilities** (PACFOLD) (Learning Disabilities Association of Canada, 2007), provided estimates of the prevalence of LDs in Canadian adults. Their data indicated the lifetime prevalence of LDs to be between 1-1%. This has been adjusted, given factors of under-reporting and the limitations of self-identification. The 2017 Statistics Canada *Survey on Disability* reported an estimated 17.7% (14% in NL) of persons 15 years of age and older with LDs, either self-identified or diagnosed by a clinician. At least 51% of students with exceptionalities in NL have LD, constituting 18% of the full student population, despite there being long waiting lists to get diagnosed (Government of NL, 2017).

Although the impairments of LD are generally life-long, they may not be immediately obvious. Early signs may appear in the preschool years (e.g., difficulty learning names of letters or counting objects), but they can only be diagnosed reliably after starting formal education. The DSM-V suggests that a diagnosis of LD should be based on a clinical synthesis of developmental, medical, family, and educational reports. Some LDs, especially those affecting organizational, problem-solving and social skills, may not become apparent until later in the individual’s education as the academic demands increase in complexity. There are instances in which LD is diagnosed in adulthood, after the individual has left school. LDs may be expressed differently over time, depending on the match between the demands of the environment and the individual’s pattern of strengths and weaknesses (Learning Disabilities Association of Ontario, n.d.)

Disability in reading is the most common and by far the most investigated subtype of LD (Shaywitz, Morris, & Shaywitz, 2008), while the other types of LD (math or writing), or comorbid conditions such as Attention Deficit/Hyperactivity Disorder (ADHD), have gained less attention until recently (Barbaresi et al., 2005; Dirks et al., 2008; Landerl & Moll, 2010; Moll, Göbel, & Snowling, 2015). Estimates vary, but it is believed that up to 80% of those with ADHD also have LDs and that an estimated 30-40% of individuals with LDs also have ADHD. One of the main links between these two diagnoses is the fact that attention, memory and information processing difficulties often give rise to academic problems. Similar to LD, ADHD cannot be readily diagnosed through medical technologies, despite the fact that the disorder is

also neurological in origin. However, even though attention and concentration are cognitive skills, and can certainly be measured, they are in fact a multifaceted set of skills.

There are some tests which are geared towards ADHD and many of these are well validated. However, many of these tests are actually behavioral screens and checklists. As such they describe behaviors that the individual is displaying but do not explore the origin. As a result, they often produce “false positives”. ADHD is a medical diagnosis, made with the clinician considering the history of the client, the client’s presenting symptoms, and information from available testing results. The challenge with diagnosing ADHD in young adults is that it is often clouded by anxiety, lifestyle issues and substance abuse limiting both a clear picture and options for medical management.

LD across the lifespan

LD was historically considered a childhood issue, which they eventually outgrew (Fletcher, 2012). Legislation in the US beginning in 1975 led to the establishment of educational programs for LD children and the training of professionals in this area of service (Hallahan & Keogh, 2001) including a systematic methodology for identification, assessment, and education (Gitterman, 2001). In the 1990’s, attention focused on adults with LD as a result of increased advocacy and research, several major federal US labour laws, and heightened awareness of the changing demands of the workplace (Gerber & Reiff, 1994). Ground-breaking research included **The Beginning Post-Secondary Students Longitudinal Study** which followed a representative sample of post-secondary students during one academic year. Six years later, it was found that the overall rate of persistence was about 53% for students with LD and about 64% for their non-disabled peers (US Department of Education, 2004).

As children with LDs have aged, the field has broadened and matured and a slow shift in focus to adults has begun as researchers discovered that learning problems and related psychosocial issues continue beyond childhood (Gregg, 2009; Maughan et al., 2009; Morris et al., 2009; Raskind et al., 1999; Undheim, 2009; Wilson et al., 2015; Gerber, 2012; Swanson, 2012). Most of this research has focused on outcomes (e.g., education, employment, mental health) of adults initially diagnosed during school age years (Brown, 2013; Gerber, 2012). Correspondingly, research has demonstrated that LD adults face a wide variety of challenges leading to a broad array of outcomes across the lifespan (Gerber, 2012). Overall, the research suggests that while some LD adults adjust well to the demands of adult life, others continue to struggle across multiple domains including education, employment, independence, daily routines, personal well-being, and social interactions (Ferri, 2000; Gerber, 2001; Goldberg et al., 2003; McNulty, 2003; Murray, 2003; Reiff, 2004; Roffman, 2000; Stafford-DePass, 1997; Telander, 1994; Werner, 1993).

The severity of LD is negatively linked to functioning and success in adulthood, whereas social support and compensation strategies are positively related to job success. Personal characteristics such as self-determination, perseverance, and effective coping strategies have also been linked to various indicators of success for

adults with LDs but a higher intelligence level does not protect an individual from being negatively impacted (Gerber, 2012; Holliday et al., 1999).

Most research literature does not differentiate between individuals who were diagnosed with LDs in childhood, and those who were diagnosed in adulthood. Limited research suggests that an increasing number of individuals are seeking initial diagnoses of LDs in adulthood (Sparks & Lovett, 2009; Brown, 2013; Kelm, 2016). Gerber (2012) cautions that interpreting follow-up studies of LD is complicated by methodological limitations caused by a lack of control groups, attrition, changes in LD definitions over time, and group designs limiting conclusions on an individual level (Gerber, 2012). Nevertheless, a growing body of literature indicates that adverse childhood events including childhood learning problems are strong risk factors for multiple adult health and psychiatric problems.

Mental Health: debilitating secondary characteristics

LD has both primary and secondary characteristics, both of which can prove to be significant blocks to success. Primary characteristics are the initial neurological challenges with specific cognitive skills including phonemic awareness, auditory processing, reading speed, production of script, visual processing, visual motor functioning, numeracy, cognitive focus, memory and executive functioning. Weakness in any of these areas is usually the target of accommodations such as adaptive technology and alternate format materials. Computers and technology have revolutionized this field to allow the individual with LD to access information and express themselves with much greater ease (Gerber & Rief, 1994).

Secondary characteristics are much more debilitating and often more difficult to redress. The eroded self-esteem from having struggled through school, the embarrassment and marginalization from having their struggles so obvious to peers, the belief that they are dumb, the externalized frustration and the resultant mental health issues all combine to derail a student with LD unless intervention is early and effective. The cost of this “emotional baggage” is carried forward and becomes cumulative. It is the reason why so many adults with LD experience mental health issues, addiction and criminality.

Klein and Mannuzza (2000) conducted a longitudinal study comparing 104 children with LD and 124 children without LD. All these children initially had no emotional difficulties. When surveyed sixteen years later, LD students reported significantly lower socioeconomic status, lower employment and pay, and higher prevalence of psychiatric disorders and addiction issues. Individuals with LD often did not reach their potential, complete education and felt that they had little to contribute to society. The PACFOLD study (Learning Disabilities Association of Canada, 2007) had similar findings, that young adults with LD were far more likely to have left school early, be unemployed and struggle with mental issues. Canadian studies on homeless populations (Barwick & Siegel, 1996; Patterson et al., 2012) identified an over-representation of LD youth with exceptionally high rates of mental disorders, substance use, physical health, service utilization and duration of homelessness.

Additional support for the prevalence of debilitating secondary characteristics of LD is stark (Carroll et al., 2005; Maughan & Carroll, 2006; Raskind et al., 1999; Wilson et al., 2009). Meta-analyses have indicated higher levels of depression (Maag & Reid, 2006; Nelson & Harwood, 2011a) and anxiety (Nelson & Harwood, 2011b). While it does not affect all students the same way, many students with LD often experience frustration, low self-esteem, poor self-concept, and repeated academic failure (Cullen Pullen et al., 2017). They find it difficult to maintain motivation, may display learned dependency and deficits in social skills (Galway & Matsala, 2011). They more frequently engage in risk-taking behaviors including substance abuse, delinquency, aggression, and gambling (McNamara & Willoughby, 2010). They have increased rates of depression (Heath & Ross, 2000; Maag & Reid, 2006; Sideridis, 2007) and struggle with employment training and income (Hakkarainen et al., 2015; McLaughlin et al., 2014; Raskind et al., 1999).

These emotional and social difficulties can be long lasting, with negative consequences in adulthood (Klassen et al., 2013). As students transition to post-secondary and employment, they faced new challenges. They must become more independent of their families and more self-confident and self-reliant. The primary symptoms first experienced as children re-surface as blocks in adulthood, triggering the cycle of secondary symptoms, yet compounded by higher workloads and increased expectations for competence and independence (Roffman, 2000; Roffman et al., 2007; Rey-Casserly & Holmes Berstein, 2010).

Research also suggests that individuals with disabilities internalize stereotypes, leading them to anticipate negative reactions from others. This experience of anticipating stigma can prevent individuals from disclosing their disability to others and exacerbate secondary characteristics (Chaudoir & Quinn, 2010; Quinn & Chaudoir, 2009). This hesitancy to disclose is common among adults with LD and limits many from seeking support (Nalavany et al., 2013; Shessel & Reiff, 1999).

LD in the justice system

The significance of secondary characteristics predicts a relationship with criminality. Persons with LD (both adults and juveniles) are considered to be over-represented in the justice system (Hayes, 1996). In fact, LD as a predictive risk-factor for youth criminality is well documented (McNamara et al., 2008; McNamara & Willoughby, 2010; Newman et al., 2011; Shandra & Hogan, 2017). Fisher-Bloom (1995) reported that there was strong evidence that the incidence of LDs is significantly greater in the institutional population than in the community at large. Just 5% to 10% of the general population have LDs, while the incidence of LDs in the prison population fluctuates between 7% and 77%. Two Canadian studies have reported incidence rates of between 7% and 25% in federal institutions (Lysakowski, 1980; Folsom, 1993). U.S. studies have reported rates ranging from 8% to 77% (Dowling, 1991; Keilitz, Zaremba & Broder, 1979). This discrepancy has been attributed to possible different definitions of LDs, access to assessment services, varying cutoff points for selected measures or the use of abbreviated versions of tests to identify disabilities (Fisher Bloom, 21). An Israeli study (Einat & Einat, 2008) reported that 70% of Israeli inmates were LD. Estimates of the prevalence of mental health issues in this population are also high, upwards of 50% and that ADHD is four to five times more

prevalent in correctional facilities than in schools (National Council on Disability, 2003).

This prevalence has been called by many researchers the “school to prison pipeline.” Research indicates that youth with LD are doubly penalized in the justice system as the learning challenges that sabotaged their schooling now sabotages their rehabilitation. From the time of arrest to incarceration and from release to reintegration with society, people with LD struggle because of their impairments (Chung et al., 2005; Shandra & Hogan, 2012). They have been observed to be resistant to intervention, unaware of their struggles and lacking in engagement (Englebrecht et al., 2008; Karver et al., 2006; Orsi et al., 2010; van der Helm et al., 2009). They lack access to appropriate educational programs and accommodations (Rutherford et al., 1985). It impacts their right to a fair trial, ability to understand what is happening and participate in their defense. If they are sentenced to custody, it often means longer time spent in prison (Chung et al., 2005).

Despite the research that does exist there is concern that it merely scratches the surface. The National Council on Disability reports “...a tremendous gap in empirically based knowledge about children and youth with disabilities, especially those who are either at risk of delinquency or involved in the juvenile justice system” (Mears & Aron, 2003, p.iii). Grigorenko et al., (2019) suggests that theories connecting learning difficulties and delinquency are neither plentiful, sophisticated, nor well-regarded and that more theoretical work is needed. Moreover, the literature on various interventions is complex, and research does not offer clear conclusions.

Research points out that it is far more cost-effective to screen, assess and treat juvenile offenders with LD than allowing poor programs and supports to lead these youth into the adult justice system (Greenwood, 2008; Grigorenko et al., 2019). While the link is clear between LD and youth justice there is a paucity of studies concerning adults with LD and the criminal justice system. This is not surprising considering the difference in philosophy between juvenile and adult courts. Young offenders are believed to be more apt to be rehabilitated, and there is a greater focus on improved educational achievement as well as other supports and services. In contrast, adult criminal courts seek to induce law abiding behavior through punishment (Grigorenko et al., 2019).

Transitioning to post-secondary

Many students with LD aspire to post-secondary (Cummings et al., 2000). While the number of LD adults enrolled in post-secondary education is a fraction of the rate of LD, the numbers are growing (Gregg, 2007; Kelm, 2016; Harrison & Holmes, 2012). Adults with LD are now the largest group of students with documented disabilities at the postsecondary level (Gregg, 2007; Harrison & Wolforth, 2007). The importance of accommodating LD at the post-secondary level is well established (Vickers, 2010). Nearly 25 years of special education law and human rights have enabled many qualified students with disabilities to pursue post-secondary education with the greatest increase being students with “hidden” disabilities such as LD, ADHD, and mental health issues (Vickers, 2010).

Students with disabilities view access to post-secondary education as: 1) an opportunity to enhance their chances of obtaining and maintaining employment; 2) a means of earning a higher annual income; and 3) a pathway to life-long independence and a greater quality of life (Wilson et al., 2000). However, the transition from secondary to postsecondary can be difficult for students with LD (Estrada et al., 2006; Satcher, 1992; Stage & Milne, 1996; Troiano et al., 2010; Wilczenski & Gillespie-Silver, 1992). Students accustomed to comprehensive instruction and individualized accommodations in the smaller high school environments are likely to experience challenges in larger, more fast-paced post-secondary environments (Vogel, 1993). Often, these students may not be prepared for the level of diligence, self-control, self-evaluation, decision-making, and goal setting that success in college requires (Field, Sarver, & Shaw, 2003; Kowalsky & Fresko, 2002).

The Learning Opportunities Task Force (LOTF) in Ontario, through multiple pilot projects, demonstrated that students with LDs are as able to succeed in post-secondary education as their non-disabled peers, provided that: a) their academic and social experiences during the elementary and secondary school years appropriately address their individual needs; b) their transition to post-secondary education is appropriately facilitated; c) the necessary individualized supports, services, programs and/or accommodations are available to them during their post-secondary years and they choose to use them (Bette, Stephenson, Harrison, McCloskey & Weintraub, 2002, p. 3).

To obtain accommodations, students usually register with a college disability office and present relevant documentation. Most high schools have transition plan guidelines to ensure students are prepared and that all documentation has been gathered. A rule of thumb has been that, with documentation, the supports and accommodations proven effective in secondary school will continue through post-secondary, although work-place job demands may complicate this. The classic example often used is that while a nursing student may qualify for extra time on a classroom exam, that same accommodation is not available in a clinical setting where response to client needs is more time sensitive. Despite accommodations and supports, LDs can compromise the individual's ability to attain their educational goals (Wolf et al., 2010).

While the types of supports vary, certain accommodations, such as extended time for exams/assignments, assistive technology, priority registration, counseling, and self-advocacy training are more common and critical to student success in college (Brinckerhoff, 1994; Greenbaum et al., 1995; Mull et al., 2001; Troiano, 1999; Vogel, 1993; Vogel & Adelman, 1992). Often, these services are offered by academic skill centers that provide support in specific areas, such as writing, note taking, or test preparation (Kuo et al., 2004).

Despite the availability of support many students with LD remain reluctant to disclose. One study found that only 24% of post-secondary students with LDs disclosed their diagnosis to their schools, and only 17% received accommodations (Newman et al., 2011). Similarly, many adults with LDs do not disclose their diagnosis to employers, nor do they request accommodations that could improve their job performance (Gerber & Price, 2012; Gerber et al., 2004). These students

report fearing being misunderstood by their peers and their instructors and that they will be perceived as unintelligent, lazy and wanting to cheat the system (Denhart, 2008; Shessel & Reiff, 1999).

Nonetheless, the literature on persistence among LD college students has shown that those who are engaged and who have a strong connection to faculty, staff, and other students are more likely to graduate (Pascarella & Terezzi, 2005; Tinto, 1994). The relationship between the student and the support specialist is also identified as a critical element that leads to student success but more research in this area is warranted (Troiano et al, 2010).

Transitioning to employment

The primary and secondary characteristics of LD persist over a lifespan and manifest in nearly all aspects of the individual's life, social, academic and eventually employment. It impacts their self-esteem and relationship with peers. It sabotages their education, limits post-secondary success and can damage career trajectories, limiting employment, as well as income and job retention (Goldstein et al., 1998; Hakkarainen et al., 2015; Haring et al., 1990; McLaughlin et al., 2014; Raskind, et al., 1999; Wilson et al., 2009).

Employment outcomes are significantly better for LD students who succeed at post-secondary where job satisfaction is often significantly higher (Greenbaum et al., 1996). Research indicates that many post-secondary graduates with LDs have successfully adapted to the demands of adult life, working at a level that capitalizes on their strengths, living independently, and actively participating in social and leisure activities. While the LD continues to persist, they are coping more successfully, enjoying high levels of full-time employment, benefits, salaries and high levels of self-efficacy (Gerber et al., 1990; Greenbaum et al., 1996; Madaus, 2006; Madaus et al., 2008; Newman et al., 2011;).

Along with completion of post-secondary studies other factors influencing success for adults with LD include the development of successful coping strategies, especially for the primary characteristics (Greenbaum et al., 1996; Madaus, 2006). Nonetheless, a high percentage of LD adults experiencing satisfying employment still avoid disclosing their disabilities in their workplaces in fear of negative impacts on their relationships with peers/supervisors (Gerber et al., 2004; Madaus, 2006).

Assessment

LDs present differently across individuals, and can range from relatively mild to severe, resulting in no single pattern of cognitive and academic performance that can be used as a template for assessment and diagnosis (Partanen & Siegel, 2014; Scanlon, 2013). It is a diagnosis of exclusion where other possible causes for the struggle must be ruled out, such as a lack of appropriate instruction, second language challenges, motivation (Adelman et al., 1989; Marinak & Gambrell, 2008), lack of engagement (Guthrie et al., 2000) and exaggerated symptoms (Alfono & Boone, 2007; Sullivan et al., 2007). The more difficult factors to consider are

psychological /emotional causes for poor academic achievement (Harrison & Holmes, 2012).

Individuals whose cognitive ability and adaptive behavior is below average are classified as having either an intellectual or developmental disability, depending upon the degree of impairment. They usually have difficulties in all functioning areas and are therefore unlikely to meet the diagnostic criteria for LD. However, DSM-V allows for individuals with IQs in the borderline range to be diagnosed as LD. Such seldom happens as it is often considered misleading to the individual to assume that accommodations/supports can allow them to meet general curriculum goals.

An LD diagnosis typically provides children with an explanation of, and support for, their challenges (Higgins et al., 2002; McNulty, 2003; Partanen & Siegel, 2014). There has been an increased emphasis on the importance of early identification and intervention for children with LDs, following the tenet that early support will mitigate the impact of both primary and secondary characteristics (Partanen & Siegel, 2014). There is, however, a lack of consensus concerning the best method for assessment of LDs (Harrison & Holmes, 2012; Kozey & Siegel, 2008; Sparks & Lovett, 2009).

Depending on the province, a licensed psychologist or school psychologist (most often referred to as clinicians) is able to assess and identify an adult as having an LD (Gyenes & Siegel, 2014). NL requires school counsellors to be sufficiently trained in assessment practices to complete assessments of students. Clinicians generally rely on provincial/territorial special education policies to guide the identification of school-age children and adolescents (Kozey & Siegel, 2008).

The process of childhood assessment generally begins with an interview with the child's parent(s) and teacher(s) to gain background information, and observations of the child in several settings. Several sessions of cognitive and academic testing are conducted with the child, and, if relevant, parents, teachers, and the child are asked to complete various questionnaires that are relevant to the referral question (Sattler, 2014). The clinician then interprets the accumulation of assessment results and writes a report that includes interpretation and recommendations. There is a follow-up meeting by the clinician with the teachers and parents to share the results of the assessment and support the education planning (Groth-Marnat, 2009; Sattler, 2014).

Adult assessment

Although LDs are often initially diagnosed during childhood, many individuals, for various reason, go unidentified until adulthood (Altarac & Saroha, 2007; Nichols, 2012). The LD may be subtle and not manifest until the demands on learning increase beyond the individual's abilities. Other adults may have simply slipped "through the cracks" because of the "invisibility" of LD (Fletcher, 2012; Nalavany et al., 2013). The definitions and criteria for LD have also evolved contributing to a steady increase in identification (Fletcher, 2012; Scruggs & Mastropieri, 2002). This evolution of diagnostic criteria implies that there may be individuals who would not have been identified in childhood but who would be now meet the diagnostic criteria (Scruggs & Mastropieri, 2002).

Undiagnosed adults with LDs grew up with a hidden disability in that they lacked both an awareness of the source of their difficulties (Orenstein, 1992; Wren, 2000) and the benefits of interventions to address them (Shapiro & Rich, 1999). Consequently, this population is at an increased risk for various adjustment problems across the lifespan (Duquette & Fullerton, 2009; Hoffschmidt & Weinstein, 2003; Kaplan & Shachter, 1991; Orenstein, 2007; Wren, 2000). Undiagnosed LDs can exacerbate impact on self- concept, self-determination, interpersonal relations, and vocational development (Duquette & Fullerton, 2009; Hoffschmidt & Weinstein, 2003; Wren, 2000).

Individuals who are not diagnosed until adulthood may require ongoing support and empowerment as they integrate the knowledge of their LD into the various aspects of their lives (Hoffschmidt & Weinstein, 2003; Orenstein, 2007; Wren, 2000). Advocates and practitioners who are better informed can link adults with previously undiagnosed LDs to programs and services that are appropriate and sensitive to individual needs and can assist their adult clients to cope with their disabilities and function more adaptively (Kaplan & Shachter, 1991; Wren, 2000). Such resources include LD support organizations, such as the Learning Disabilities Association, vocational rehabilitation programs, adult basic education, assistive technology, and workplace accommodations. This is especially important for adults who are diagnosed with LD in adulthood, since they may not have had any previous opportunity to learn about the resources that are available and to which they are entitled.

Kelm (2016) reports a lack of consistency in the guidance of clinicians concerning the identification of LDs in adults (Gregg et al., 2006; Sparks & Lovett, 2009a). Other researchers have highlighted the inconsistency among post-secondary institutions within North America concerning the documentation requirements to support an LD diagnosis for adult students (Vickers, 2010; Gyenes & Siegel, 2014; Harrison et al., 2013; Sparks & Lovett, 2009a). There is agreement, however, that regardless of the diagnostic criteria used, diagnosis of LDs in adulthood parallels that of children requiring an assessment of one's cognitive and academic functioning (Harrison & Holmes, 2012; Sparks & Lovett, 2009b). However, most assessment instruments are aimed at children and not normed for adult populations resulting in limited testing being available compared to that aimed at the K-12 population.

Evaluating adults with LDs has not been adequately studied and some suggest an important area of inquiry (Mapou, 2013). Fletcher & Miciak (2017) argue that such assessments should include a careful review of previous assessments, case history and intervention history, with particular attention to the automaticity of academic skills. For adults, the process differs in that the client typically takes on the role of both the primary informant and the test subject, as well as recipient of information in the report (Groth-Marnat, 2009). The clinician gathers relevant background information from the adult and explains the results of the assessment to him or her, including specific cognitive and academic strengths and weaknesses (Kelm, 2016).

There is very little research about the experience of having an assessment explained to you as an adult. However, parents' reactions to receiving assessment reports presented on their children does help illuminate the experience. Many parents report feeling confused and overwhelmed with professional jargon and technical language.

Other struggles include vague, unhelpful recommendations and high-level writing style, especially problematic for parents who may themselves have low levels of literacy (Harvey, 1997, 2006; Zake & Wendt, 1991; Merkel, 2010).

Research has also indicated that parents with a college degree are more likely to understand the results of a report than parents with less education (Miller & Watkins, 2010). These findings have significant implications for adults who may face the same challenges outlined above, with the added problem of not having supports available to help them (Denhart, 2008). Research indicates that the experience of receiving and making sense of a diagnosis of a LD in adulthood is an emotionally significant event. It can elicit feelings of confusion, anger, and sadness (Kong, 2012; Orenstein, 1992; Young et al., 2007), whereas others express feelings of relief and hope (Fleischmann & Fleischmann, 2012; Fleischmann & Miller, 2013; Kong, 2012). Many adults express frustration at not having been diagnosed earlier and the impact that has had on their lives (Orenstein, 1992; Young et al., 2007).

Adult screening

While assessment serves a critical role for individuals with LDs, screening also plays an increasingly vital role, especially for individuals who cannot afford an assessment or, for whatever reason, are not yet a candidate for standardized assessment services (Malcolm et al., 1990; Riviere, 1998). Informal screening is considered to be the first step in the process of gathering relevant information about an individual with a suspected LD, whether they proceed on to a full assessment or not. It may include observations, informal interviews, the use of a written tool, and/or a review of medical, school, or work histories which are all a part of an assessment (Riviere, 1998; Learning Disabilities Association of America, 2013). Screening stops short of an assessment and pinpoints what is immediate and what can be done to help now.

Screening is a way for an advocate to better determine the probability of a suspected issue, what supports might help and whether the client needs to continue with an LD diagnosis. LD screening can identify areas of strengths and challenges that will help the person better understand why he or she has struggled in certain areas of life. Knowledge of strengths can help determine the best strategies and/or technology to succeed in school or at work. It can triage a need for referral to health care, addictions counselling, or lifestyle support. It can also work to identify what types of accommodations might help the individual such as assistive technology, extended time, etc.

Advocates who conduct LD screening may begin with an informal interview, asking the person about their past successes and challenges. The answers may indicate past behaviors, events, or characteristics that are associated with adults who have LDs. Typical questions may include: 1) did you need extra help in school?; 2) do any of your family members have problems learning?; 3) have you had difficulty getting or keeping a job?; 4) do you have problems with reading, writing, or math skills?; 5) how do you best learn?; and 5) what do you enjoy most, and why?

Screening is considered an ongoing process that serves as the practitioner's guide, at different stages of the learner's development, for adaptation of teaching materials

and teaching approaches, and for possible referral for formal assessment. Practitioners are advised to identify: 1) learners whose academic performance contains unexpected gaps; 2) learners who display signs of poor vision or hearing; 3) learners having academic performance problems in specific areas of reading, expressive language, and/or math; and 4) learners whose behaviors/psychological manifestations are interfering with the learning process. Other triggers could include: 1) problems concentrating; poor organization and time management; 2) variable or unpredictable behavior; and 3) difficulty functioning in various social situations.

There are a number of screening tools available, and some require special training, while others are available online. Some tools are free while others may have associated training costs/fees. It is important, however, to choose a screening tool that is designed for the appropriate age group. When conducted and reviewed appropriately, using the right screening tool can be a valuable step in determining the need to seek further advice and evaluation. Screening tools should also be: 1) inexpensive; 2) quick to administer, score; 3) easy to interpret; 4) narrow in purpose; and 5) able to provide information in several areas, such as language, motor, and social skills. Some examples include:

- Learning Needs Screening Tool, <http://www.onestops.info/pdf/LearningNeedsTool.pdf>
- National Center for Learning Disabilities (NCLD), Adults and College Students, <http://www.nclid.org/age-related-content/college-adult>
- National Center on Workforce and Disability Screening Tool, http://www.onestops.info/article.php?article_id=28
- Adult LD Characteristics, http://www.dhs.state.mn.us/main/groups/agencywide/documents/pub/dhs16_146029.pdf
- Screening for Success, <https://www.ldanb-taanb.ca/screening-for-success/>

The goal of screening is immediate support, either through suggested accommodations and/or referral to more appropriate services. It does not preclude the place for an assessment rather it triages need and informs whether the timing is right for an assessment to be pursued.

Community-based assessment services

Recognizing the challenges of undiagnosed adults with LD face in getting assessed the Ontario government struck the Learning Opportunities Task Force (LOTF) in 1997. The mandate of this task force was to investigate the status of post-secondary students with LD and to make recommendations that would enhance access and services for these students. The final report contained 7 key findings and 24 recommendations, one of which was: "A comprehensive, up-to-date diagnostic assessment is essential for the provision of requisite supports, services, programs and accommodations for students with learning disabilities" (Bette, Stephenson, Harrison, McCloskey & Weintraub, 2002, p. 34).

The LOTF therefore recommended that, “The Province should establish, implement and evaluate the concept of Regional Assessment and Resource Centres” or ARC’s. Today, two screening and assessment centres continue to operate: 1) the Regional Assessment and Resource Centre (RARC) established at Queen’s University in Kingston; and 2) the Northern Ontario Assessment and Resource Centre/Centre d’évaluation et de ressources du Nord de l’Ontario (NOARC/CÉRNO) at Cambrian College in Sudbury.

The ARC’s allow students to get appropriate, comprehensive and reasonably priced screening and assessments that identify their strengths and make specific and relevant recommendations for accommodations/supports. They rely on screenings more for ADHD clients. The diagnosis of LD previously had not always been available to individuals without the financial means to pay for an expensive assessment.

RARC is a stand-alone clinic which serves students in all of Southern Ontario. Its Mobile Assessment Team (MAT) provides screenings and assessments in all cities within Southern Ontario to assist with post-secondary transition. NOARC/CÉRNO offers an in-house team of professionals providing services primarily to the 3 post-secondary institutions in Sudbury. NOARC/CÉRNO’s roster of external psychological practitioners provides service to students on all of the main campuses (and some satellite campuses) of the 8 other colleges and universities in Northern Ontario.

Conclusion

This literature review demonstrates that adults with LDs may experience limitations and restrictions across a number of domains throughout their lives. However, much of the literature is focused on education and employment and there is an identified need for broader research in under-investigated areas as mobility, self-care and family/domestic life (Gerber, 2012; Sharfi & Rosenblum, 2014).

A host of negative outcomes have been associated with LD, particularly for people of low socioeconomic status (Johnson & Webb, 2012). These negative outcomes are exacerbated for individuals with an unidentified LD, leaving little wonder that they are so over-represented in marginalized groups such as mental health, homeless, un/under-employed and prison population. Co-morbidities predict a range of poor health outcomes in adulthood, including mood and anxiety disorders, suicidal ideation, early and severe substance abuse and physical health problems. Early risk factors are often longstanding and drive a trajectory of cumulative risk, potentially leading to severe psychopathology and social exclusion (Patterson et al., 2012). The extensive evidence points to the importance of programs and services that assist individuals with LD to reverse these trends at all life stages, including adulthood. The findings also suggest the need for researchers, clinicians, and those involved with adult education to consider mental health and educational problems among individuals with LD.

While the K-12 system has done a relatively good job at improving services for, including assessment of, children with LD many children continue to “slip through the cracks”. Advocacy groups such as LD associations have helped shift the field and drive both research and public policy. However, this shift is less visible for adults who

remain isolated and directionless with few options for supports and less for assessment.

Society cannot continue to ignore the challenges that arise when individuals with LD are unidentified. Too many students are leaving school early. Too many are not realizing optimal educational attainment. Too many are facing learning obstacles for a second or third time with no greater understanding of the origin or what they can do. Economies pay a high price for lost income and earning potential. Governments pay a higher price in the continued draw on social programs. Mental health and justice services are not able to become proactive and are trapped in the overwhelming wave of referrals. The genetic link of LD, the cumulative nature of unaddressed learning issues, the prevalence of debilitating secondary characteristics, drives the cycle of poverty which is costing much more than appropriate interventions.

Government of Newfoundland and Labrador Policy Review

The parallel between the literature and the consultations mirrored a synergy with the policy direction of the current Government of Newfoundland and Labrador (herein referred to as GNL). Examining recent policy papers and directives highlight the concerns and challenges already raised in this report. It crosses government departments, programs and initiatives. It is voiced in Minister's mandate letters and political platforms. It echoes across various reports and studies commissioned by government. It drives the drain of dropout from our high schools, the pattern of addictions, homelessness, illiteracy, the draw on mental health services, and the levels of unemployment / underemployment. Often times, it begins the cycle of poverty

It informs an opportunity to act.

If the current economic crisis is to be solved, and the provincial economy is to become more diverse, people must be able to reach their potential, participate in education and training, and find and maintain employment. Failure to remove, reduce or alleviate barriers to education and employment allows more people to slip into the cycle of poverty and dependence. Among GNL's most important stated strategic directions are strengthening the community sector, alleviating poverty, and supporting persons with disabilities by removing barriers and increasing accessibility, especially in education and employment.²³

The community sector is evolving rapidly to drive innovation that will increase the capacity of community organizations to contribute to better social outcomes and increased economic activity in the province.²⁴ Realizing this potential includes reaching the following growth targets by 2024: 1) Increasing the number of people employed in the community sector; and 2) Creating high-profile partnerships between the community, public and/or private sectors.²⁵

In the Way Forward Commitment to "Partner with the Community Sector to Improve Services and Find Efficiencies," GNL has promised to partner with the community sector to "explore and pilot opportunities to improve service delivery and identify system efficiencies. Pilots will be evaluated and expanded where positive outcomes are identified through means that are cost effective."²⁶ This expanded role for the community sector as partners in the delivery of services is focusing first on vulnerable populations and then expanding to other target populations and areas based on lessons learned. This is the model being proposed for the LDANL centre.

In 2018, the Department of Industry, Energy and Trade released the **Social Enterprise Action Plan** with a goal to increase the number of social enterprises and enhance services for existing social enterprises in the province.²⁷ GNL has further

23 Rising to the Challenge. Liberal Party platform 2021 (2021).

24 See: Ready for Takeoff: Social Enterprise in NL (2016); The Way Forward (2016).

25 The Way Forward with Community (2019), p. 6

26 https://www.gov.nl.ca/thewayforward/focus_area/better-services/

27 <https://www.gov.nl.ca/iet/files/TWFSocialEntActionPlan.pdf>

committed to building on proven models across Canada to spark, grow, and enhance our community sector, and drive social innovation.²⁸

By developing a pilot social enterprise model, a high-potential organization such as LDANL is poised to accelerate the provision of screening and assessment services for persons with LD of all ages and especially marginalized citizens across the province. Screening and assessments are the gateways to accessing services and supports which improve educational outcomes in the K-12 system, support access to post-secondary education and increase lifelong successful employment. Once LDs are identified, and appropriate supports are in place, individuals can progress and fulfil their potential. People with higher education and skills tend to work more, earn more, and work in higher skilled jobs. They have fewer and shorter periods of unemployment and are less reliant on government financial support.²⁹

GNL has affirmed that “all people have the right to access services and participate fully in their communities without barriers.”³⁰ Further, GNL has committed to working with all stakeholders to ensure equitable access to services and opportunities for people with disabilities.³¹ LD is the largest category of identified exceptionality in the province’s schools and, by extension, the province. Many persons with LDs have had poor educational experiences and they do not expect new educational opportunities to be helpful to them. People need early intervention in schooling to show them what is possible. For those undiagnosed, or whose LDs have changed over time, appropriate screening, assessments, accommodations, and other supports are key to higher education, training and making a successful transition to independent adulthood.

Now is the Time: The Premier’s Task Force on Improving Educational Outcomes (2017) presented 82 recommendations to improve educational outcomes. It recommended substantial improvements in the educational outcomes for students with special needs including a new special education model that would promote assessment of needs, development of an individual education plan, and placement in an environment where needs can be best met, either full-time or part-time.³² GNL accepted all recommendations and in 2018 provided an update on progress which included those pertaining to assessment of children.³³ Action has resulted in a new special education model and policy and a new assessment framework. Actions also address a more coordinated provision of supports and services (better capacity and more effective deployment of appropriate resources) between health and education, especially for children deemed to be of highest risk.³⁴

28 Rising to the Challenge (2021).

29 See: www.aesl.gov.nl.ca/adultlearning/adult/Work_Family_Policies_Report.pdf2; www.aesl.gov.nl.ca/adultlearning/adult/Best_Practices_Report.pdf; www.aesl.gov.nl.ca/adultlearning/adult/Gap_Analysis_Report.pdf

30 Rising to the Challenge (2021), p. 38

31 IBID

32 https://www.gov.nl.ca/education/files/task_force_report.pdf

33 The Way Forward: Education Action Plan (2018).

<https://www.gov.nl.ca/education/files/eap-report.pdf>

34 IBID

Additional capacity for screening and assessment of children in K-12 would accelerate the identification of children needing supports. LDANL's proposed assessment centre and services would be a focal point for collaboration with schools, school districts, government departments and agencies, and other non-governmental organizations to remove systemic barriers that prevent LD students from accessing educational opportunities.

This would complement the planned implementation of a health risk assessment tool (in progress) for school-aged children, beginning in kindergarten, to monitor healthy child development. The provincial government has evaluated the province's childhood screening and pre-school health check programs and completed comprehensive research to inform the development of a child health risk assessment tool to measure health and well-being of school-aged children. The assessment tool itself will complement the Healthy School Planner as healthy living plans are developed for school-aged children.³⁵

The Child and Youth Advocate identified LDs as one of the key factors in chronic absenteeism and early school leaving³⁶ The Advocate pegged our high school drop-out rate at 5.7 per cent (987 students) in 2015-16. Government committed to reducing this number by 10 per cent, or approximately 100 fewer drop-outs, by 2020.³⁷ An advisory committee has been formed that includes external partners such as the Newfoundland and Labrador Teachers' Association, Choices for Youth and Thrive to advise on drop-out reduction. The proposed screening and assessment centre aligns with the strategies being developed by this committee to keep students in school, provide alternative opportunities for those who leave school before graduating, and support those who return to school.

Early school leavers have no avenue to return to the high school system, unless they left during high school and need to recover a number of credits. Most school leavers must wait until they are 19 years of age and gain admission to ABE programs. These students face significant challenges in becoming self-sufficient given the correlation between educational attainment and poverty.³⁸ In NL approximately 2,000 students are enrolled annually in ABE, which cost \$9.9 million in 2016-17.³⁹ Building better pathways is vital for ABE students so that they can access the range of post-secondary and labour market options open to them.

The proposed LDANL assessment centre naturally connects with **The Way Forward to Adult Literacy** (2018), GNL's five-year action plan which outlines direction for the province to become more educated and economically diverse. Action #21 specifically commits to working with the K-12 system to address early school leavers and working with service and training providers in the ABE program to increase supports and options within adult literacy programming for people with identified learning

35 <https://www.gov.nl.ca/thewayforward/action/implement-child-health-risk-assessments-for-school-aged-children/>

36 Chronic Absenteeism: When Children Disappear, Table 1, p. 13.

<https://www.childandyouthadvocate.nl.ca/files/ChronicAbsenteeismJan2019.pdf>

37 IBID, p.4

38 <https://www.gov.nl.ca/isl/files/Gap-Analysis-Report.pdf>

39 https://www.gov.nl.ca/education/files/task_force_report.pdf

disabilities and other difficulties.⁴⁰ GNL wants to ensure that accommodations and supports similar to those in the K-12 system are available within the ABE program.

A Report on the Gaps Analysis on Employment and Training Services Accessibility for Persons with Disabilities (2018) noted that some youth are not provided the needed disability-related documentation when they leave school, including assessments and a profile of their learning needs. In other cases, training and employment programs demand recent or new assessments, which can be costly to the applicant.⁴¹ The proposed LDANL assessment centre would help fill that critical gap and catalyze ABE students on the pathway to higher education, skills development and employment.

The Way Forward on Workforce Development (2019) notes that persons with disabilities have been traditionally underrepresented in the labour market. In 2016, just under half (29,360) of this group were employed. Participation rates for this group are also lower than for the general population (54% versus 81% for those without disabilities) while the unemployment rate is higher (15% versus 13%).⁴² GNL research has identified a range of barriers affecting persons with disabilities' involvement with the workforce.⁴³ Future approaches to address these barriers include earlier intervention, greater transition planning, respectful workplaces, individualized programming, and a coordinated employment and training system that is flexible and responsive to the diverse needs of persons with disabilities.⁴⁴

GNL pledges significant focus on (addressing both skills gaps and barriers) employment for youth and persons with disabilities along with older workers, Indigenous people, and women. Actions include research examining skills gaps, barriers to employment, and how to address both gaps and barriers and support for underemployed and unemployed apprentices and journeypersons by transitioning them into related trades with ongoing labour market demands.⁴⁵

Current programs such as the Employment Support for Persons with Disabilities and the Work-Related Supports for Persons with Disabilities help people with disabilities develop skills, gain experience, and receive support to prepare for, enter or remain in the workforce.⁴⁶ This LDANL project would connect with these program partners through the province-wide network of career and employment centres and provide low-cost screening/assessment services to enable youth and adults who have not been screened/assessed to progress down the pathway to employment. Furthermore, in Action #13, the **Way Forward to Workforce Development Work** commits to work with stakeholders (such as LDANL) on a pilot to provide enhanced employment supports to clients to remove barriers to employment.⁴⁷

40 The Way Forward to Adult Literacy (2019).

41 <https://www.gov.nl.ca/isl/files/Gap-Analysis-Report.pdf>

42 The Way Forward to Workforce Development (2019), p. 7.

<https://www.gov.nl.ca/ipgs/files/Workforce-Development-Report-WF.pdf>

43 IBID

44 IBID

45 IBID

46 IBID

47 <https://www.gov.nl.ca/ipgs/files/Workforce-Development-Report-WF.pdf>

The switch from youth to adult services has been noted as a particular challenge for persons with disabilities. When students reach age 18, they move from services that were available as a child to having to navigate eligibility of adult services.⁴⁸ The Gaps Analysis Report (referenced above) also noted the critical nature of transition planning for youth with disabilities, citing the need to ensure (among other things) affordable and timely assessments in order to access post-secondary training including skilled trades.⁴⁹ The **Skills Task Force (2007) Action #34** committed to increased options and opportunities for persons with disabilities to participate and remain in the workforce including expanded strategies and supports to assist persons with disabilities in accessing employment opportunities.⁵⁰

To that end, exams scheduled at the end of block/level training periods in the skilled trades now have accommodations available for apprentices or trade qualifiers with disabilities or language barriers. Candidates must have appropriate supporting documentation from a qualified professional (i.e. an individual who possesses professional credentials to perform an assessment and give recommendations for accommodations)⁵¹. If candidates lack records, current assessments/ documentation of disabilities to the standard required, they cannot be accommodated on these exams which are essential for certification and further career progression and employment. The proposed LDANL screening and assessment services would work to address the requirements for current assessments and documentation required for apprentices and journeymen, as well as all those seeking post-secondary education.

Employment among older workers (55+) has increased by 45% between 2008 and 2018 (34,300 to 49,700). At the same time, however, the unemployment rate for this group has also increased (from 15% to almost 17%, representing just under 10,000 unemployed older workers available to work in 2018). GNL has committed to encouraging and supporting those unemployed older workers. Barriers to successful attachment include the increased need for adult literacy and digital literacy, combined with employers' lack of knowledge or experience with older workers, as well as general employer perceptions regarding this group.⁵²

In 2007 the Province released the **Healthy Aging Policy Framework** followed by a **Healthy Aging Framework Status Report** in 2015. The Framework contained five priority directions and 28 goals. But it has not been revised or updated since its release and is no longer referenced as a guiding tool.⁵³ Instead, a new statutory office, the Office of the Seniors' Advocate, has been created in 2017. The Seniors'

48 Improving Labour Market Participation of Persons with Disabilities: A Review of Barriers to Employment and Innovative Products and Practices (2019).

<https://www.gov.nl.ca/isl/files/Best-Practices-Report.pdf>

49 Goss Gilroy (2008)

50 Skills Task Force Report (2007)

51 See: <https://www.gov.nl.ca/isl/files/app-pdf-studentsupports-studyguide-be.pdf> ; <https://www.gov.nl.ca/isl/app/exams/accomodations/>

52 The Way Forward to Workforce Development (2019), p. 8

<https://www.gov.nl.ca/ipgs/files/Workforce-Development-Report-WF.pdf>

53 Long May your Big Jib Draw: Setting Sail (2019)

<https://www.seniorsadvocatenl.ca/pdfs/LongMayYourBigJibDrawSettingSail2019.pdf>

Advocate is committed to older workers and age friendly workplaces. As reported by the Senior Advocate in 2019, more people are working well into their 60s and 70s. the increasing numbers of older people in the workforce and there has been a trend over the last number of years towards people staying in the workforce longer. Employers need to continue to retain and recruit older workers.⁵⁴

In November 2019 the province's Seniors' Advocate co-hosted (with community and municipal partners) a summit on older workers which brought together employees, employers, policy makers and others to explore the changing landscape of the workforce.⁵⁵ Seniors, many of whom have never been screened or assessed, need reading, numeracy and digital literacy to become employed, maintain employment, manage their affairs, connect with community and overcome isolation and dependency. Given that many older workers are in lower income jobs and have overall lower levels of education, access to low-cost screening and assessment would enable them to access supports required to live and work.

Reducing Poverty: An Action Plan for Newfoundland and Labrador (2006) initiated a pan-government strategy to break the cycle of poverty and social exclusion by supporting people to develop to their full potential and participate in their communities. From 2006 to 2014, the strategy received over \$1 billion in new funding.⁵⁶ The Poverty Reduction Strategy (PRS) implements a broad range of initiatives (in Budget 2020-21 investments totalled \$323,657,261⁵⁷) and reflects five goals: (1) improving access to, and coordination of, services for people with low income; (2) creating a stronger social safety net; (3) improving earned income; (4) increasing emphasis on early child development; and (5) establishing a better-educated population.

Workforce participation is a priority for the strategy which recognizes that additional supports are required for people with visible or non-visible disabilities and other vulnerabilities.⁵⁸ Investments in social infrastructure, including women's, community, and youth centers, provide services that decrease barriers to education and/or employment and improve the quality of life for marginalized youth people and families.

The Department of Children, Seniors and Social Development (CSSD) Minister's mandate letter (2020) directed the Minister to "review existing actions related to housing and food insecurity, poverty reduction and lead development of a renewed strategy to reduce poverty in consultation with stakeholders, experts, and communities."⁵⁹ The recent platform commitment⁶⁰ reiterates this commitment to a renewed strategy to reduce poverty in consultation with stakeholders, experts, and community leaders with particular focus on single parents and seniors.

54 IBID

55 Older Workers Summit Summary Report (Nov. 2019)

56 Poverty Reduction Strategy Progress Report (2014), p. vii

57 GNL Budget 2020-21 <https://www.gov.nl.ca/cssd/files/Budget-2020-Poverty-Reduction-Initiatives-Budget-2020-21.pdf>

58 IBID, p. ix

59 <https://www.gov.nl.ca/wp-content/uploads/CSSD-Mandate-Letter.pdf>

60 [Rising to the Challenge \(2021\)](#), p. 14

The mandate letter further directs the Minister to “lead development of an action plan on prevention and early intervention for families that will coordinate government efforts, focus on community partnerships and identify opportunities to improve outcomes for all children and youth so they can develop to their full potential.”⁶¹

61 <https://www.gov.nl.ca/wp-content/uploads/CSSD-Mandate-Letter.pdf>

Appendix A: Literature review methodology

The purpose of the literature review was to identify and examine research on the assessment needs of, and services for, adults with LDs, the transition beyond the K-12 system and the impacts of LDs across the lifespan. The primary questions guiding the literature review of evidence-based research were:

- What are the needs of adult persons with LD in the transition from school to work, and school to school to work and in later phases of adult life?
- What are best practices in assessments for diagnosing an adult who may not have been previously diagnosed?
- What best practices, procedures and services are needed/can be implemented during the transition years (18-30) and beyond that will foster positive outcomes for adults with LD?

Searches were conducted mainly using the Educational Resources Information Centre (ERIC), the online library of education research and information, sponsored by the Institute of Education Sciences (IES) of the U.S. Department of Education. Other databases searched included Google Scholar, Pub Med, PsychINFO and Dissertation Abstracts International.

National and international associations, advocacy organizations, government and professional organizations websites were also searched and reviewed. These included:

- Learning Disabilities Association of Newfoundland and Labrador
- Learning Disabilities Association of Canada
- All other provincial learning disabilities associations within Canada
- CanLearn Society.ca
- Learning Disabilities Association of America <https://ldaamerica.org/>
- LD Online <http://www.ldonline.org/articles/c710/>
- Council for Exceptional Children <https://www.teachingld.org/>
- Association on Higher Education and Disability <https://www.ahead.org/home>
- National Council on Learning Disabilities <https://www.nclld.org/>
- National Adult Literacy and Learning Disability Center
- National Council on Disability
- National Institutes of Health
- National Joint Committee on Learning Disabilities
- National Research Center on Learning Disabilities

Search Terms

The keywords 'learning disabilities' were combined with the keyword 'adults' and with each of the following keywords:

Learning Disabilities (Reading Disabilities, Math Disabilities, Comorbid RD+MD); Specific Learning Disabilities; Learning Disabilities Etiology; Learning disabilities Identification; Adults with LD; Adults with Specific Learning Disabilities; Adults with

dyslexia; Adults with LD characteristics; Adults with LD outcomes; Adults with LD and employment; Adults with LD and life span issues; Adults with LD and postsecondary education; Adults with LD and transition; Adults with LD and accommodations; Adults with LD and screening, diagnostic assessment; High-Incidence Disabilities; Adult Basic Education; Adult Education; Adult Educators; Adult Literacy; Definitions of LD; Disability Identification; Disability Guidelines; Dyslexia; Literacy Education; Numeracy; College Students with LD; Self-determination; Disability Identification; LD Adult Screening Tests; LD Adult Assessment Tests; Informal Assessment of LD; Assessment; Educational Attainment; Special Education; Special Needs Students; Special Education Learning Disabilities; College students with disabilities; Student Characteristics with LD; Response to Intervention; Transition from School to Work; Employment and LD; Income and LD; Post-secondary Work Outcomes and LD; Employment Services; LD across the Lifespan/Life Course; At-Risk Persons with LD; Vulnerable Persons with LD; Transition from School to Work; LD and Mental Health; Juvenile justice system and LD; Adult justice system and LD; Individuals with Disabilities; Education Act; and Risk-Resilience Framework.

Other descriptors:

Attention Deficit Disorders; Attention Deficit Hyperactivity Disorder; Cognitive Processes; Cognitive Restructuring; Communication Disorders; Dyslexia; Educational Diagnosis; Emotional Problems; Executive Function; Hyperactivity; Language Impairments; Learning Problems; Minimal Brain Dysfunction; Neurological Impairments; Perceptual Impairments; Reading Difficulties; Recall (Psychology); Recognition (Psychology); Remedial Reading; Response to Intervention; Writing Difficulties

Selection Criteria:

The following selection criteria were used for the inclusion of studies: (a) the article was written in English; (b) Specific Learning Disabilities (SLD) or Learning Disabilities (LD) were referred to as the primary condition of the study population (see discussion of terminology and definition below); (c) the article related to adults with LD across all developmental stages of adult life; and (d) the main theme(s) covered by the article related to the three primary questions guiding the literature review.

The early rounds of review quickly revealed that the keywords 'learning disabilities' refer to and/or included intellectual disabilities in the UK and some other European countries. It is important to note that despite the addition of the keyword 'adults' and the limitation of NOT UK, the literature review search often resulted in irrelevant articles. Throughout the search process, articles from the UK and other countries in which the term LD refers to intellectual disabilities or other major cognitive impairments as well as articles from other places where LD was presented as a secondary diagnosis were removed.

Titles which dealt primarily or solely with children were removed. Those dealing with late adolescence (the period of transition from school to work or school to school to work) were included. Many articles were not relevant for adults with LD, but to a

variety of other diagnoses such as physical, intellectual and mental disabilities including autism, cerebral palsy, schizophrenia and other disorders.

Appendix B: Key Informant methodology and sources

Interviews started in early 2021 with email requests being forwarded to over 100 key informants identified as potential stakeholders by LDANL. The researchers also did an extensive review of youth serving agencies, literacy programs, community centers and employment agencies in the province. During each interview participants were asked if they could suggest other key-informants who might have a perspective on this topic. Efforts were made to ensure a provincial voice however the majority of respondents were either in the greater metro area or in larger population hubs such as Grand Falls/Winsor, Corner Brook, Goose Bay and Marystown.

A limitation of the study was the timing. Covid-19 had many people working from home which resulted in email being the dominant way of connecting with participants. Many emails outside the metro area were unanswered and follow-up phone calls were unsuccessful. However more than 85% of requests for feedback were successful and 110 key informants were interviewed (see below). Nearly all interviews were done using the Zoom platform with a few participants preferring telephone conversations.

Nonetheless, saturation was reached early with themes being quickly identified and nuanced by subsequent interviews. In late-March, the needs assessment portion of the project began to slow when the feasibility aspect began to dominant discussions.

List of Organizations and People Consulted	
Organization	Person
Thrive	Ellie Jones
	Shelby Arnold
	Michelle Clemens
	Alex Powell
Department of Education	Eldred Barnes
	Bernie Ottenheimer
	Lauren Michael Power
	Joanne Hogan
Department of Health	Lisa Baker Worthman
	Adam Churchill
	Niki Legge
	Andrew Churchill
Department of Industry, Energy & Technology	Randy Follett
	Michelle Power
Department of Immigration, Skills and Labour	Sandra Bishop
	Angela Abbott
Key Assets	Dave Martin
	Devin Dwyer
TI Murphy Center	Aline Johnston
MUN Blundon Center	Jason Geary
	Kathy Skinner
	Beth Ryan

List of Organizations and People Consulted	
Organization	Person
	Jackie Hesson
Way Points	Jennifer Kettle
	Hugo McCarthy
	Lori Leonard
Choices for Youth	David Banfield
	Michael Barbour
Eastern Health	Dr. Susan Pardy
	Rachel Boyer
	Jen Smith
Office of the Child Advocate	Karen Gray
NL English School District	Robyn Breen
	Denise Coady
	William Whalen
	Steve Alexander
	Georgina Lake
	Carolyn Stacey
	Colleen Trainor
Community Centers	Kim White
	Janice Henstridge
	Barbra-Ann Geehan
	Michelle Wall
	Terri Turner
	Darrell Jackman
	Gail Thorne
	Mike Kearney
Memorial University of NL	Barbara Hopkins (retired)
	Dr. Sharon Penney
	Dr. Kimberly Maich
	Dr. Gabrielle Young
	Dr. Gerald Galway
	Dr. Vianne Timmons
	Dr. Kellie Hadden
	Dr. Gerald Galway
Avalon Employment	Sean Wiltshire
Janeway Child Health Center	Jill Cluney
	Dr. Sandra Luscombe
	Dr. Leigh Anne Newhook
	Aruna Thyagarajan
	Janine Hubbard
	Nancy Dillon
	Diane Bouwman
	Kim Maher
Occupational Therapists	Patricia Moores
	Deane Dyke
	Andrea Pittman
	Laurie Hart

List of Organizations and People Consulted	
Organization	Person
	Lori Howell
	Jodi Bowles
Provincial Directors of LD	Toby Rabinovitz, AB
	Karen Velthuys, MN
	Lawrence Barnes, ON
	Ainsley Congdon, NB
	Martin Dutton
	Stephanie Hammond
The Discovery Center	Kathleen Brenton
Learning Disabilities Association of NL	Edie Dunphy
	Aneesh Sasikumar
	Lynn Green
	Karen Nelson
John Howard Society	Melissa Noseworthy
Single Parent Association	Aletha Palmer
Brain Injury Association	Erin Guilfoyle
College of North Atlantic	Lucy Miller
	Ted Power
	Tara Thomas
Autism Society	Paul Walsh
	Chris Dede
	Sarah White
Stella's Circle	Rob McLennan
HM Penitentiary	Cindy Nagle
	Sam Martin
	Susan Green
Board of Examiners in Psych	John Harnett
	Charles Penwell
NL Association of Psychologists	Janine Hubbard
Laubauch Literacy Council	Margie Lewis
	Julie Bickford
Empower NL	Kimberly Dawson-Yetman
Carpenters Millwright College	Joanne George
Other	Anne Price – Canlearnsociety AB
	Joanne Middleton

Appendix C: References

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