Understanding Psychoeducational Assessments within the Framework of Learning Disabilities and Diverse Learners

Professional Development Session for the

Ontario Native Education Counselling Association (ONECA)

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Psychoeducational Assessments

- A psychoeducational assessment is an evaluation of a student's cognitive ability, educational achievement levels, various processes related to learning, and behavioural/emotional functioning.
- A psychoeducational assessment is conducted by a member of the College of Psychologists and is required by most school boards, colleges, universities, and professional licensing boards in the determination of student needs for accommodations.
- A psychoeducational assessment is standardized and norms are based on a stratified sample of children, adolescents, and adults

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Normative Samples for WAIS-IV

- Normative information is based on a national sample representative of the Canadian population of individuals aged 16:0 to 90:11
- A stratified sampling plan ensured the normative sample included representative proportion of individuals according to selected demographic variables
- For each age group in the normative sample, the proportions of Caucasians, Asians, First Nations, and other ethnic groups were based on the proportion of individuals within the corresponding age group of the Canadian population
- Census data gathered by Statistics Canada (2007) provided the basis for the stratification along the following variables:
  - Age
  - Sex
  - Ethnicity
  - Self or parent education level
  - Geographic region

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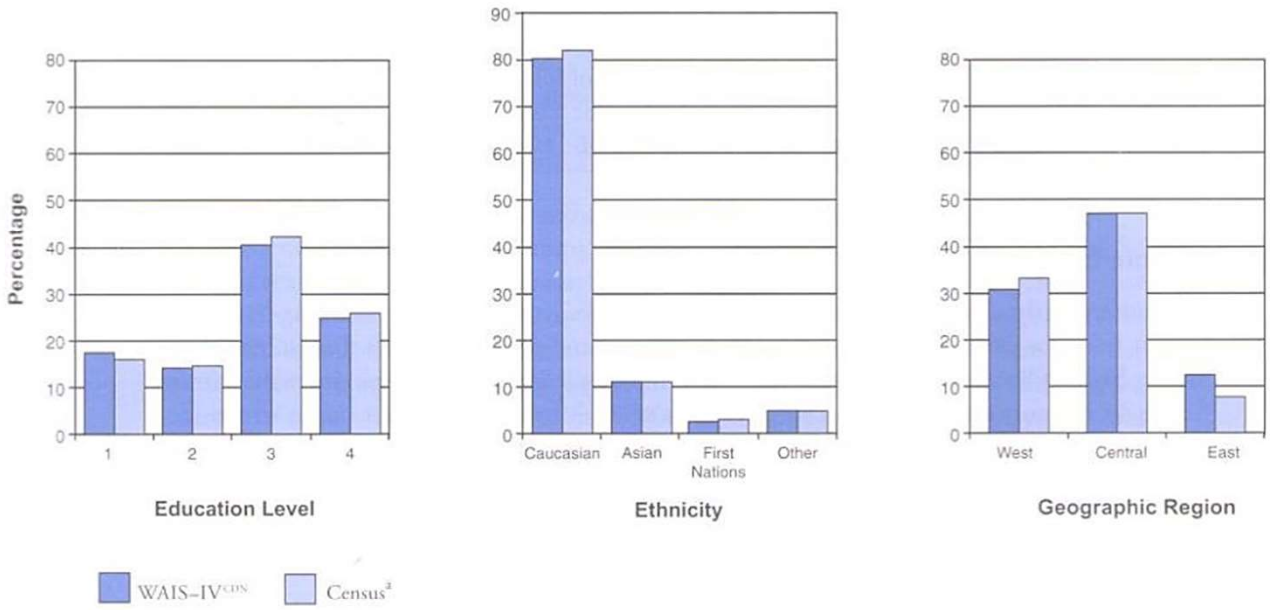

[a] Statistics Canada (2007)

Figure 4.6 Demographic Characteristics of the Normative Sample Compared to the Canadian Population

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Normative Samples for WISC-V

- The global thinking and reasoning measure (WISC-V) manual identifies a fundamental goal to ensure that the First Nations community was appropriately represented in the normative sample.
- To achieve this goal, First Nations communities and organizations across Canada were invited to participate in the standardization and more than 90% of the First Nations sampling target was met.
- The standardization sample also ensured that the First Nations sample is also closely aligned with the national population in terms of reserve status. This provided an even stronger normative sample for First Nations communities and strengthened the representativeness of the sample overall, given that those living on reserves have different educational, social, and economic experiences and opportunities which relate to performance on measures of ability and achievement compared with their First Nations peers who are living off reserve and with other non-Aboriginal children in the normative sample.

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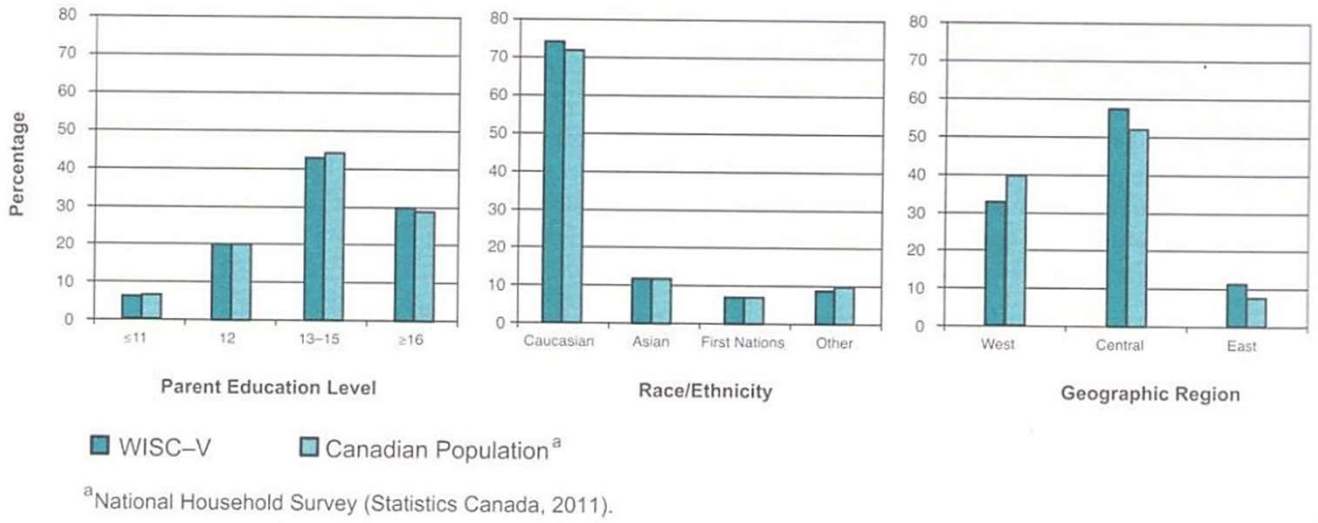

Figure 2.2 Demographic Characteristics of the Normative Sample Compared to the Canadian Population

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Normative Samples for WIAT-III

- The academic achievement measure (WIAT-III) also based normative information on a sample representative of the Canadian population of students in grades PreK to 12.
- For each grade and age group, the stratified sample was based on the racial proportion of First Nations and other racial groups within the corresponding group in the Canadian population.
- It is important to note that the other assessment batteries used in most assessments may have indigenous representation in the norms but these are based on United States populations. Thus, the psychometric results need to be interpreted within this cultural context.

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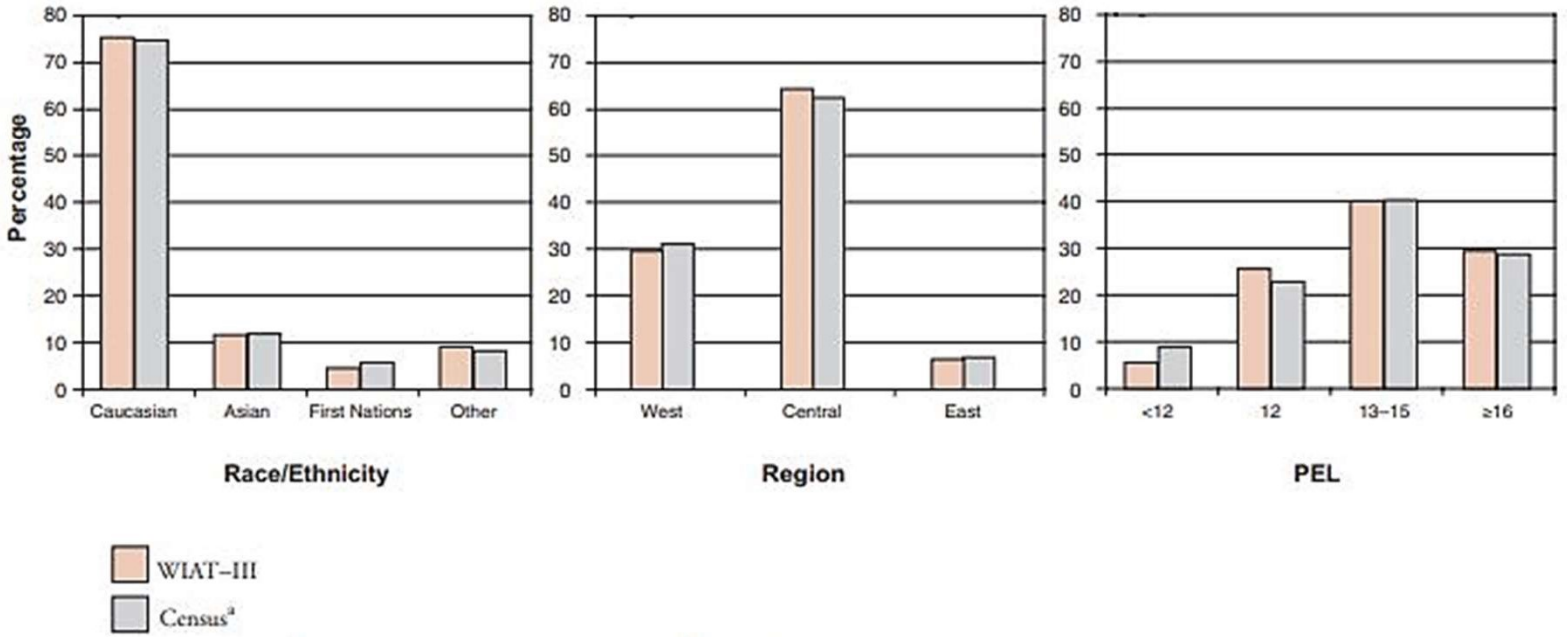

[a] Canadian population data are from *2006 Census Populations* (20% Sample Database) [CD–ROM] by Statistics Canada, 2006. Ottawa, Ontario, Canada.

Figure 2.2 Demographic Characteristics of the Grade-Based Normative Sample and the Canadian Population

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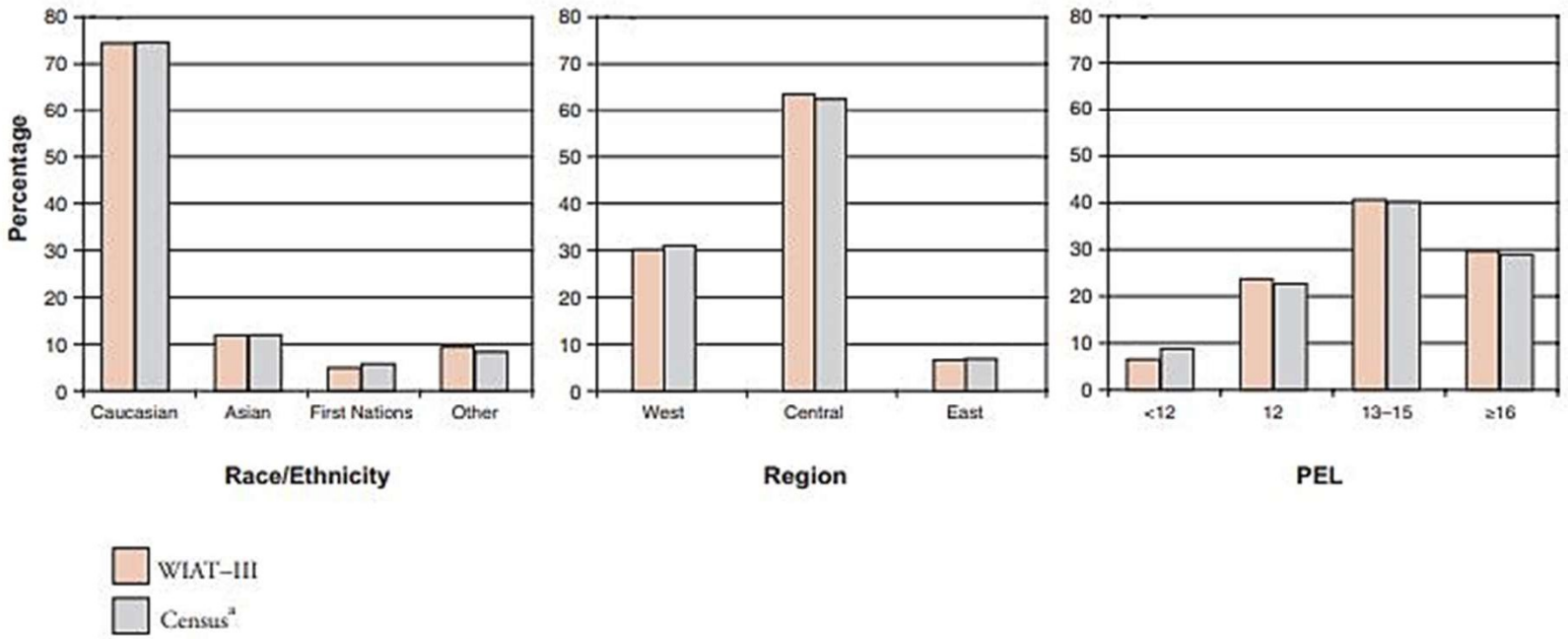

[a] Canadian population data are from *2006 Census Populations* (20% Sample Database) [CD–ROM] by Statistics Canada, 2006. Ottawa, Ontario, Canada.

Figure 2.3 Demographic Characteristics of the Age-Based Normative Sample and the Canadian Population

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Psychoeducational Assessments

- A psychoeducational assessment provides information about an individual's unique learning strengths and weaknesses and can often be used to make diagnosis and recommendations
- Psychoeducational assessments refer to testing to identify neurodevelopmental disorders such as:
    - Intellectual Disabilities (Intellectual Developmental Disorder),
    - Attention Deficit/Hyperactivity Disorder (ADHD)
    - Communication Disorders (CD)
    - Autism Spectrum Disorder (ASD)
    - Motor Disorders
    - Learning Disabilities (LD)

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Psychoeducational Assessments Using OPA Guidelines for Learning Disabilities

- Developed by a working group of psychologists throughout Ontario
- Impetus was the wide variability in assessing and diagnosing LD which resulted from
  - advances in research
  - new diagnostic criteria of Learning Disorders in the DSM-5, and
  - the adoption of the LDAO definition in 2002 and ratified in 2015.
- OPA published the consensus statement and supporting documents, 2018 and revised 2020
- Provides a standard, step-wise process for assessments
- Details a set of criteria for diagnosis of LD

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5 Criteria for the Diagnosis of LD

1. Average abilities for thinking and reasoning
2. History of academic functioning below expectations
3. Below average academic achievement
4. Evidence that academic difficulties are logically related to psychological processes
5. Evidence that the difficulties in reading, writing, or mathematics cannot be accounted for *primarily* by other factors

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Criteria for the Diagnosis of LD #1

At least average abilities essential for thinking and reasoning.

Category	Low	Below Average	Average	Above Average	Superior
Percentile Range	≤ 2	2-14	16-84	86-98	≥98

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Criteria for the Diagnoses of LD #2

History of academic functioning below the level typically expected for individuals of the same chronological age, or the need for excessive time or support to develop or maintain typical levels of academic functioning.

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Criteria for the Diagnosis of LD #3

Below average academic achievement (i.e., at least one standard deviation below the mean) in at least one area of:

- Reading
  - Word fluency or pseudo-word reading
  - Fluency in reading individual words or text
  - Timed or untimed literal or inferential reading comprehension
- Writing
  - Production fluency for handwriting or typing
  - Spelling from dictation and in text
  - Sentence structure
  - Conventions of print
  - Vocabulary; ideation; organization of written text
- Mathematics
  - Calculation, including but not limited to: numeracy, algebra, geometry and calculation fluency
  - Applications such as the understanding of time, money, measurement, data analysis
  - Word problem-solving including geometry and data interpretation.

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Criteria for the Diagnosis of LD #4

Evidence that the difficulties in reading or writing or mathematics are logically related to deficits in psychological processes. These processes can include:

- Phonological awareness
- Orthographic processing
- Rapid automized naming
- Memory
- Processing speed
- Receptive language
- Expressive language
- Visual-spatial abilities
- Visual-motor integration
- Executive functioning

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Criteria for the Diagnosis of LD #5

Evidence that the difficulties in reading, writing, or mathematics cannot be accounted for ***primarily*** by factors such as

- other conditions or disorders
  - intellectual disabilities
  - uncorrected visual or auditory acuity
  - physical or chronic health disabilities
  - other neurodevelopmental disorders, or
  - internalizing or externalizing disorders

- However note: Learning Disabilities may co-exist with various other conditions or disorders.

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Criteria for the Diagnosis of LD #5 Cont'd

- Environmental factors (e.g., psychosocial adversity, inadequate or inappropriate educational instruction)
- Insufficient motivation or effort
- Cultural or linguistic diversity

Impoverished environment, high levels of psychological distress, and non-mainstream culture all impact on performance on standardized testing

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Culturally and Linguistically Diverse (CLD) Individuals

- 25% of Ontario residents are first or second immigration immigrants or refugees, or identify as indigenous (Statistics Canada, 2016)
- Points to the need to differentiate LD from language and cultural differences
- Adaptations for CLD individuals can be addressed in four parts
  - Cognitive, language, literacy, and math skills
  - Adapting to cultural and immigration factors
  - Social, emotional, and behavioural assessment
  - Specific considerations for individuals who identify as Indigenous

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Adaptations for Culturally and Linguistically Diverse Individuals

The following are considerations for CLD individuals:

- Consider a diagnosis of LD in second language individuals who have had two or more years of English or French reading instruction and have below average word-level reading and spelling skills
- Examine the types of errors that individuals make on language and reading comprehension tests. Consider positive transfer (e.g., they may use words that are similar in their first language to understand the second language), and negative transfer (they may apply grammatical structures that are correct in their first language to their second language when that is not appropriate).
- Compare the functioning of the individual with siblings or peers from the same context
- Assess in the individual's first language when appropriate
- Assess cognitive processes (phonological processing, RAN, and non-word repetition).
- Consider that if phonological processing scores are below average even after explicit instruction for one or more years in English or French, that this may represent a Learning Disability, rather than being due to ELL status alone

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Adaptations for Culturally and Linguistically Diverse Individuals

Considerations for CLD individuals continued

- Determine whether errors are associated with instruction that differs from what is commonly taught in Canada (e.g., different symbols, terminology and procedures in math, inadequate knowledge of symbols and metaphors used by native speakers of English or French).
- Supplement standardized cognitive and achievement tests with response to intervention and dynamic assessment strategies
- Carefully consider whether it is necessary to administer an IQ test and the timing of administration. Use a nonverbal test when appropriate and ensure that the individual understands the directions on nonverbal tasks.
- Use clinical judgement when interpreting scores, considering the verbal and cultural loading of the test and subtests and examine scores on component scales and subtests for indications of average ability.
- Consider that crystalized intellectual measures will show more cultural variation than fluid intellectual measures (e.g. fund of general knowledge)

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There was a time when I teetered precariously with an awkward foot in each of the two worlds - the scientific and the indigenous. But then I learned to fly, or at least try. It was the bees that showed me how to move between different flowers - to drink the nectar and gather pollen from both. It is this dance of cross-pollination that can produce a new species of knowledge, a new way of being in the world. After all, there aren't two worlds, there is just this one good green Earth.

---Braiding Sweetgrass

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Specific Considerations for Individuals Who Identify as Indigenous

Three key issues that suggest psychologists should adopt a critical perspective regarding assessment of individuals who identify as Indigenous

- Educational attainment of Indigenous children and adults is lower than the Canadian population at large. Indigenous youth, however, are more likely to complete secondary and post-secondary education than their parents (Statistics Canada, 2011)
- Parents may be wary of seeing psychologists because many Indigenous children were taken from their families for adoption by non-Indigenous families. A practice that continued for many years (60's scoop, 1960s to 1980s).
- Many Indigenous individuals do not ascribe to the medical model of assessment and diagnosis

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Specific Considerations for Individuals who Identify as Indigenous

- The adaptations for CLD individuals in general pertain to the Indigenous population.
- Due to the 3 key issues identified on the previous slide, the following are some specific additional strategies that may be appropriate in some contexts:
  - Developing trust with individuals and families may include developing trust with community leaders with specific reference to elders.
  - Be clear that your role is to help individuals or their children with academic learning and mental health.
  - Depending on the individual and the context, it may be very challenging to diagnose LD, and the diagnosis may not be required to provide intervention. Decide whether it would be useful to give a diagnosis, or whether the focus should be on describing the learning profile and providing recommendations for intervention.
  - In some communities it might be more appropriate to emphasize language, literacy and numeracy development for all community members rather than diagnosing LD in individuals. When it is necessary to diagnose, a lower cut-off than an academic achievement standard score of 85 may be needed.

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Professional Responsibility

- Be cognizant of cultural variation in assessments
- Make a commitment to educate myself and pursue continuing education to further understand Indigenous issues:
  - Professional Consultations- Cultural Competency Discussion Group, Jordan's Principle Team
  - Workshop- Indigenous Cultural Safety Training Ontario Competency (San'yas/PHSA BC)
  - Workshop-Promoting Well-being among Indigenous youth through strengths based culturally relevant mentoring
  - Conferences – Anishinabek G7 FASD Conference
  - Workshop- Cultural Mindfulness Training (George Couchie)
  - Self directed learning- Braiding Sweetgrass: Indigenous Wisdom (Robin Wall Kimmerer); All Our Relations: Finding the Path Forward (Tanya Talaga)

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A Few Key Points I've Learned to Date

- Assessment formulations need to be considered with the context of First Nation/Indigenous/Native/Metis culture
- In all interactions with students, understand that cultural diversity permeates everything, including psychological adjustment, behavioural adjustment, academic achievement, and relationship with peers in the school setting
- Acknowledge a sense of history (historical disadvantage, institutional and systemic racism, history of oppression, inequities rooted in colonialism)
- Listen more and see things from the student's perspective to understand their unique needs and continue to provide access to an education that is culturally relevant, sensitive, and safe

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Science and art, matter and spirit, indigenous knowledge and Western science— can they be goldenrod and asters for each other

---Braiding Sweetgrass

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What is Dyslexia?

- Individuals seeking assessment for reading difficulties have often heard the term dyslexia and ask whether their challenges with reading may be due to dyslexia
- The term “dyslexia” is often used instead of learning disabilities, is used in international research and practice, and there are many internet sites that provide information about it
- When appropriate, psychology practitioners could use the term dyslexia in addition to learning disabilities when providing a diagnostic formulation according to the OPA Guidelines

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What is Dyslexia?

- Definition of dyslexia according to the International Dyslexia Association (2002):
  - “Dyslexia is a specific learning disability that is neurobiological in origin.
  - Characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities.
  - Typically resulting from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction.
  - Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.”

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What is Dyslexia?

- Dyslexia is a specific subset of learning disabilities in reading.
- The criteria for diagnosis of LD stipulated in the OPA Guidelines are consistent with this definition
  - However, also include other types of LD (e.g., an individual may have below average functioning in reading comprehension, mathematics or written expression but have average word level reading and spelling skills) that would not fall under the above definition of dyslexia.
  - The term is also not used by the Ministry of Education in Ontario, or in many other sectors where access to intervention or accommodations may be important to the individual.

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What is Dyslexia?

- When individuals meet the OPA criteria for LD and have difficulties with word and pseudo-word reading and phonological or orthographic processing an additional diagnosis of dyslexia may be made.
- Children with dyslexia typically have difficult with accurate reading of words and pseudo-words as well as reading fluency and spelling, whereas adolescents and adults who have received appropriate remediation may read the words accurately but typically have subtle difficulties with phonological processing, reading fluency, and spelling.

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What is Dyslexia?

- Research has pointed to the key components of intervention for dyslexia (Fletcher et al., 2019).
  - Considerable evidence that good Tier 1 literacy programs prevent reading problems in most children and reduce the number of children who would require an assessment and remedial interventions for reading disabilities.
  - Early intervention is important because remediation after the primary grades must be intense and fluency is reduced.
  - Intervention should be done in the context of a reading program that includes recognition of common sight words, spelling, reading fluency, vocabulary, and reading comprehension.

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What is Dyslexia?

- The term dyslexia is sometimes inappropriately used to describe people who do not have word level reading problems
  - Although people with dyslexia typically have difficulties with text-level reading comprehension as well as word-level reading, some individuals are competent at reading individual words but still have difficulties with reading comprehension that are associated with a language disorder or English being a second language (Fletcher, Lyon, Fuchs & Barnes, 2019; Geva & Wiener, 2015).
  - Although an individual may have a learning disability their problems are not consistent with the definition of dyslexia.

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What is Dyslexia?

- Dyslexia is arguably the most highly researched type of LD
  - Between 3% and 7% of the population meet the criteria for this diagnosis depending on the cut-off used for below average achievement in word-level reading.
  - Dyslexia is more predominant in males than females, persists into adulthood, has moderate to high heritability, and involves both brain structure and function.
  - The association between phonological processing and reading difficulties is well established
    - Other cognitive processes (e.g., visual perception deficits) have not been supported as being related to dyslexia
  - Word-level reading accuracy and fluency are also associated with reading comprehension.
  - This suggests that when individuals obtain below average scores on tests of word identification, pseudo-word reading or reading fluency, psychology practitioners should administer tests of phonological processing that include phonemic awareness, phonological memory, orthographic processing, and rapid automatized naming (Kirkpatrick, 2015).

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