A Glossary for #WesternDLD2: A Graduate School-Age Language & Related Disorders Course for Speech-Language Pathology Students

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CSD 9638 – Developmental Language Disorder II
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This handout was created with the intention to provide knowledge of current concepts related to Developmental Language Disorder (DLD). This may be used by any professionals who work with children with DLD, particularly in a school setting.

Concepts Related to Developmental Language Disorder

> Formerly referred to by other names, including "Specific Language Impairment", **Developmental Language Disorder (DLD)** is an impairment in the processing, use, and/or understanding of language from childhood.

NOTE: Terms in *italics* have their own, separate entry

Accommodations: Accommodations are made on an individual basis to allow a student to meet the targets at their expected grade level; they are the individual provisions that support each student's learning; made at the students' level to achieve curriculum needs

Authentic assessment: A model of assessing a student's skills by creating and observing them in more naturalistic settings

Automaticity: When a skill no longer requires as much effort to carry out; a skill becoming automatic

Benchmark: Predicted levels of achievement; used to mark level of achievement in comparison to other students (what they should know by point X)

Classroom observation: A professional observes the child in their classroom, as unobtrusively as possible

Cognitive referencing: Compare a child's expected skills – based on their IQ (cognitive potential) – to their actual skill level.

Comprehension monitoring: A means by which a student is made aware of what they do and do not understand when they read.

Crystalized intelligence: Ability to use existing knowledge to solve problems; fact-based

Curriculum-based measurement: A model of assessing a student's skills based on their achievements that fall in line with the planned curriculum.

Decoding: sounding out the letters during reading; relies on typical letter-sound pairings to "sound out" new words; e.g.: "c-a-t" to understand "cat"

Differentiated instruction: Tailoring learning on an individual basis to challenge each student at their level; maximize the student's learning potential; work in the students' *zone of proximal development*

Differentiation: making a task easier or harder, depending on the individual needs of the student; engaging in *differentiated instruction*; individualization

Discourse organization: Means of organizing knowledge on a large scale; may use external organizers (graphic representations, templates, etc.); relies on high order skills (e.g.: perspective-taking, *inferencing, comprehension monitoring*)

Domain-specific deficits: Difficulties in one particular area; e.g.: Children with DLD have difficulty in the linguistic domain

Domain-general deficits: Difficulties in skills that transcend areas; e.g.: Impaired attentional skills will have an impact on behaviour, language, memory, etc.

Dual route to reading: A proposed model of reading that offers two ways to discover a word's meaning: *decoding* and *sight-word reading*

Entrenchment: Multiple exposures to a concept to make a strong connection in the brain (the neural pathways); the end goal of entrenchment is *automaticity*

Executive functions: active, effortful, self-directed, conscious actions to achieve goals; things you can to do work towards a goal

- Working memory: the manipulation of information for short periods of time; to be differentiated from *short-term-memory* and *long-term memory*
- Inhibition: the self-stopping of undesired behaviours; not the first/more salient response
- Cognitive flexibility/flexible thinking: ability to "think outside the box"; ability to change the way one thinks about an issue, and adapt to change
- Self-monitoring: the recognition of, and judgement in one's ability to use skills

Explicit learning: Learning that requires intention and effort; often must be taught by someone more knowledgeable

Expository language: A fact-based story; often more formal or academic "textbook language"; can be assessed by asking the child to describe a favourite activity (e.g.: sport, game, tv show, etc.)

Fluid intelligence: Drawing on *cognitive flexibility* to solve problems in novel ways; independent of acquired knowledge

Implicit learning: Learning that takes place without conscious effort

Individualized Education Plan (IEP): A legal document drawn up by the students' team of professionals that lists strategies for the student

Inferencing: The linking together of ideas to create a deeper, more complex understanding; born out of what is implied, not what is explicitly stated

Inquiry-based learning: A model of learning that proposes the student and teacher are co-learners; the student leads the area of interest, and the teacher supports this by shaping thinking, paraphrasing, and repeating; it does not preclude *explicit learning*

Language disorder associated with…: If a language disorder co-occurs with another mental disorder, then it is not labeled as "DLD" but rather "language disorder associated with…"

Long-term memory: The information held in one's memory for more than a few moments; it may be retrieved to be manipulated in *working memory*

Mastery goals: To be distinguished from *performance goals*, mastery goals are achievements that enhance the student's level of proficiency in a skill; moving toward *automaticity*

Modifications: Changes made to the curriculum to create altered expectations for a child that are probably not at their grade level

Morphological awareness: Morphemes are the parts of a word that have meaning, such as the base, prefixes, and suffixes; morphological awareness is the understanding of the meaning of the individual parts, and the ability to manipulate them (e.g., capitalizing on *mutability*)

Motivation: Motivation can drive learning; it may be intrinsic (internally driven, by feelings) or extrinsic (externally driven, such as via a material reward)

Mutability: The ability of a word to be broken into parts and re-combined with other words to derive new meanings (e.g.: the verb ending "-ing" added to a website name to get "facebook-ing" or "google-ing")

Narrative language: The kind of language used to tell a story; usually naturalistic and informal; important parts include:
- Macrostructure – story elements that allow for prediction, *inferencing*, etc. (e.g.: exposition, inciting element, rising action, climax, falling action, conclusion)
- Microstructure – the language used to create the story itself (e.g.: the language structures such as the sentences)

Orthographic representation: The printed representation of sounds of a language; the written letters and words

Performance goals: Objectives of enhanced output, without focus on the contributing skills; what you are able to do

Poor decoder: A child who has difficulty using the *decoding* method of reading (poor comprehender); may be proficient at sight-word reading

Print knowledge: A child's understanding that print (the written *orthographic representation*) holds meaning, that there are conventional ways to write and that these "squiggles" can convey information

Progress monitoring: Watching the students' learning, to know when to make it more difficult or to offer more support (stay in their *ZPD*)

Protective factors: Genetic and environmental influences that make it less likely that a child will experience or develop difficulties (e.g. DLD, learning disability)

Pull out: A model of intervention that involves taking the child out of the classroom for therapy

Push in: A model of intervention that involves bringing the intervention into the classroom (inclusionary)

Reading components (5): Five domains that contribute to reading ability
- <u>Phonological awareness</u>: understanding of the sounds in words and the ability to manipulate through rhyme, blending of sounds together, segmenting of sounds in a word
- <u>Phonics</u>: understanding of the letter-sound correspondences (e.g.: "c" makes a /k/ sound)
- <u>Reading fluency</u>: the ability to read swiftly and without difficulty or errors
- <u>Vocabulary</u>: the knowledge of words and their meanings
- <u>Text comprehension</u>: a child's ability to understand written text

Relevancy: Ensuring that the material is significant to the student, to help with *motivation*

Risk factors: Genetic and environmental influences that make it more likely that a child will experience or develop difficulties (e.g. DLD, learning disability)

Self-regulation: When a child is able to monitor and support their own ability to learn, by *inhibiting* (c.f. *Executive functions)* disruptive behaviours to keep themselves calm, focused and alert

Short-term memory: The information held in one's memory for a brief period of time, before being either manipulated (*working memory*) or moved to *long-term memory*

Sight-word reading: Reading of the word as a whole, to access the meaning without having to sound out the letters; e.g.: reading "yacht" as "YAH-t"

Simple view of language: The idea that understanding of the written word comes from the combination of word meaning knowledge and spoken language knowledge
- Word knowledge + Oral language = Text comprehension

Situation model: A "work-in-progress" mental model that the student builds as they read and learn; relies on *comprehension monitoring* to ensure that the new knowledge fits with the current understanding

Space awareness: A child's understanding of their workspace

Time awareness: A child's understanding of the passage of time and what can be achieved in a given amount of time

Tiered intervention: An understanding that different "tiers" represent different levels of SLP or other professional involvement in classroom learning.
- <u>Tier I</u>: Universal instruction; the intervention targets are provided at the classroom level
- <u>Tier II</u>: Targeted interventions; add to the curriculum, rather than change it
- <u>Tier III</u>: Specialized treatments; targeted intervention for a particular child

Universal Design for Learning (UDL): A model of lesson planning that ensures an accessible learning environment for all,

Zone of Proximal Development (ZPD): A model proposed by Vygotsky (1978): these are things the child is able to do with help; it is beyond what they are capable of on their own, but not so difficult that they cannot achieve it with help

Appendix A – Intervention Considerations

Math
- As math involves using language, symbols, and visuospatial working memory, children with DLD may have difficulty with math tasks. As such, a child with DLD may benefit from explicit teaching of math language.

Social Communication
- Social communication involves all aspects of what is involved when interacting with others. This includes:
  - <u>Social cognition</u>: the ability to self-regulate, take another's perspective, inferencing, joint attention. Sometimes referred to as "social intelligence"
  - <u>Pragmatics</u>: language in use; the ability to adapt one's language to the context; following conversational rules for communicative functions
  - <u>Language</u>: phonetics, phonology, morphology, syntax, morphosyntax, and semantics; all the rules that are used to convey meaning
  - <u>Social skills</u>: Behaviours that are expected or demonstrated in interacting with others
- Children with DLD and other disorders (see Appendix B) often have difficulty in these areas

Written Expression
- Written expression relies on language skills, but also cognition (writing style, and monitoring of what they have written) and motor skills (the physical act of writing). A child with DLD would likely benefit from targeted intervention.

Motivation
- A child's likelihood of learning is tied to their level of motivation. Intrinsic motivation is associated with higher academic achievements: knowing more is its own reward.

Recruiting related processes
- Students who have difficulties in one area (e.g. DLD) may benefit in their learning from drawing on strengths in other areas. For example, use multimodal instruction to allow the child to have multi-sensory input. Another way to recruit related processes is by reducing the cognitive load (the amount of information the brain has to process) in order for the weaker language system to use more brain power to process the linguistic aspects.

Executive Function Intervention
- Explicit instruction in executive function skills (c.f. *Executive functions*) may be required for children with DLD. Some things to note: training out of context does not have evidence of transfer to other areas; pragmatic and social communication training can rely on certain executive functioning skills (e.g. *inhibition*, *working memory*, conversational rules, etc.)
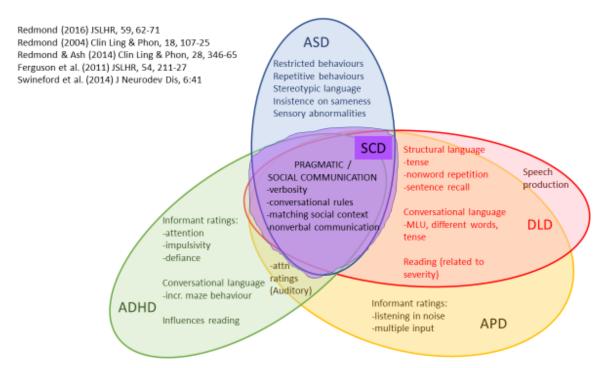
'I do, we do, you do'
- A good way to ensure the child has gained the desired skills is to provide a demonstration ("I do"), then walk through the process with the student ("We do") and then allow the student to do it on their own ("You do").

Appendix B – Special Populations

Several special populations have symptoms that overlap with, and may compound the difficulties experienced by children with DLD:

- Autism Spectrum Disorder (ASD)
  - ASD is characterised by restricted and repetitive behaviours, and difficulty with verbal and nonverbal communication.
- Auditory Processing Disorder (APD)
  - There is a fair amount of overlap in symptoms between APD and DLD. Auditory Processing Disorder in particular has impaired scores on tests of hearing in noise, and auditory attention.
- Attention Deficit Hyperactivity Disorder (ADHD)
  - Difficulties in attention confound other *executive function* skills, and has an effect on academic performance
- Social Communication Disorder
  - Impairment specifically in social communication skills (*social cognition*, *pragmatics*, etc.)
- Selective Mutism
  - Anxiety disorder characterised by the child not speaking in situations in which speech is normally expected (e.g.: at school, with strangers), but able to speak in other situations (e.g. at home with immediate family)
  - Both verbal and nonverbal communication problems

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