

The Multilingual Brain: Language Learning in Today's World

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Today's Plan:

- What is *language*?
- How do children learn their first language?
- Let's talk about *multilingualism*
- Second language timing
- Multilingualism and disabilities

Land Acknowledgement

→ I join you from the traditional, ancestral, unceded territory of the Coast Salish Nations

- Languages live and evolve in communities of people who use the language
- Children are the 'life blood' of a language

Photo credit:

<https://socialwork.ubc.ca/news/awakening-the-spirit/>, published in 2015





What is *language*?

What is 'Language'?

'a language'

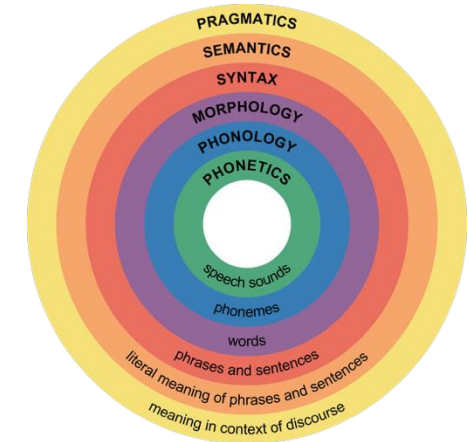
Countable noun



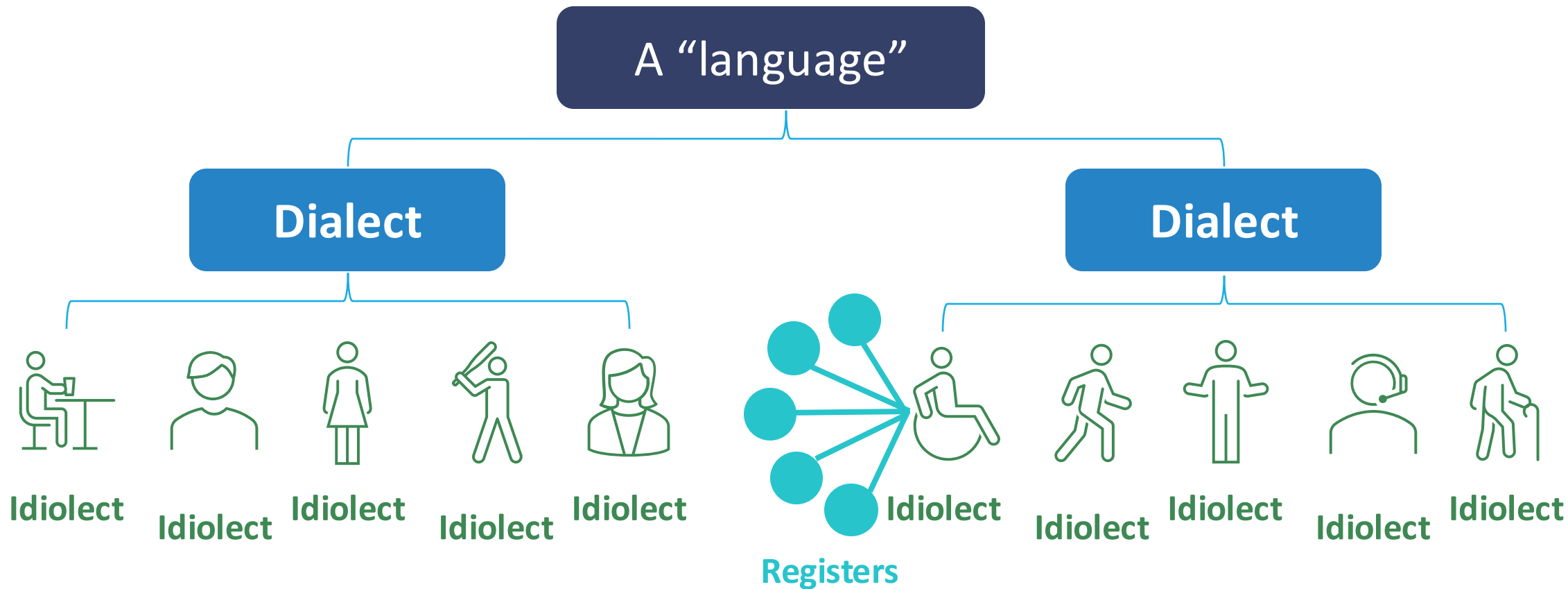
English, Spanish, həŋdʌmiŋəm,
Yoruba, Auslan

'Language'

Uncountable noun



'A system of conventional, arbitrary symbols...'



More accurate to say that language systems exist along a spectrum than in boxes

Language

Form

Structure

Phonology
Morphology
Syntax

Content

Meaning

Semantics
Vocabulary

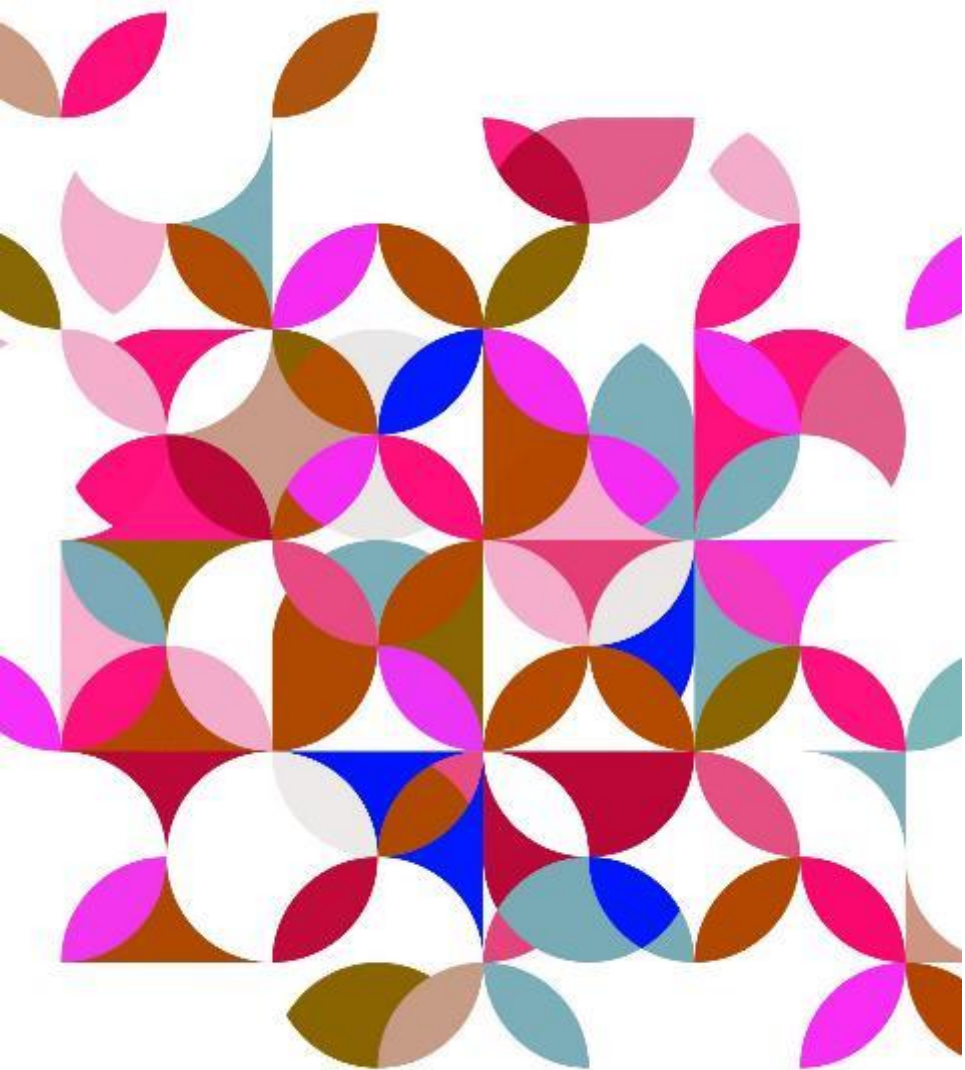
Use

Function

Pragmatics

A young girl with dark hair and a white bow is sitting on a light-colored sofa, laughing joyfully. She is wearing a white sleeveless top with a dark polka-dot pattern and matching shorts. To her right, a man is sitting on the same sofa, looking towards her. The scene is brightly lit, suggesting a window in the background. A white rectangular box is overlaid on the right side of the image, containing the text "How do children learn their first language?".

How do children learn
their first language?



L1 Acquisition

In first language learning (L1), we don't really *teach* a child the language...

Children *re-construct* the language

- our brains are born with a universal framework ready to acquire a linguistic system
- language-specific details are filled in based on the linguistic input in their environment

Chomsky (1986); Pinker (2007)



Language Input

To learn a full and complete linguistic system, the input must be:

- High **quality**
- Sufficient **quantity**
- **Consistent** in form, content, and use

Moeller & Tomblin (2015)



Motivation

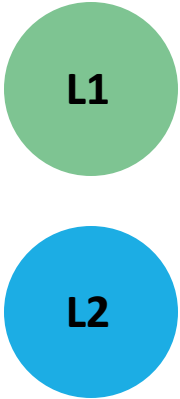
- Children don't learn a language because they (or their parents) want them to learn a language
- **Children need to feel motivated to use a new language**
- *Are there enough opportunities for the child to use the language in meaningful social interactions?*

The background features a stylized illustration of several people's heads in profile, rendered in shades of teal and light blue. They are surrounded by speech bubbles of various sizes, each containing a different character or symbol. Visible characters include 'æ', 'ß', 'ñ', '!', 'y', 'ã', and '€'.

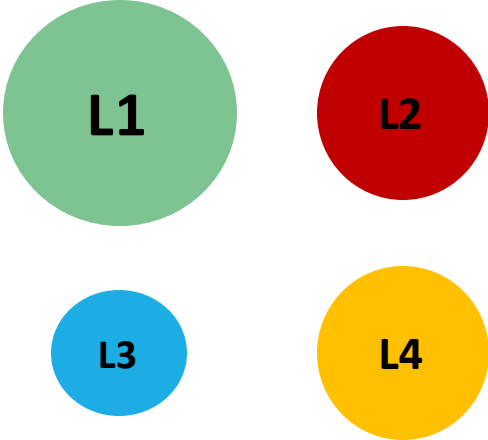
Let's talk about
multilingualism

What is 'multilingualism'?

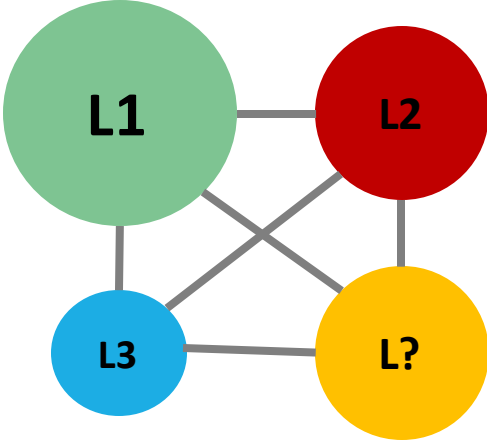
bilingualism



multilingualism



plurilingualism



Eaton (2018)

How many people are multilingual?

- About 60% of the [world](#)
- Over 50% of [Europeans](#)
- Over 40% of [Canadians](#)
- About 20% of [Americans](#)
- 50% of students in the [Vancouver School Board](#) speak a language other than English at home and 18% are designated as ELLs

Gration (2025); Peña (2016);
Statistics Canada (2021); VSB (2025)



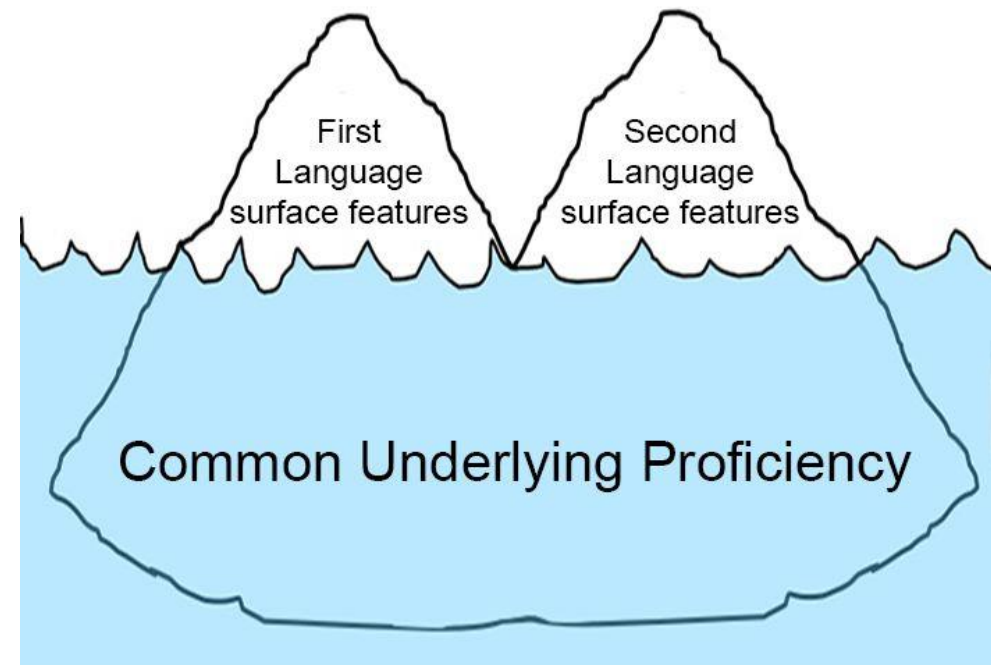
SD43 – Languages used in the home

Based on responses from 88% of 2,143 students

English	78%	Filipino/Tagalog	3%
Other	19%	Japanese	2%
Mandarin	11%	Hindi	1%
Korean	9%	Punjabi	1%
Cantonese	5%	Vietnamese	1%
Spanish	5%		

Does the L1 help learn an L2? Yes!

- Any L1 shares aspects of **form**, **content** and **use** with other languages
- L1 is initially used as a *scaffold* for learning L2
- Cummins' *Linguistic Interdependence Theory of Language Transfer*



Cummins (1997)

The Conversation Canada

(www.theconversation.com)

→ an online forum for academics to publish research findings in an accessible format for the public



The Conversation Canada article (July 2019)

→ includes an educational video

<https://theconversation.com/the-amazing-baby-brain-says-pas-de-probleme-with-bilingualism-120470>



Second Language Timing

Language Learning at Different Ages

Simultaneous Bilingualism

Learning two or more languages within the first 3 years of life

How does this happen?

- more than one language used in the home
- different languages used in the home and in the community

Sequential Bilingualism

Learning a second language after the first language is established, usually after 4 years of age

How does this happen?

- exposed to this language upon starting school (e.g., early French immersion)
- Additional language started being used in the home (e.g., family moves, new relationship)

French Immersion (FI) Outcomes

- English skills and academic success are the same for FI students compared to English-only students ([Genesee, 2006](#))
- students in *late FI* programs have been found to catch up to *early FI* peers in French skills by graduation ([Kwan, 2015](#); [Rustom, 2015](#))
 - early and late FI students have different strengths
 - language skills transfer between English and French, especially literacy skills



Benefits of Multilingualism

Early Views



-
- bilingualism was originally thought to be bad → leading to language disorders and confusion
 - for example, that bilingualism ‘caused’ lower performance on tests of intelligence (e.g., Darcy, 1953)
 - **1960s**: Canada introduced French Immersion programs in Quebec that spread nation-wide
 - research started to find that bilingual children performed higher on intelligence tests than monolingual children (e.g., Peal & Lambert, 1962)

Benefits of being multilingual

Social and Emotional

- greater ability to understand other perspectives, known as ‘theory of mind’ (Schroeder, 2018; Xia & Haas, 2025)
- may develop greater capacity for empathy and better social skills (Chamorro & Janke, 2020; Javor, 2017)
- increased job, travel, and social opportunities
- supports stronger relationships with family members and healthy connection to a heritage identity (for ‘heritage language’ homes)



Benefits of being multilingual

Cognitive

- early bilingualism can help you learn other languages in high school (Nguyen & Winsler, 2021) and adulthood (Degirmenci et al., 2022)
- delays effects of aging, which increases for each additional language learnt (Amoruso et al., 2025)

Note: we still don't know if bilingualism improves executive functions like flexibility and attention (Antoniou, 2019)



Maintaining a Heritage/Home Language

“It is the position of Speech-Language & Audiology Canada that **home languages, dialects, and cultures** are critical to the emotional, psychological, familial, social, cognitive, and academic well-being of students.”

Speech-Language and Audiology Canada (2024, p. 3)



Supporting the use and continued learning of a child or student's home language:

- does not make it harder for the child to learn additional languages
- does not interfere with academic success

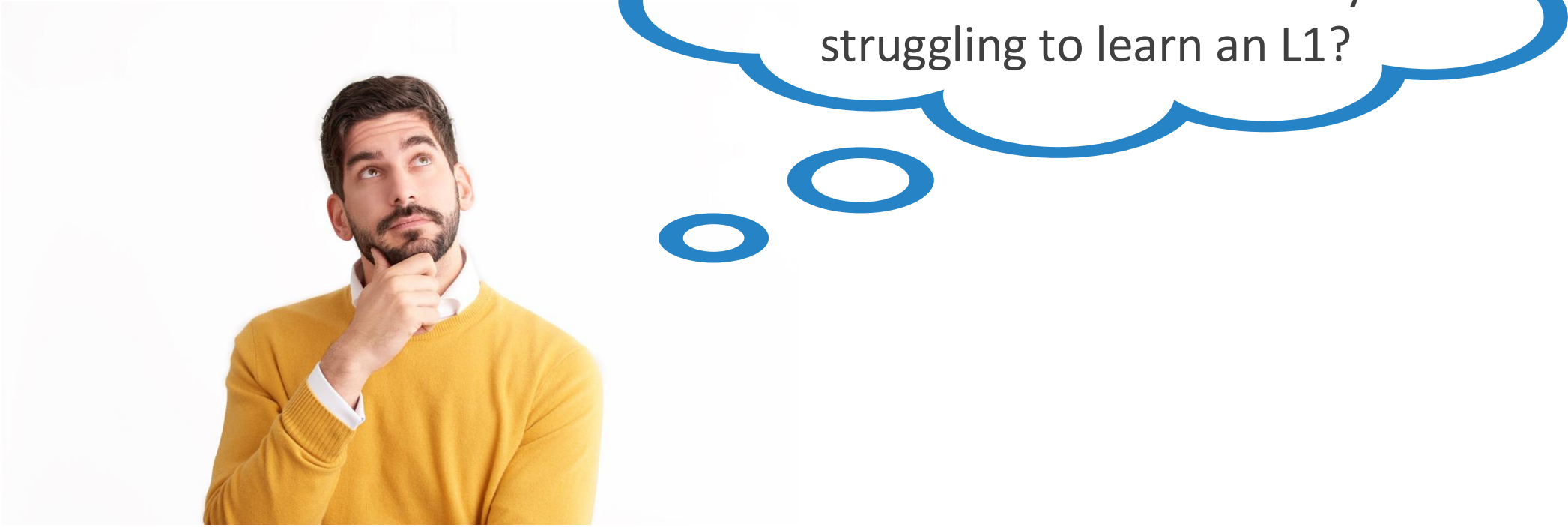
Genesee & Geva (2006)



A photograph of a classroom scene, overlaid with a teal color filter. A teacher stands at the front of the room, smiling, with a whiteboard behind him. Several students in the foreground have their hands raised, indicating an interactive lesson. The room features a clock on the wall and overhead fluorescent lights.

Multilingualism and Disabilities

Bilingualism and children with a language disability (LD)



What if the child is already struggling to learn an L1?

Bilingualism and children with a language disability (LD)

- Multilingualism does **NOT** cause language disability or make difficulties worse
- For children with a LD, multilingual children can achieve **similar L1 abilities** as monolingual children
- For children with a LD, multilingual children can achieve **similar academic outcomes** as monolingual children



Beauchamp et al. (2022); Genesee & Lindholm-Leary (2021);
Gonzalez-Barrero & Nadig (2019); Kay-Raining Bird et al. (2005, 2021)

Bilingualism and children a with language disability (LD)

However, children with LD **need more time and exposure** to each language than those without LD

Providing bilingual opportunities can present an **additional challenge** for children and their families to find the **extra time and resources**



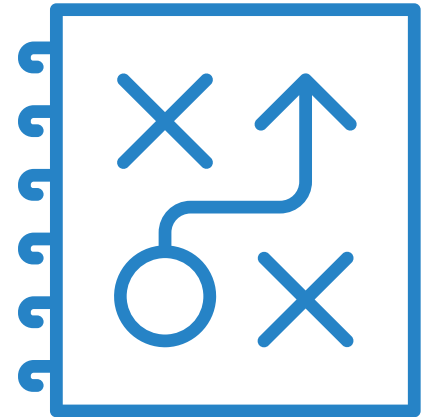
Consider:

- family context and expectations?
- desired level of bilingualism (receptive, functional, biliteracy...)?

Bilingualism and children with a language disability (LD)

Family Language Plan / Bilingual Action Plan

- Who will use each language?
- In which contexts?
- For how long?
- Great idea when families find it hard to devote time to a desired L2 or when children are exposed to 3 or more languages



Why being bilingual can open doors for children with developmental disabilities, not close them

Published: January 10, 2023 6.51am EST

January 2023

<https://theconversation.com/why-being-bilingual-can-open-doors-for-children-with-developmental-disabilities-not-close-them-196599>

Parents of autistic children often face a tough linguistic choice – but bilingualism can be of huge benefit

Published: March 29, 2019 8.23am EDT

March 2019

<https://theconversation.com/parents-of-autistic-children-often-face-a-tough-linguistic-choice-but-bilingualism-can-be-of-huge-benefit-114480>

A hand holding a blue marker is drawing a checkmark inside a circle on a document. The background is a light blue, slightly blurred image of a document with some faint markings and a pen in the upper left corner. A white rectangular box is overlaid on the left side of the image, containing the text "General Recommendations".

General Recommendations



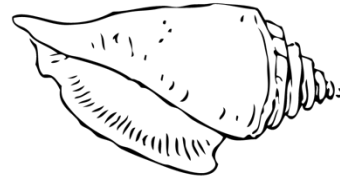
- Human brains are primed to learn more than one language, with enough **quality**, **quantity**, and **consistency** of exposure
- Children will learn any language that is useful in **forming social relationships**
- Children with **disabilities can** learn multiple languages, and may even benefit more from being multilingual
- Even if a language can only be partially acquired, there are still many benefits

Thank You!

Questions?



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SWEET & SQUIRES
LINGUISTIC CONSULTING

Areas of specialty:

- Multilingualism
- Children with exceptionalities
- Pronunciation and accent
- d/Deaf and hard of hearing

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