

# What to expect when your child learns a Coast Salish language

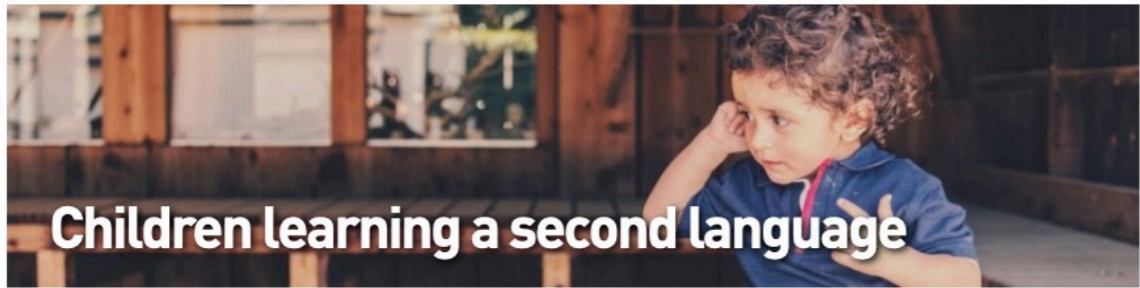
**Martina Joe & Elise K McClay** - Linguistics  
Simon Fraser University

In collaboration with **Henny Yeung** and the whole language acquisition research team: **Randeana Peter, Sonya Bird, Boey Kwan, Delores Louie, Roseanna George, Donna Gerdts, Samantha Sundby, Blair Chartrand, Chloë Farr, Elaine Seymour, Georgina Seymour, Ruby Peter, and Allegra Simionato.**

‘iyus munmun’lh workshop  
(March 16th, 2023, adapted from last year’s presentation)



Infants learning their first language(s)



Children learning a second language




Adults learning a new language



# let's talk

sfu.ca/langdev


**SFU** LANGUAGE LEARNING AND DEVELOPMENT LAB



**N'ini qalsan nataniik tikuq. ?at huqqtu?ni ? ?amak hawisqti?itni.**  
The third month is tikuq. The snow starts to melt, and the ground floods.

**Øip ?at qawsaqa?ni ?a-qtas tikuqs k ? fatit ?utmi ? ?itmasi.**  
Øip stays inside in March so he stays warm and dry.


**?a-ktuqakwum:**  
hawisqti?it (for a place to be flooded)  
huqqtu (for snow to start to melt)  
?a-ktu (snow)  
?itkin (to make)  
?a-quku? (raft)  
qawsaqa ?aqtas (to stay inside)  
?itmasi (to be dry)  
?utmi (to be warm)



<https://youtu.be/VDBPuAbWcBA>

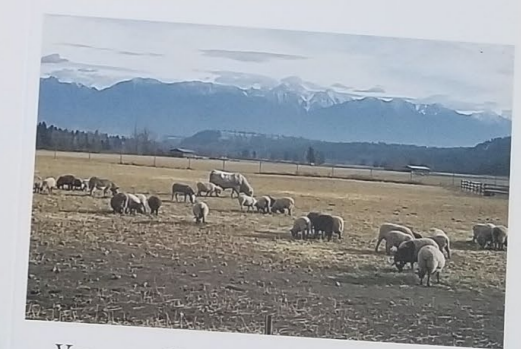
**£IK'UQ'**

KUKIÇINMIYIT KĒA QAĒSANMIYIT KĒA KĒA KĒA KĒA KĒA KĒA KĒA KĒA KĒA KĒA



Vancouver Ktunaxa Class Student-Guided Curriculum: Year 1  
by Violet Birdstone, Elise K. McClay, Terrance Gatchalian, Anne Bertrand, Lillian Antelope, Brian Birdstone, Martina Shovar, Michelle Buckman, Arwen Buckman, and Naobi Buckman

MARCH 26, 2020



Vancouver Ktunaxa Class Student-Guided Curriculum: Year 2  
by Violet Birdstone, Elise K. McClay, Terrance Gatchalian, Lillian Antelope, Brian Birdstone, Michele Buckman, Arwen Buckman, Niobe Buckman, and Martina Escutin

March 26, 2021

# AKA: Eyise

When I was a child, it took a while for me to be able to say my name.



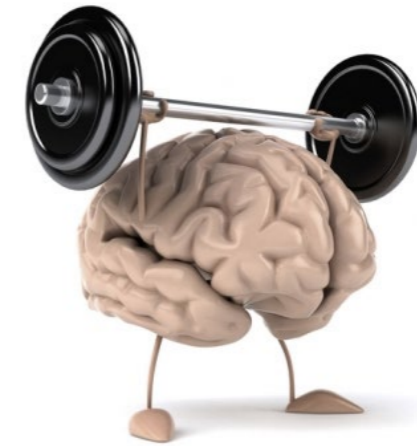
## Pronunciation in child language

Introduction	Learning English sounds, preview of Hul'q'umi'num'
	Typical differences between child & adult speech
Key points	Salish languages (what sounds may be hard, why)
	Hul'q'umi'num' (Language Nest report)
	Hul'q'umi'num' (Language Acquisition report)
Take-homes	Discussion

# Pronunciation in child language

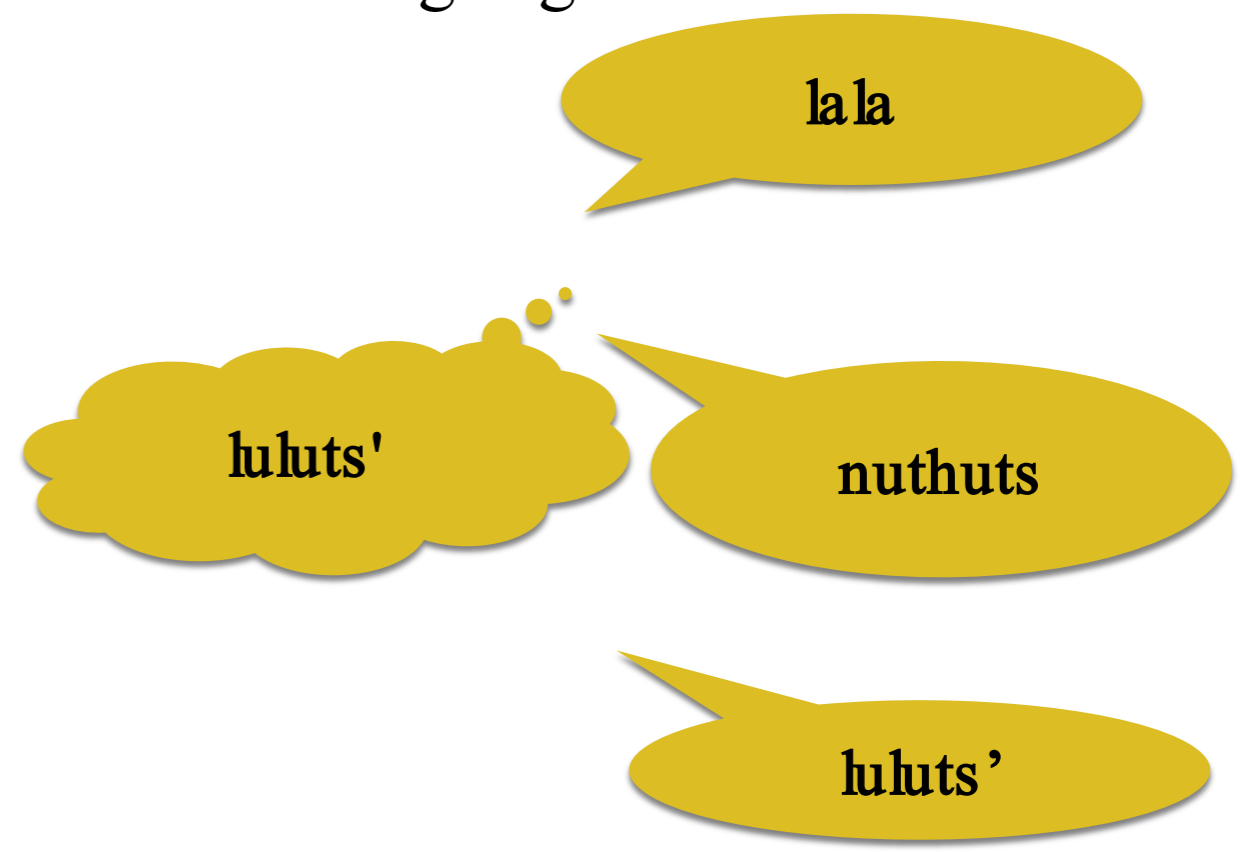
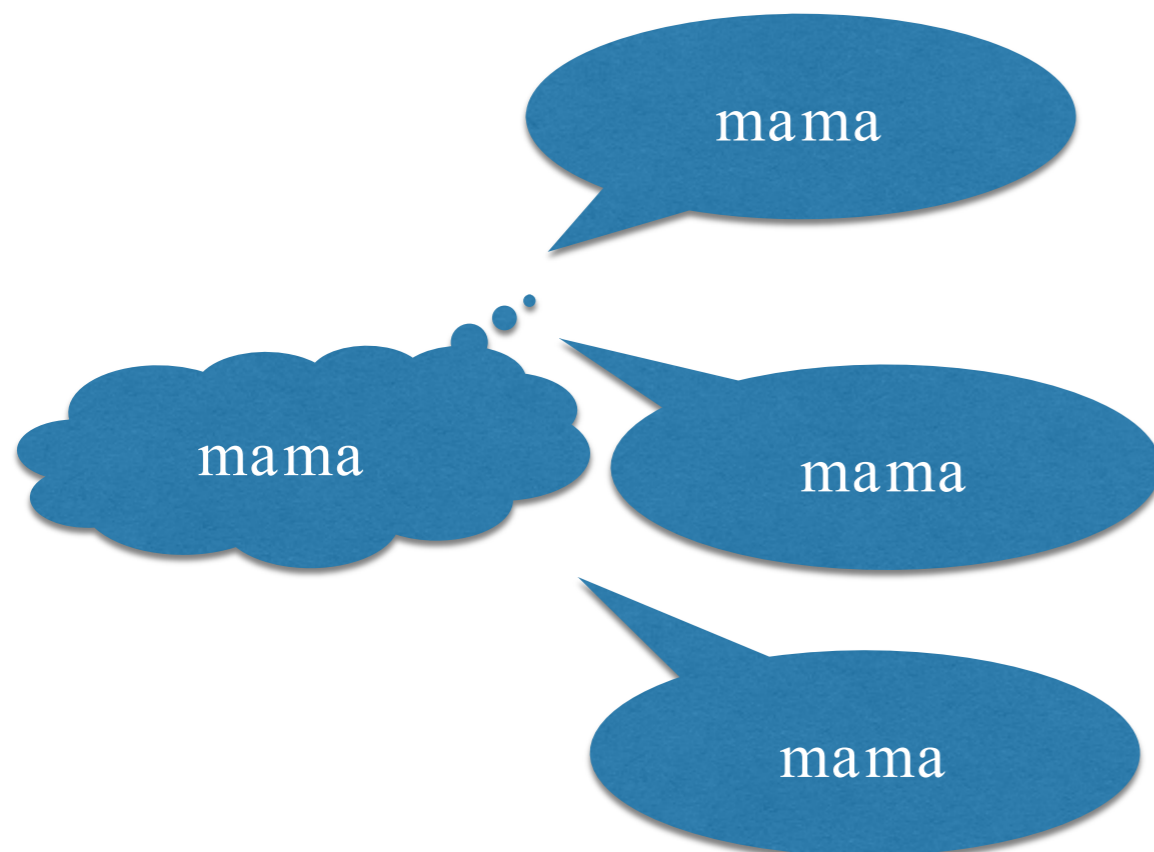
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# Main Ideas



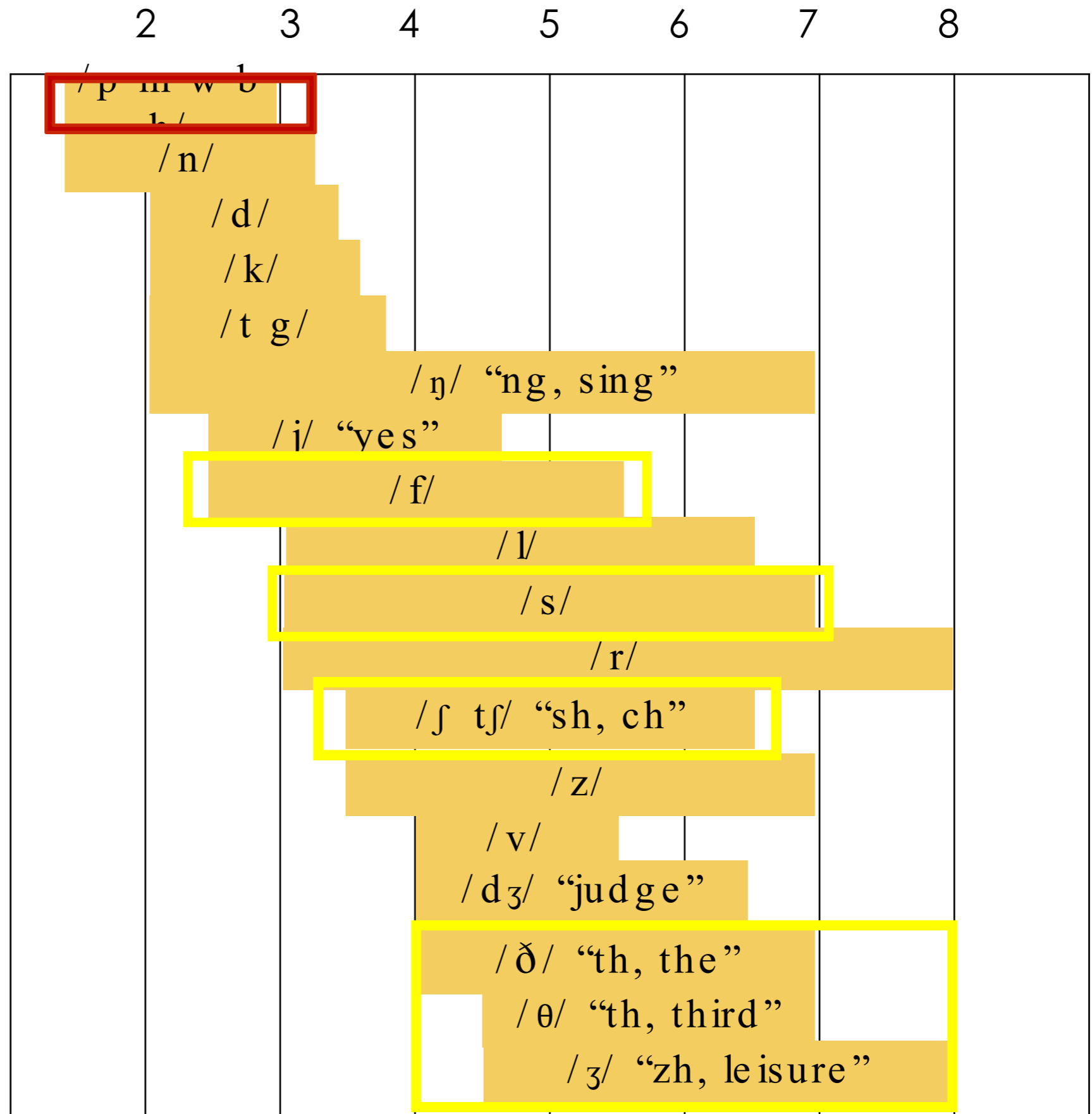
- Children will **reliably** say some sounds **earlier** than they will be able to say other sounds.

- There are **patterns** in what sounds come earlier, compared to which sounds come later. These patterns even apply across languages.



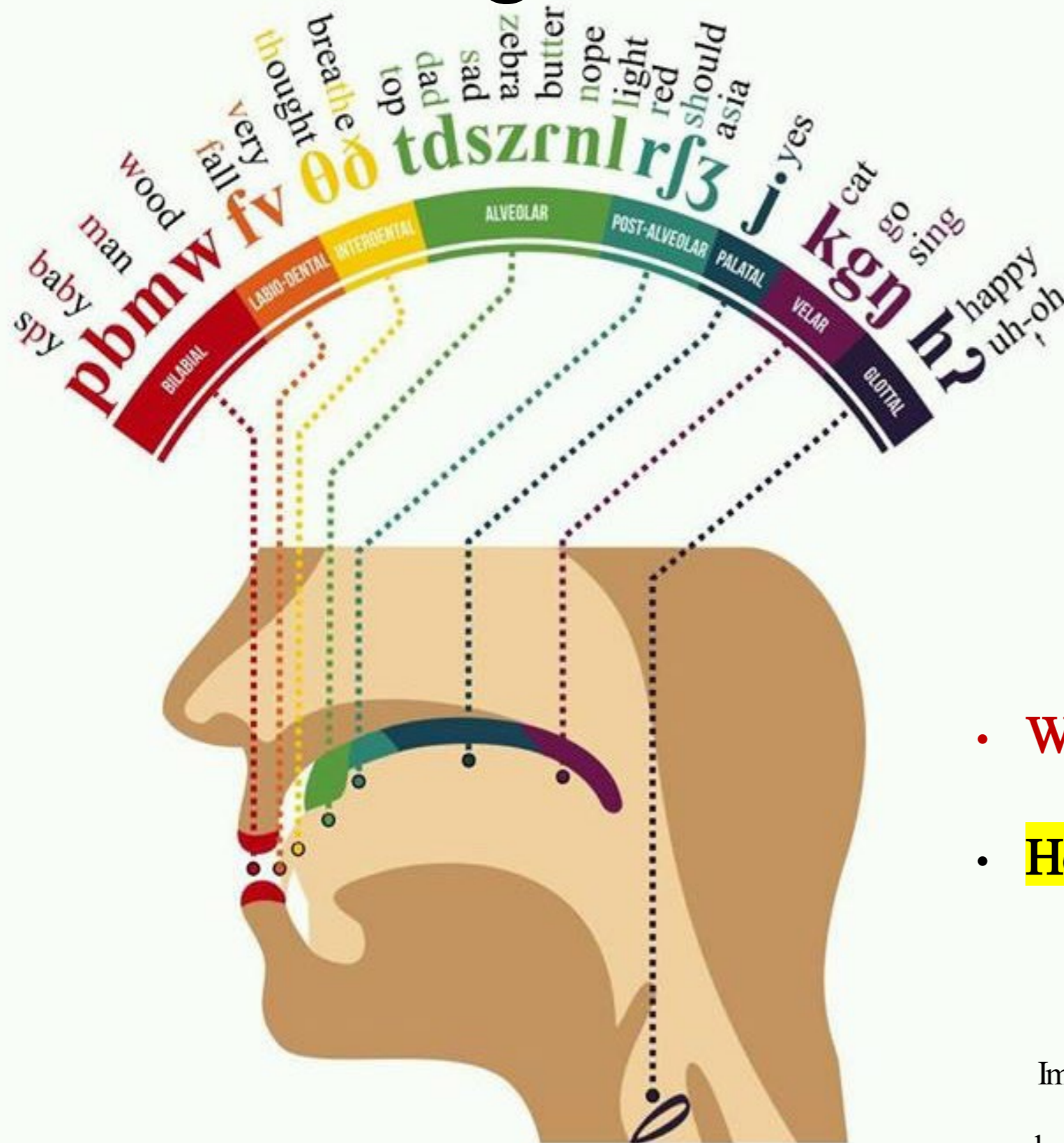
Difference between “age of customary production” (50%) and “age of mastery” (90%)

# English consonant learning (in years)



adapted from SLT  
Info & Williamson  
2010

# English consonants



- **Where** you make the sound
- **How** you make the sound

Image originally designed by Tyler Neyens for a [languagebasecamp.com](http://languagebasecamp.com) article by Halle Neyens



# Hul'q'umi'num' consonants

p, p', m, m', w, w'

tth, tth', th

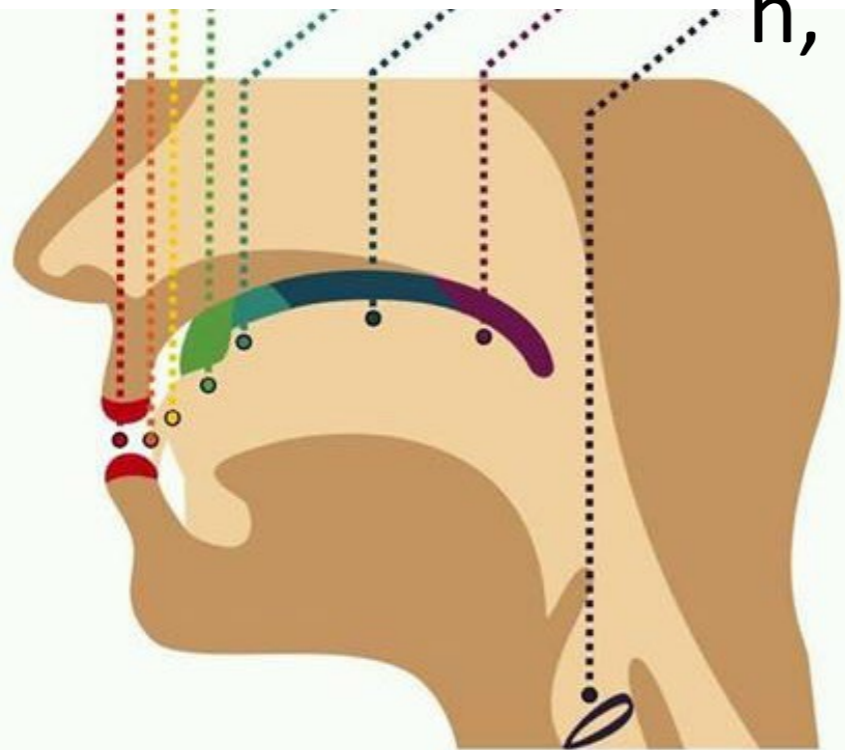
t, t', ts, ts', tl', s, lh, n, n', l, l'

ch, ch', sh, y, y'

k, kw, kw', hw

q, q', x, qw, qw', xw

h, '



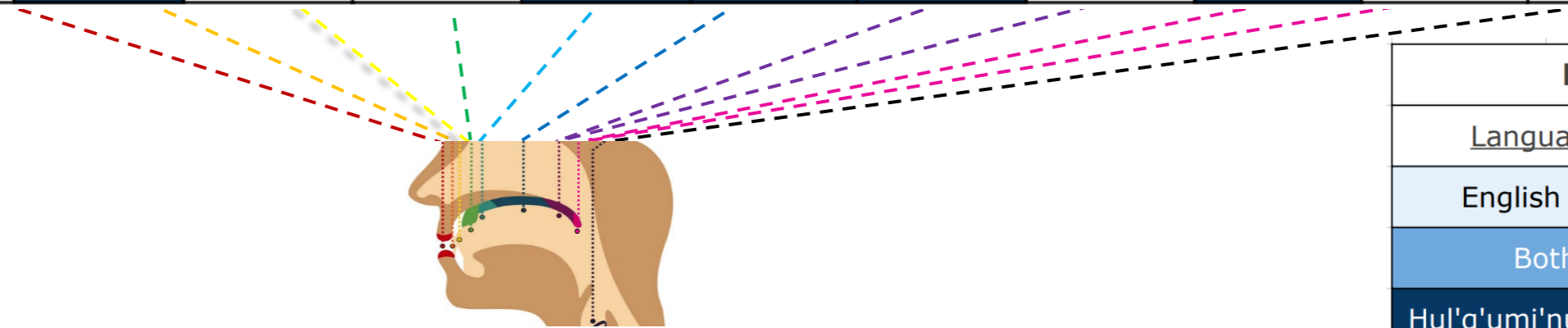
Some sounds are shared between English and Hul'q'umi'num', some sounds are unique to one or the other.

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# Hul'q'umi'num' & English sounds

↑  
Different ways of making the sound  
  
(e.g. lips sealed for p or lips partly open for w)  
↓

	p	b				t	d			k	g	kw	q	qw	'
	p'					t'						kw'	q'	qw'	
				tth		ts		ch							
				tth'		ts'		tl'	ch'						
		f	v	th	th (the)	s	z	lh	sh	zh		hw	x	xw	h
	w					r		l	y			(w)			
	m					n						ng			
	m'					n'		l'	y'			w'			



Legend	
Languages	Total
English only	10
Both	14
Hul'q'umi'num' only	23*

\*including kw and ts, which we sometimes get in English, e.g. **queen**, **Betsy**

# Pronunciation in child language

## Introduction

**Learning English sounds, preview of Hul'q'umi'num'**

**Typical differences between child & adult speech**

## Key points

**Salish languages (what sounds may be hard, why)**

**Hul'q'umi'num' (Language Nest report)**

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## Take-homes

**Discussion**

# Why don't children pronounce like adults?

Fine motor control is hard and takes time.

Some sounds are rare and hard to pick out of a crowd (English “th” sounds close to “f”)

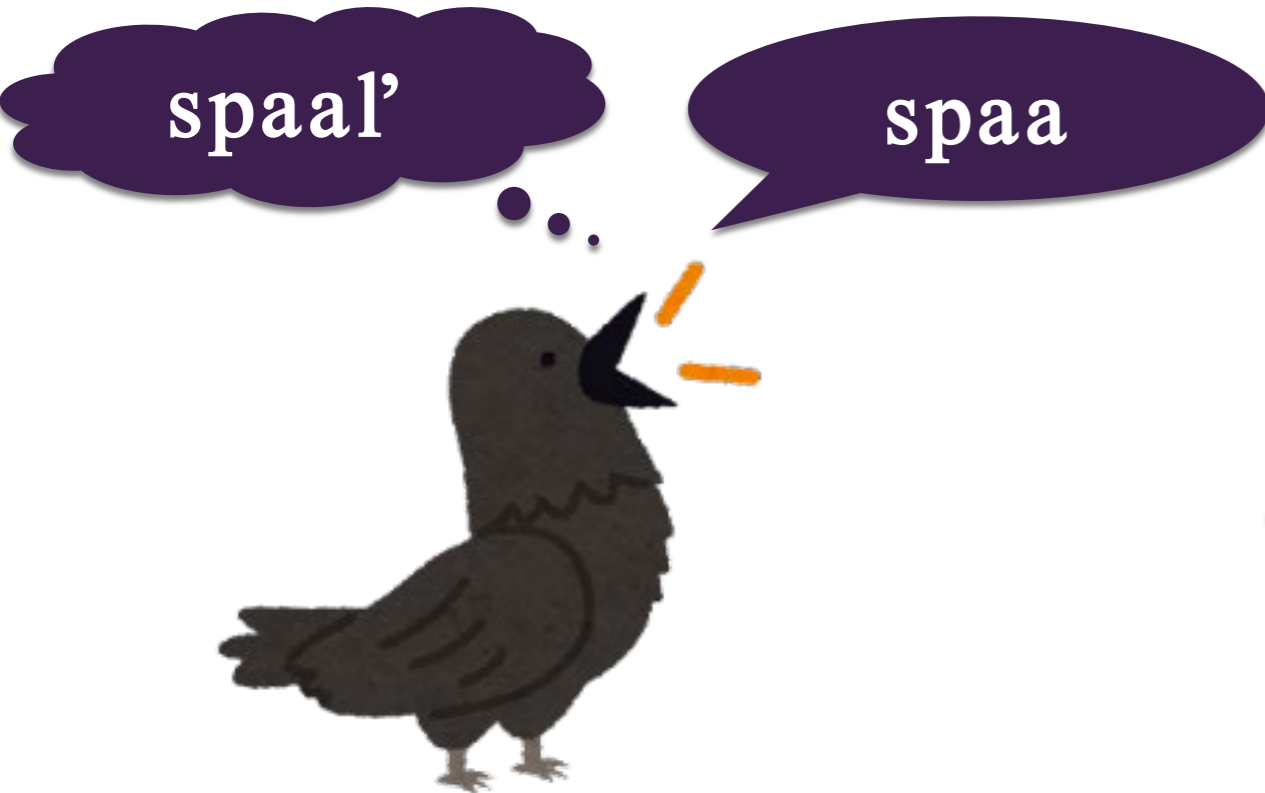
Sometimes, even if a child can say some sounds, they continue producing their earlier versions of those sounds, too.  
(“idioms” like “tottages”)

# Final consonant deletion

Child A (age 7:2)

- a. [kæ:]            'cab'
- [kɪ:]            'kid'
- [dɔ:]            'dog'

(Dinnsen, Barlow & Gierut 2012)



# Weak syllable deletion

banana → nana

giraffe → raffe

forgot → got

Child 195 (4;11; Dinnsen,  
Gierut & Farris-Trimble 2010)

yuse'lu

seluw

2

q'ullhanumutsun

k'uthamutsin



# Consonant cluster reduction

[l ɔ r] 'floor'

[l i p] 'sleep'

lhq'etsus

kese

[l aɪ] 'fly'

[l ɛ d] 'sled'

[l æ g] 'flag'

[l aɪ d] 'slide'

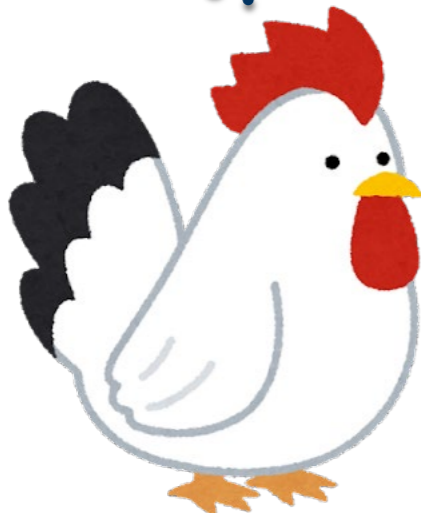
snuxshun

sashun

Child 218 (4;6; Dinnsen, Gierut, Morrisette & Rose 2014)

chichkun

chichakun'



mousmus

mousus



# Fronting

<i>cat</i>	/kæt/	→	/tæt/
<i>goat</i>	/gəʊt/	→	/dəʊt/
<i>cod</i>	/kɒd/	→	/tɒd/

From STL Info

(<https://www.stlinfo.com/phon101-velar-fronting/>)





What do children commonly do?

## ... to words

- Final consonant deletion
- Weak-syllable deletion
- ...

## ... to sounds

- Consonant cluster reduction
- Fronting
- ...

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# Hul'q'umi'num' consonants

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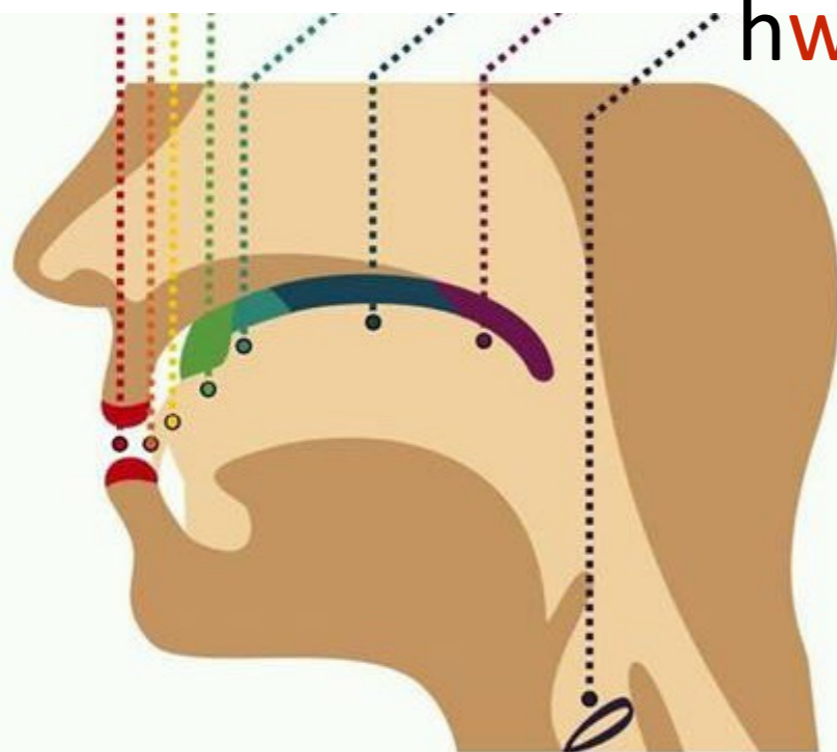
t, ts, ts', t', s, lh, n, n', l, l'

ch, ch', sh, y, y'

k, kw, kw'

q, q', x, qw, qw', xw

hw, h, ' (glottal)



Some sounds are shared between English and Hul'q'umi'num', some sounds are unique to one or the other.

Some Hul'q'umi'num'-only sounds...

- Have ' ("glottalized")
- Combos like **tth**, **ts**, and **ch'** ("affricates")
- Back-of-mouth like **q**, **x**, and **xw**

Image originally designed by Tyler Neyens for a

# Making predictions

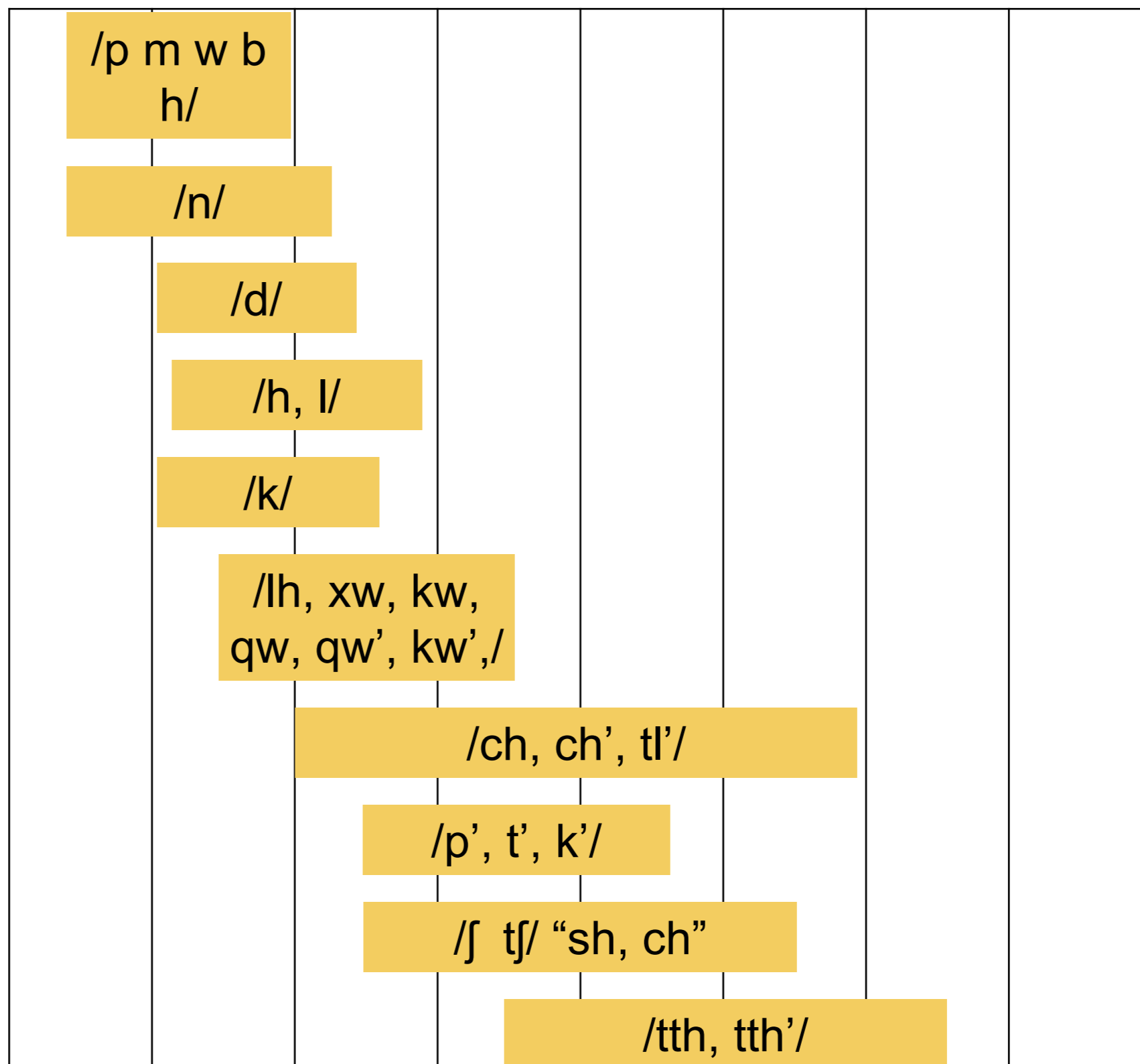
Lab volunteers Kim Mann and Laura Dand helped put together information from other language contexts that have some similar language sounds: **isiXhosa** (’ and combos) and **Q’eqchi’** (’, combos, and back-of-mouth)

Both languages have relatively large populations of speakers.

For languages smaller populations, the **order** children learn sounds at will probably remain similar, but the **timing** will be likely to be delayed.

Estimated range for “age of mastery” (90%) based on other languages

2 3 4 5 6 7 8



# Predicted Coast Salish consonant learning (in years)

Adapted from  
Learning the  
sounds of  
Skwxú7mesh  
sníchim Primer

# Predicting order of acquisition

Later sounds include ones...

- In the back of the mouth like **xw** and **qw** (age 2.5-4.5)
- That include a combo of two sounds (affricates) like **tth**, **ch**, and **tl** (age 3-7)
- That have a ' (glottalized sounds) like **qw'** and **ts'** (age 3.5-7.5)
- Where the tongue touches the back of the teeth (interdentals) like **th** and **tth** (age 4.5-7.5)

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# Language Nest

**7 families, 16 children, age ranging from 18 months to 9 years old**

New method: instead of working with Elders, working with L2 learner-speakers, learning alongside children

Covid also impacted the way the nest happens...

- Continued the nest on Zoom so the children still saw each other and people stayed in touch
- Now, parents meet on Zoom on Saturdays



# Language Nest: Now

Have been growing immersion in our own homes with daily activities. Came up with some sentences that we say daily and started speaking them in hul'q'umi'num'. Things like...

- **Commands** (Go have a snack, Put away your bags, etc.)
- **Routines** (in the morning, after school, evening)
- Pointing out **images** in picture books
- **Counting, singing songs**
- Pointing out **animals** on car rides
- Being able to understand **words or commands at cultural gatherings**

Kids have even been correcting their families outside of the house on their language!

Impact on the whole community, not just the family doing the Nest.

# Three projects so far

Numbers (Martina Joe and Rosie  
George's class paper)

Glottals (Rosie, Martina, Thomas  
Johnny, Dana Shier, Blair Chartrand,  
Sam Sundby)

"Repeat after me"

# “Repeat after me”

Children 3-7 years old repeated after adults (body parts, creatures, and numbers).

Described...

- How old children were the first time they said specific sounds
- Number of times in the word lists they **heard** or **said** those sounds

*Predictions* from other languages were helpful but imperfect.

The more kids heard a sound, the more reliably they could say it. – best at sounds in both langs

# Predictions vs. Reality

		Age of first production in Hul'q'umi'num'							
		3	4	5	6	7	Not yet produced		
Age predicted in Skwxwu7mesh flyer	3	h, k, kw, l, lh, m, n, p, qw, s, sh, t, w, x, y				hw, xw	kw', qw'	<b>Legend</b> Hul'q'umi'num' age compared to prediction in Skwxwu7mesh flyer Younger Same Older No production so no comparison No prediction so no comparison	
	4	ch, t'					*ch', p'		
	5						*t'		
	6								
	7								
	No prediction	' , *'n, q, q', th, ts					l', 'm, n', w', *'w, y'		'l, m', tth, tth', ts', *'y

\* Starred sounds were not in the input.

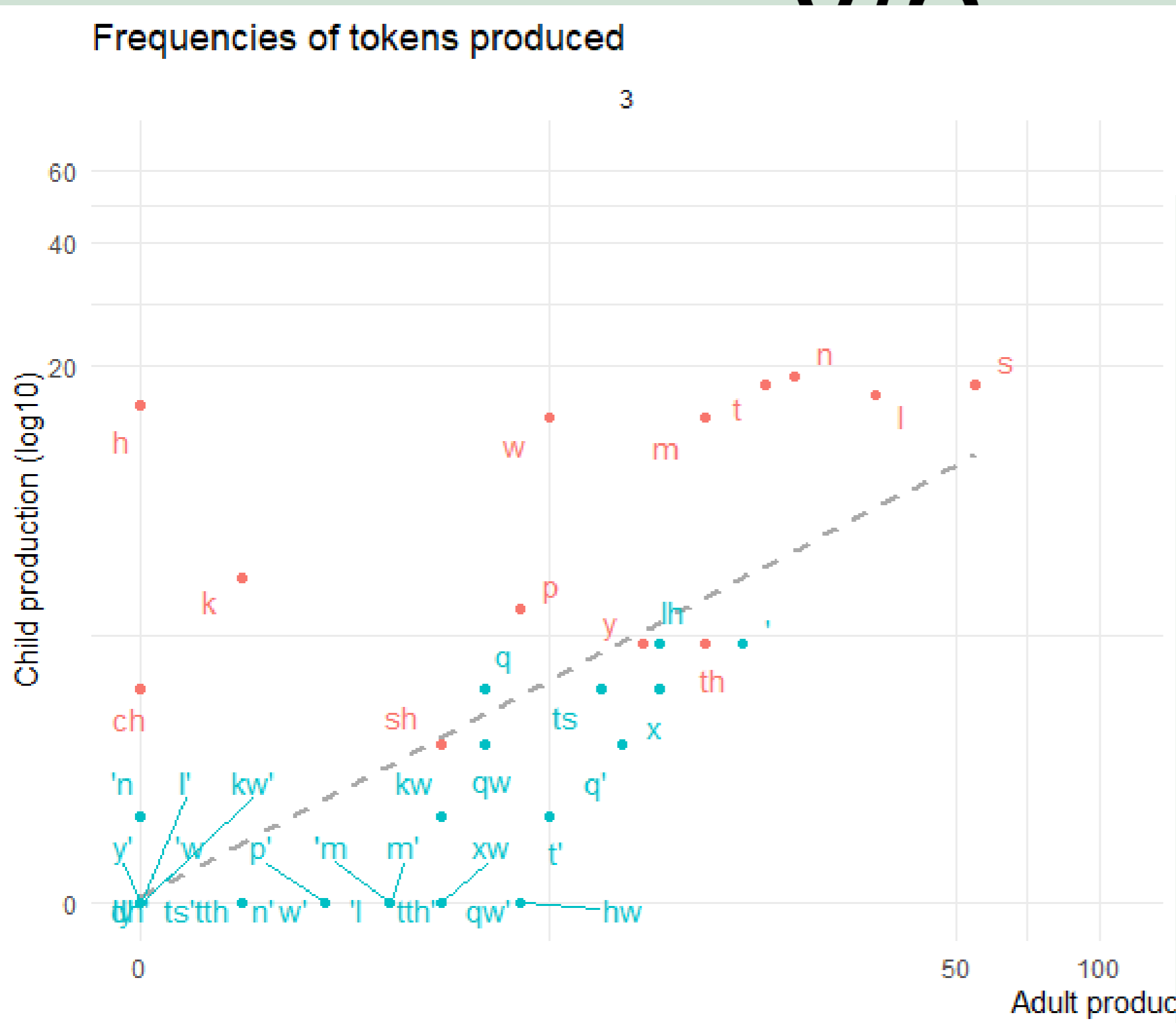
/t'/ and /ch/ occur earlier and /hw/ and /xw/ occur later in Hul'q'umi'num' than predicted

Table by Kwan, B. (2022)

# Hear more, say more: 3

who

Frequencies of tokens produced



**Kids mirror their models:** Sounds they heard more, they said more.

Sounds from both languages (red) more frequent than ones from Hul'q'umi'num' only (blue)

Some sounds (e.g., /ch/, /h/, /k/, /w/) are over-represented in 3 year olds' speech, (sort of expected)

/q/, /qw/ and /q'/ are produced by 3-year-olds!

Glottalized sounds are rare

# Hear more, say more: 7

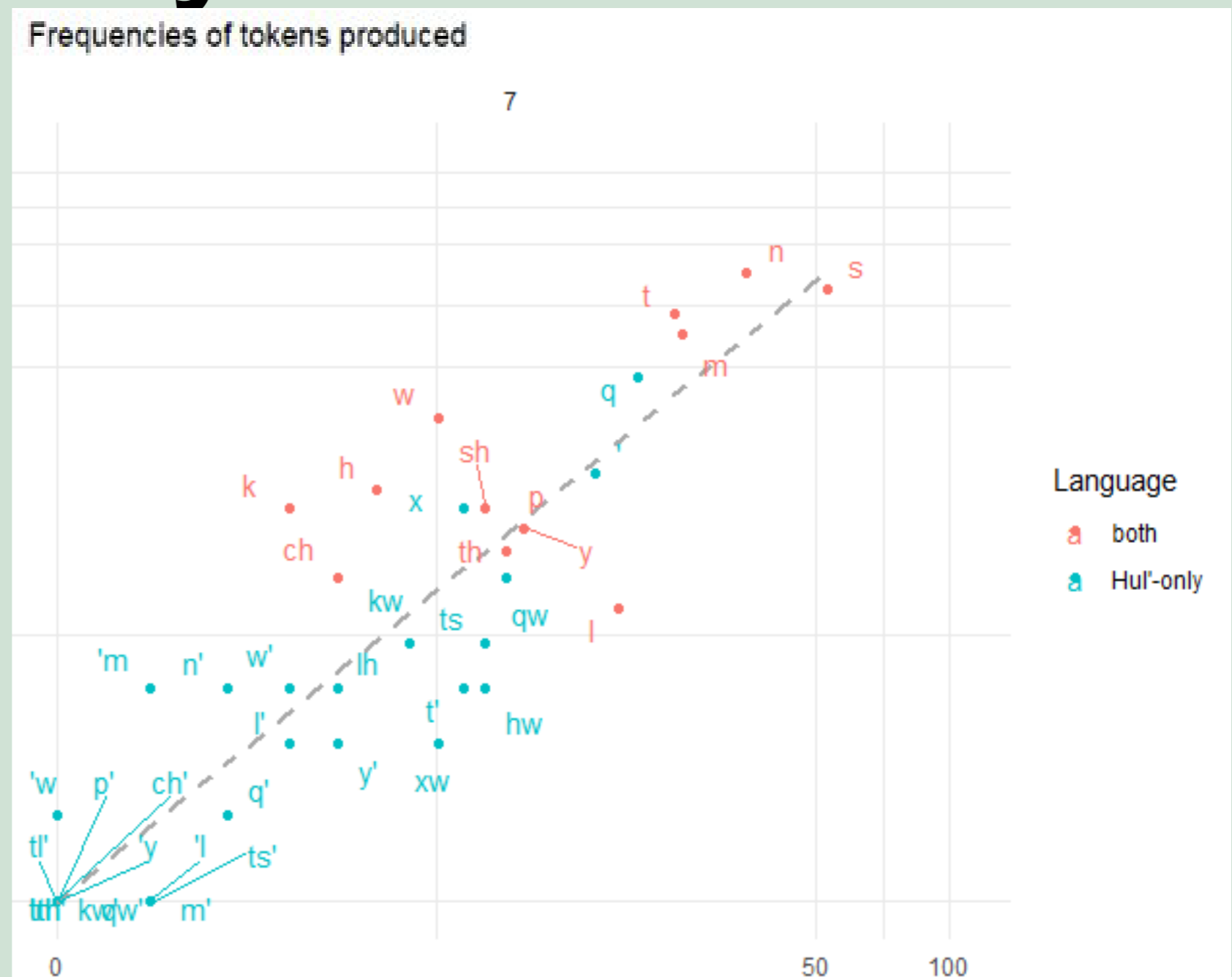
## y/o

**Kids mirror their models:** Sounds they heard more, they said more.

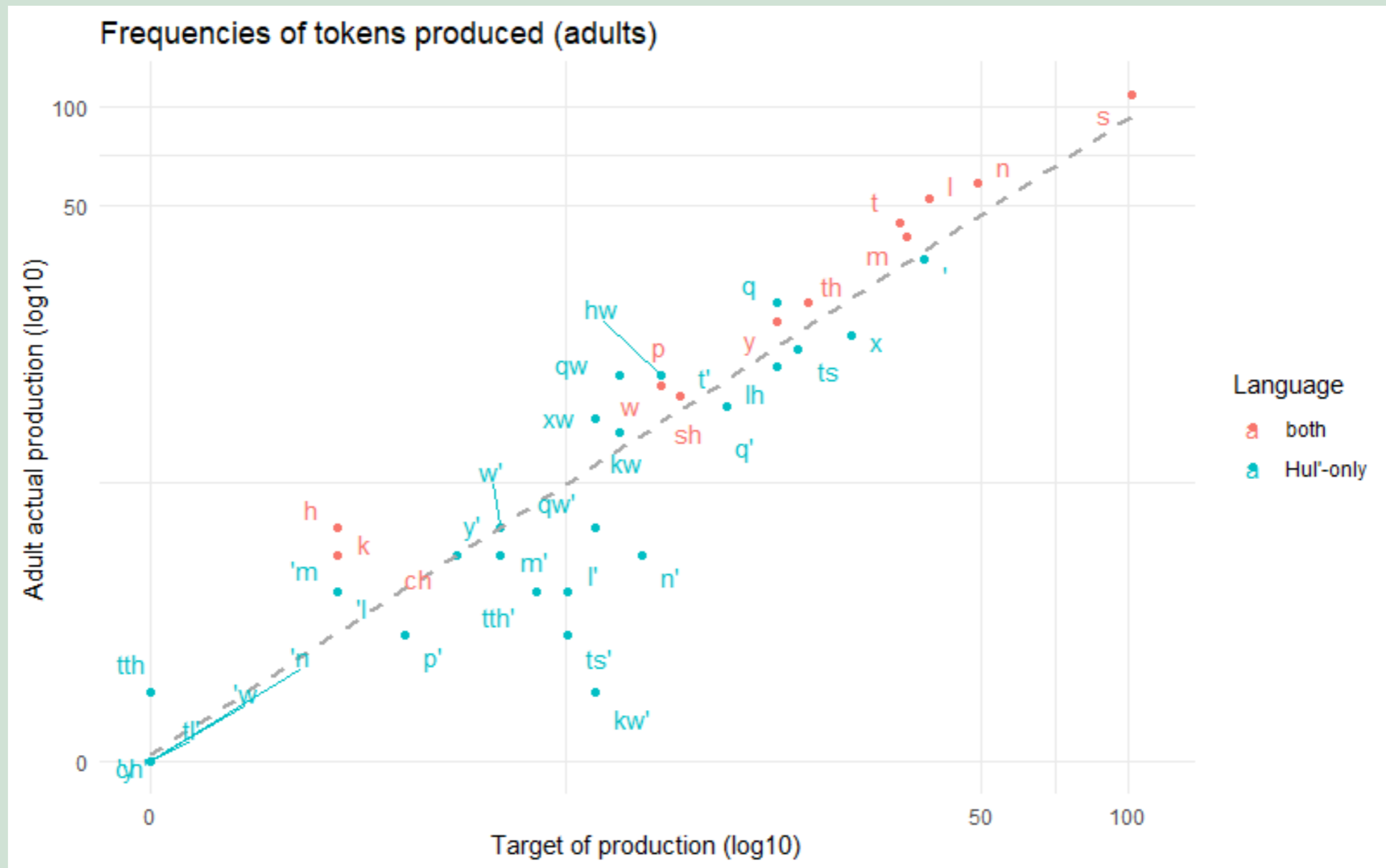
Sounds from both languages (red) still more frequent than ones from Hul'q'umi'num' only (blue)

The over-represented sounds (/ch/, /h/, /k/ , /w/) becoming **more like adults**/closer to the line than for 3-year-olds.

**Glottalized** sounds still rare



# Adult Accuracy



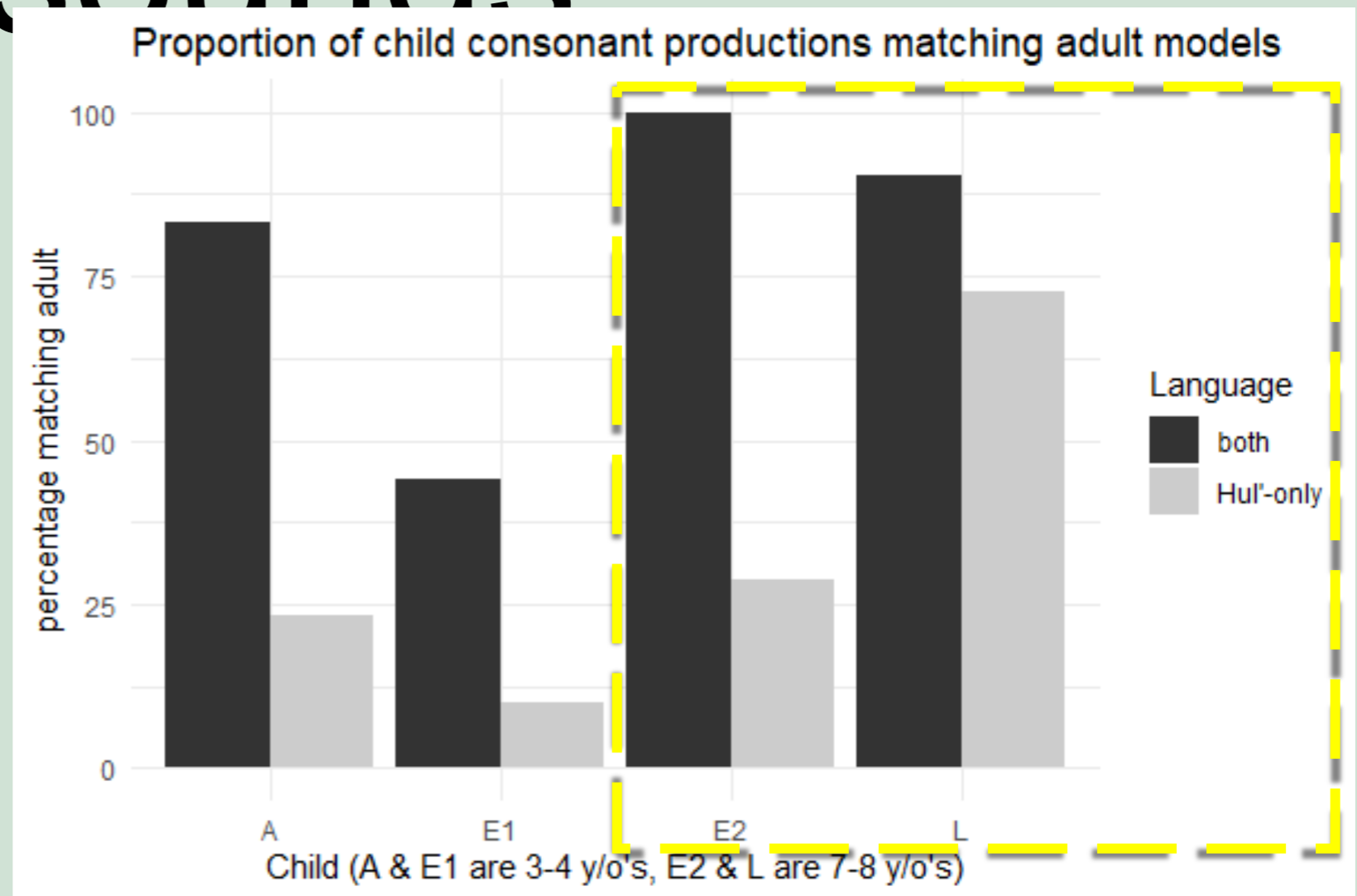
More /tth/ than what they were aiming for

Fewer glottalized sounds than what they were aiming for (see the cluster under the line)

# Matching adult sounds

By 7 years old, exposure to Hul'q'umi'num' influences proportion of Hul'q'umi'num' only sounds produced by kids:

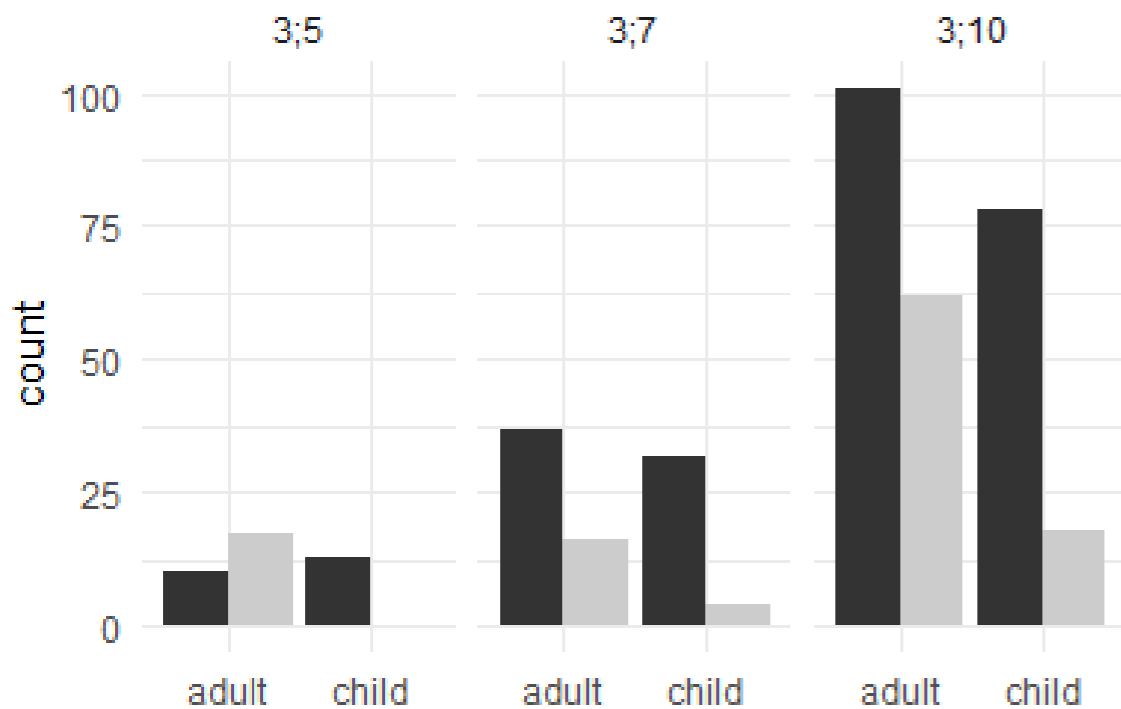
L is exposed to Hul'q'umi'num' more regularly than E2 and has a much higher proportion of Hul'q'umi'num' only sounds



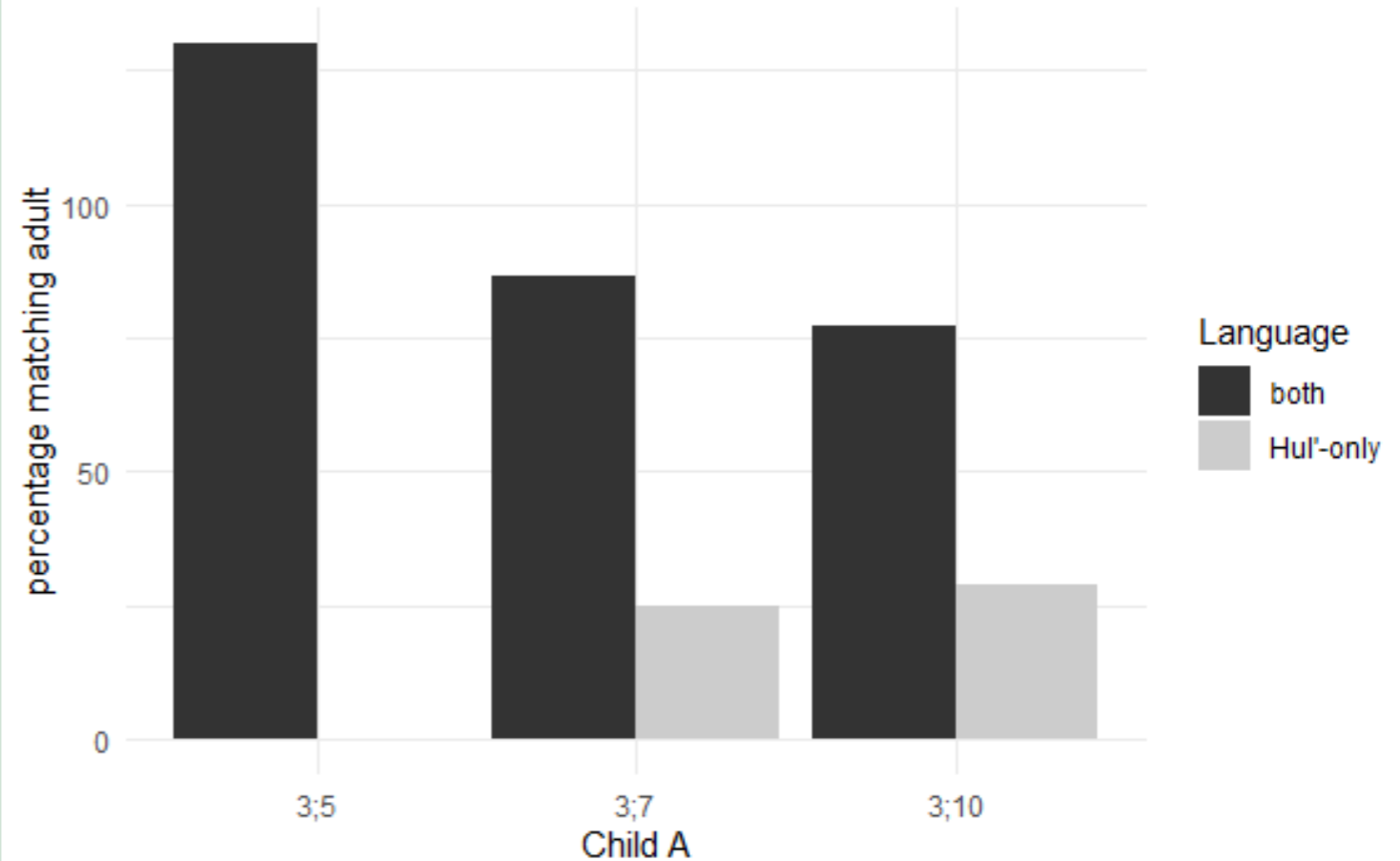


# Growth in 5 months

Child and adult productions of phonemes:



Proportion of child consonant productions matching adult models



In a span of 5 months (3;5 to 3:10), A went from saying no Hul'q'umi'num'-only sounds to saying 30% of those she heard!

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# What to expect

Some sounds will be harder than others! This is normal.

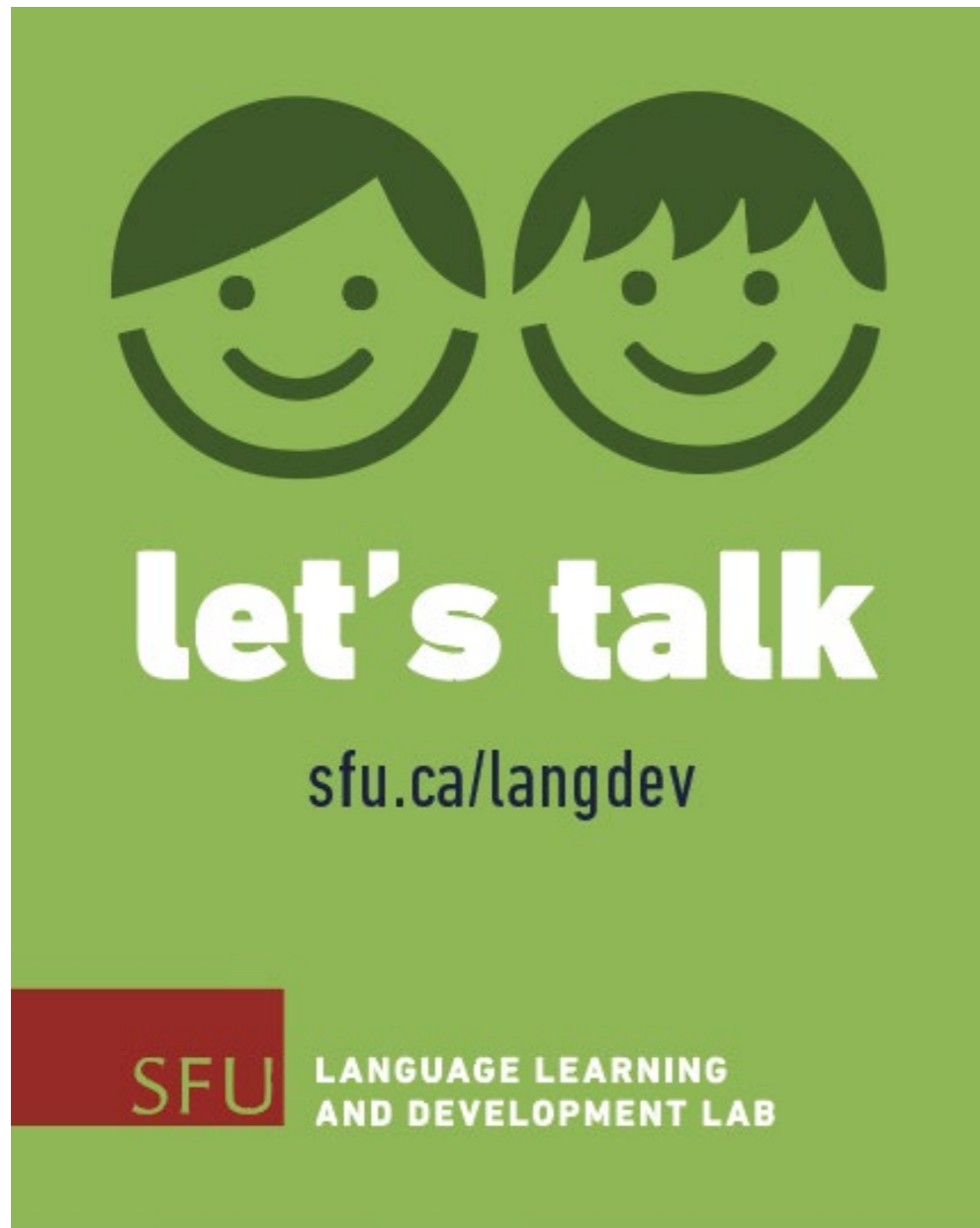
Everything is learnable over time.

Keep “input” in mind: what do your children hear?

# Discussion

Do you think pronunciation patterns will be different for adult learners? How?

What questions still need to be answered about how kids learn Coast Salish languages? (There are a lot! This is the first time this work is being done.)



Huy tseep  
q'u!  
Thank you!

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