#### Enabling tool: Estonian-English code-mixing of a 2-year-old with even input

# **Usage-based theory**

**Lexically fixed combinations** 

 $\mathbf{\Psi}$ 

slot and frame patterns

 $\mathbf{V}$ 

abstract patterns

I want candy

 $\downarrow$ 

I want X



### **Usage-based theory**

.Entrenchment

- ·How to bilingual children's languages interplay as the children produce speech?
- •Quick et al (2018, 2020) and Gaskins (2019) have found:
- •MLU follows input patterns
- •MLU is higher for code-mixed utterances
- Code-mixed utterances are syntactically more complex

## **Participant and data**

- .Case study
- .2;4-2;10
- Estonian-English simultaneous bilingual
- Language separated by time and on an average week fairly balanced
- .35h of data

Monday	EST
Tuesday	ENG
Wednesday	EST
Thursday	ENG
Friday	EST
Saturday	ENG
Sunday	ENG

### **Methodology**

- . 6853 utterances coded:
- Monolingual Estonian
- Monolingual English
- Code-mixed
- .3 analyses:
- Language proportions
- MLU for monolingual and code-mixed utterances for 3 periods
- Complexity analysis (sentences, phrases, fragments)

### **Results: language proportions**

	Estonian days	English days
CM utterances	42%	40%
EST utterances	44%	15%
ENG utterances	14%	45%

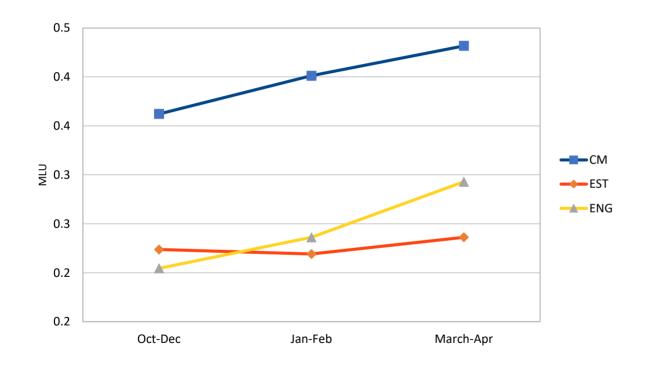
Other studies with similar aged children:

Quick et al. (2018): 7%, 9%, 10%

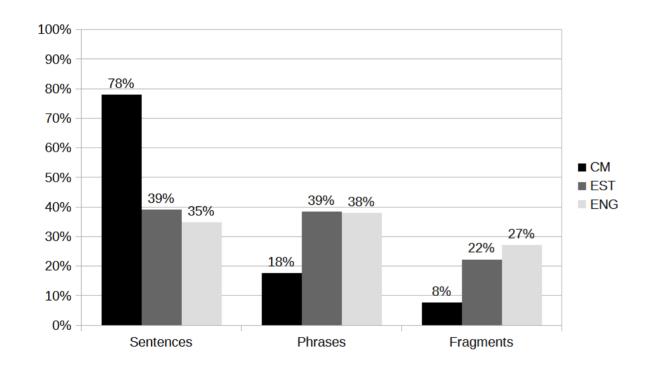
Gaskins et al (20xx): 9%, 11%, 40%\*

\*(2h of data)

#### **Results: MLU scores**



# **Results: Complexity analysis**



#### **Discussion**

Language proportions and MLU reflected the input pattern

Why so many code-mixed utterances?

Why did the code-mixed utterances have the highest MLU?

Code-mixing as an enabling tool

Thank you for listening!