

Can We Produce Two Languages Simultaneously?

The Influence of Simultaneous-Communication on the Spoken Language of Bimodal-Bilinguals

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Research Questions

- Simultaneous-communication (Sim-Com) – where sign language accompanies spoken language - is the common method of instruction in classrooms of the deaf.
- What are the changes in the spoken language (Hebrew) of bimodal bilinguals (Hebrew-Israeli Sign Language (ISL)) in a such Sim-Com situations?
- What are the factors that explain such changes?



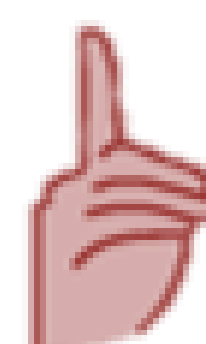
Theoretical Background

- The modality differences between spoken and signed languages, allows speakers the hypothetical opportunity of producing and perceiving two languages at the same time.
- Studies that tested Sim-Com found reduced use of idiomatic English expressions (Newton, 1985) and deletion of vocabulary and grammatical constructions that cannot be easily represented by the sign system (Kluwin, 1981).
- Different studies reported a "dual-response advantage" of the Sim-Com situation in naming tasks with fewer naming errors (Emmory et al., 2012; Kaufmann & Philipp, 2017).



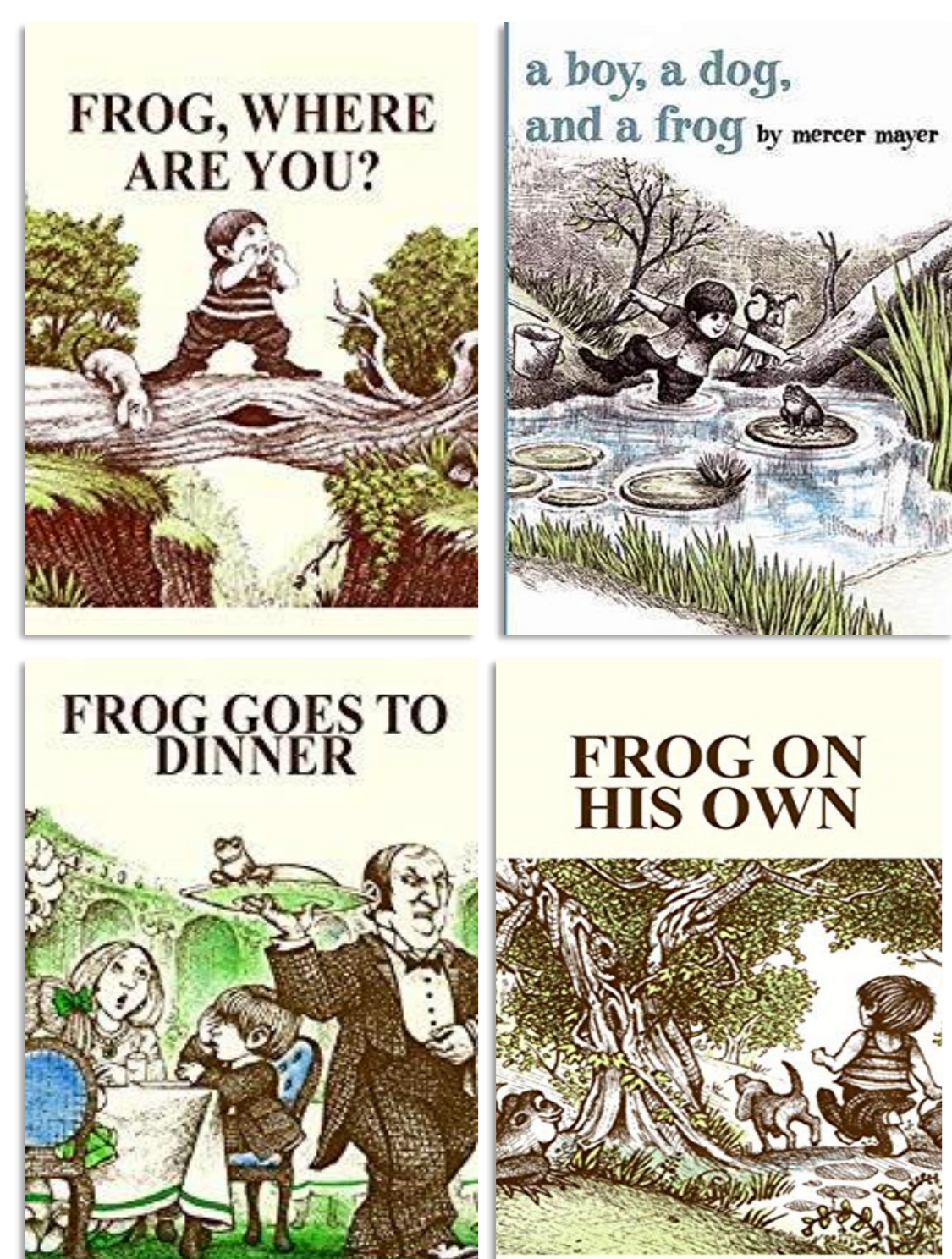
Participants

- 42 bimodal bilingual adults with Hebrew as a first language and ISL as a second language participate in this study.
- All participants will be teachers who work with deaf and hard of hearing students and use Sim-Com on a daily basis.



Procedure and Design

4 Frog Stories



in

4 Conditions

Speech alone



Sim-Com



Dual Task



Sign alone



and additional measures

ISL vocabulary test

ISL word	Hebrew word	ISL word	Hebrew word
1	אב	אב	אב
2	אב	אב	אב
3	אב	אב	אב
4	אב	אב	אב
5	אב	אב	אב
6	אב	אב	אב
7	אב	אב	אב
8	אב	אב	אב
9	אב	אב	אב
10	אב	אב	אב
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26	אב	אב	אב
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28	אב	אב	אב
29	אב	אב	אב
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31	אב	אב	אב
32	אב	אב	אב
33	אב	אב	אב
34	אב	אב	אב
35	אב	אב	אב
36	אב	אב	אב
37	אב	אב	אב
38	אב	אב	אב
39	אב	אב	אב
40	אב	אב	אב
41	אב	אב	אב
42	אב	אב	אב

ISL fluency test



Language History Questionnaire

שאלה	כן	לא
1		
2		
3		
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Research Hypotheses

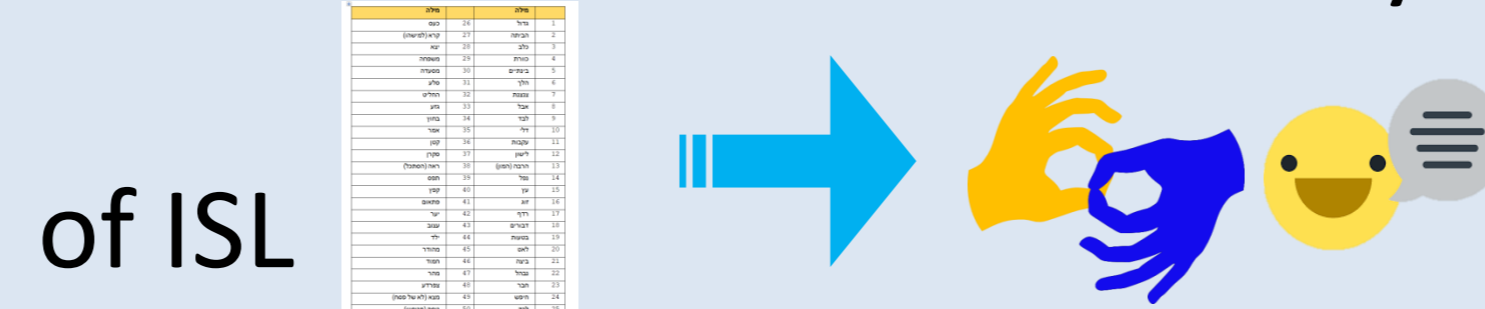
Initial Hypothesis: All participants will score better in the speech only condition than in the Sim-Com condition  

But Why? We expect 3 sources of explanations to contribute to the syntactic and lexical diversity of the Sim-Com performance:

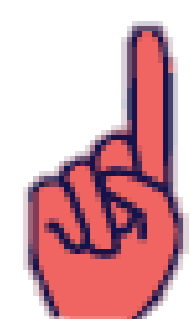
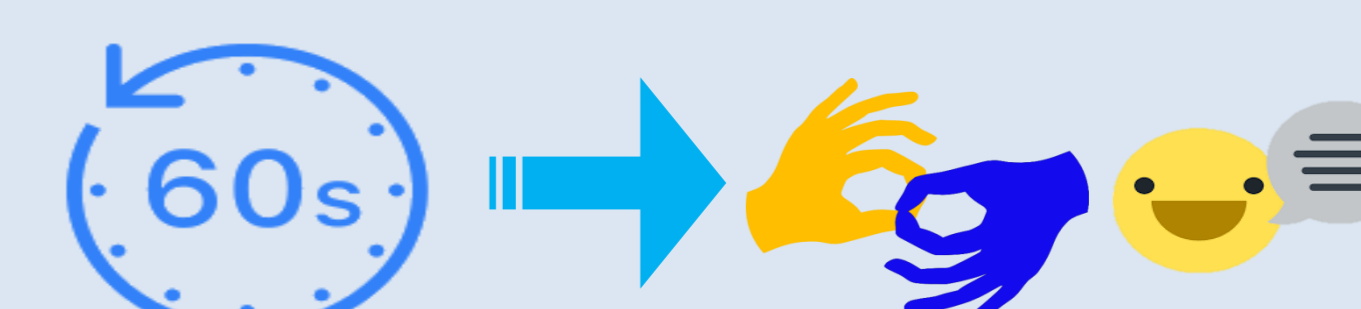
1. Cognitive load of doing two tasks together



2. Constraint from vocabulary knowledge of ISL

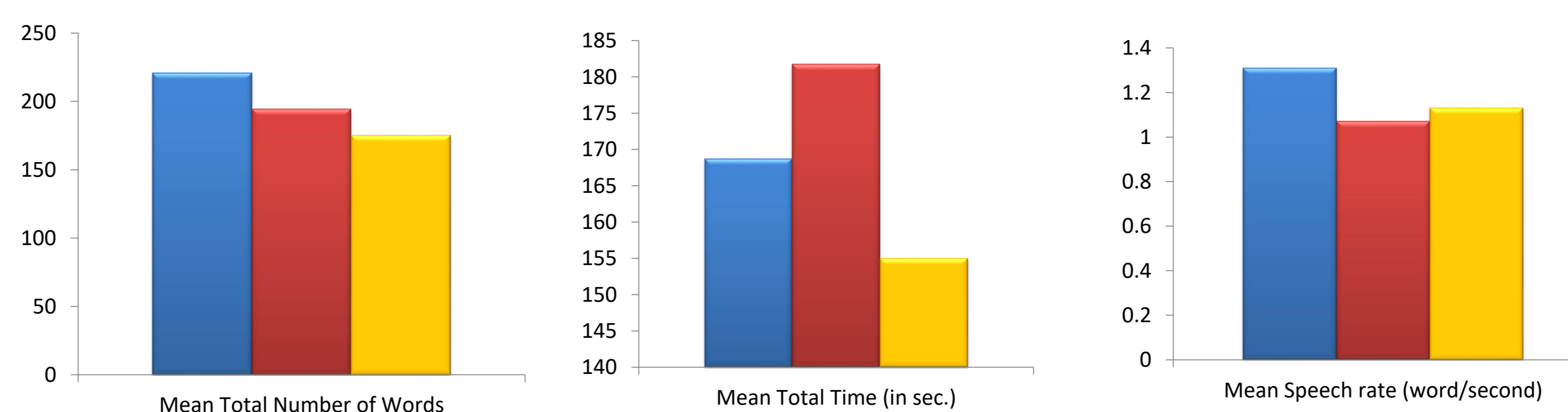


3. Automatization level of ISL



Preliminary Results (n=4)

■ Hebrew Alone
■ Sim-Com
■ Dual Task



Significance of The Current Study

- Investigates a less studied area- the Sim-Com influence on the **lexical and syntactic aspects** of the spoken language.
- Uniquely examines Sim-Com as a **dual task situation**.
- Investigates a situation that happens on a **daily basis** in the education system for deaf and hard of hearing children.



References

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- Kaufmann, E., & Philipp, A. M. (2017). Language-switch costs and dual-response costs in bimodal bilingual language production. *Bilingualism: Language and Cognition*, 20(2), 418-434.