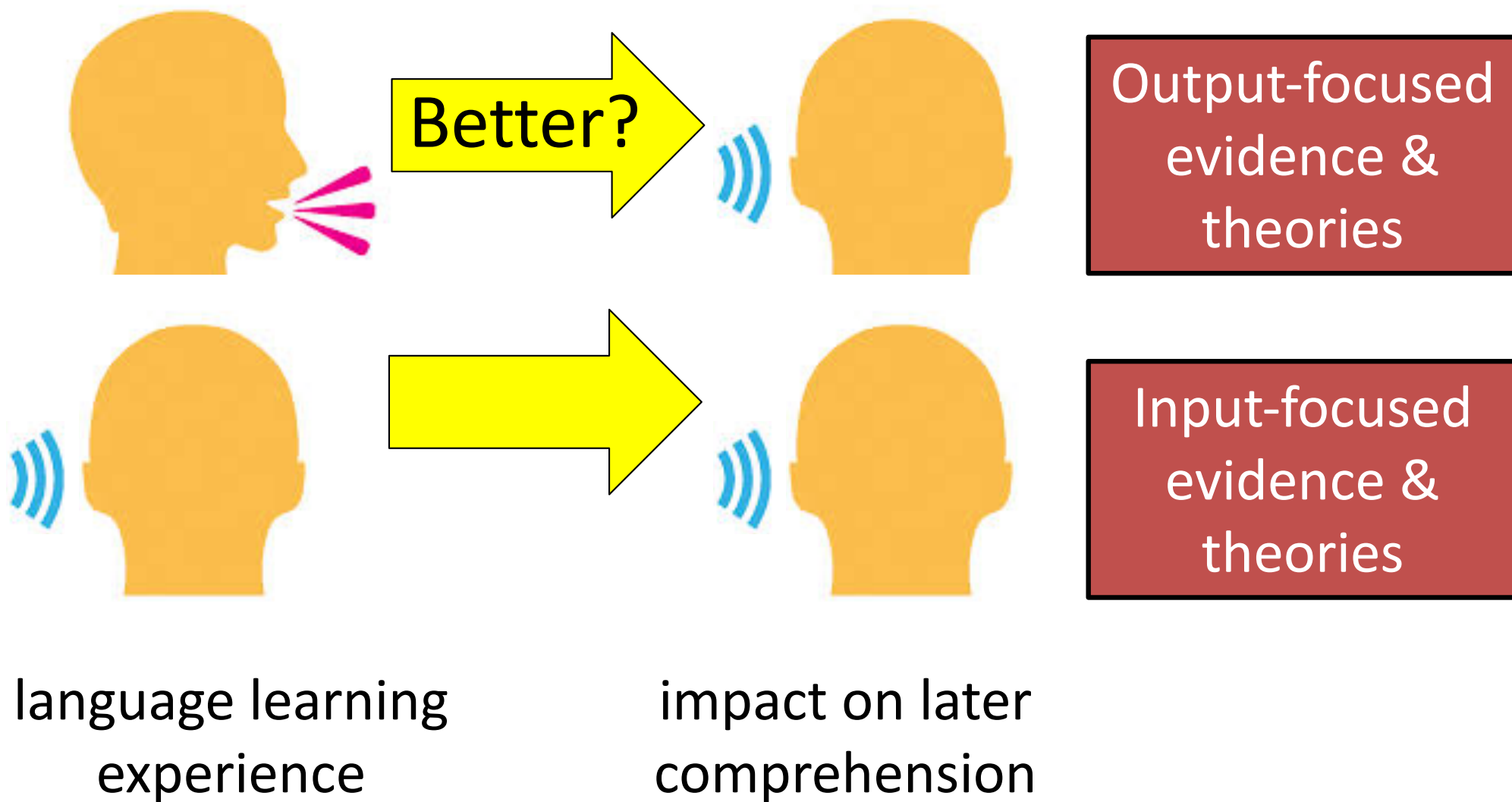


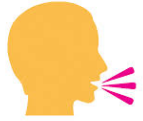
Language Production Practice Improves Comprehension Performance on Grammatical Dependencies in Early L2 Learning

Elise W.M. Hopman & Maryellen C. MacDonald





1. **Language production practice** might be a stronger learning opportunity than **language comprehension practice**



Why?

Memory literature:

Production involves

- Attention demands
- Task-relevant choices
- Hearing yourself speak
- Recall (vs recognition)

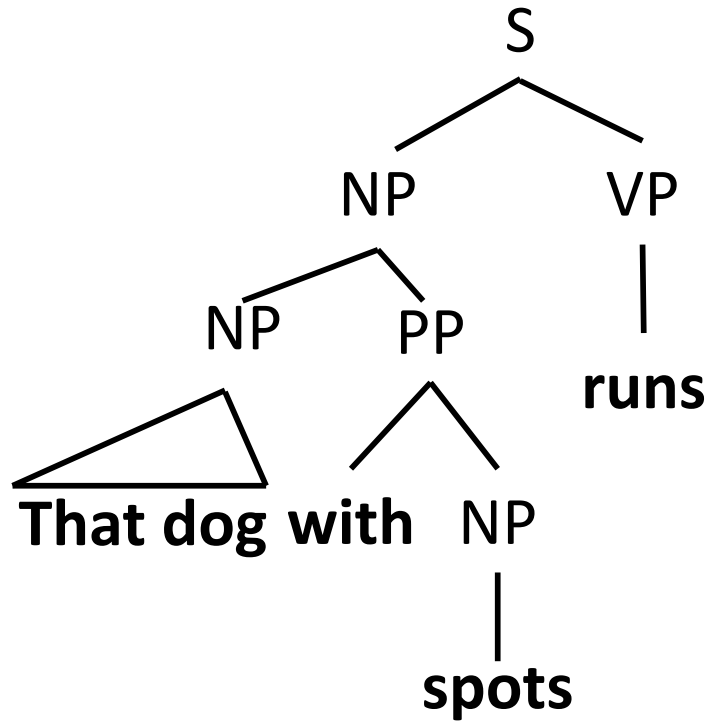
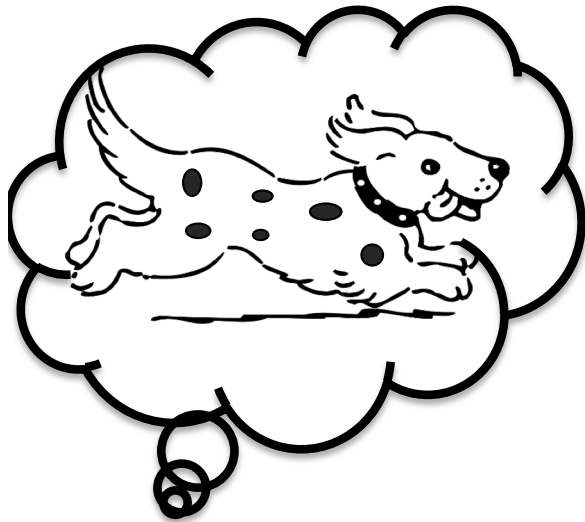
Production Effect
Testing Effect

Single Word  Sentence Level **Dependencies**

good enough processing, minimal syntactic analysis

Message

Utterance



[ðæt dɒg wɪθ spats rʌnz]

Message

Utterance Plan

Utterance

Binding

binding during sentence planning = learning opportunity

Artificial Language Training

Comprehension-Only
Learning
Condition



Mixed-Experience
Learning
Condition

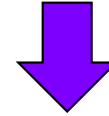
Production-Only
Learning
Condition



Passive Exposure (all learning conditions)



Active Block:

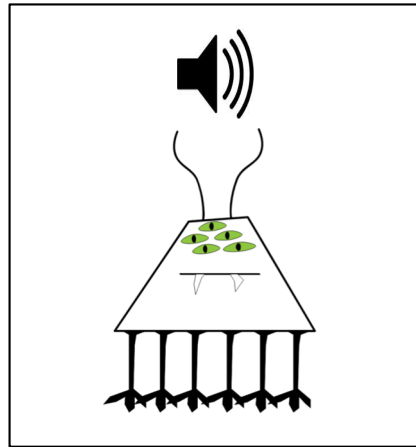


Active Block:



Active Block:

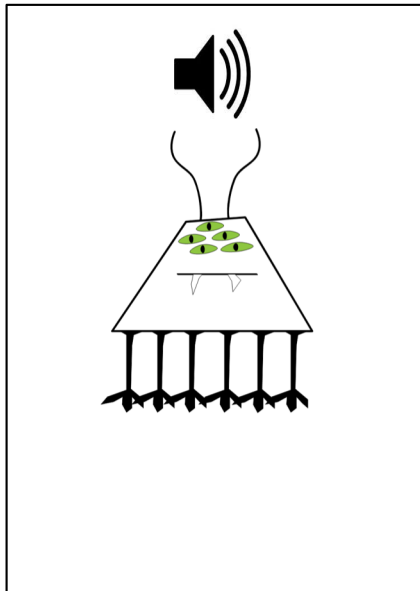
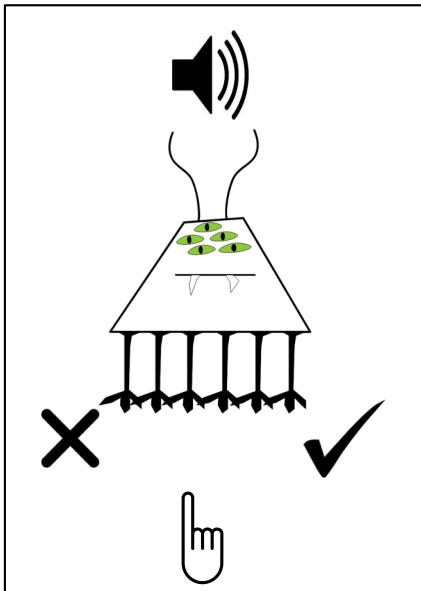
Passive Exposure (all conditions)



Comprehension Trials

Active task

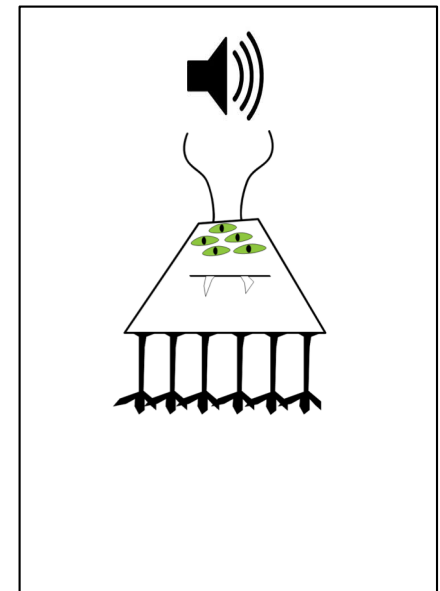
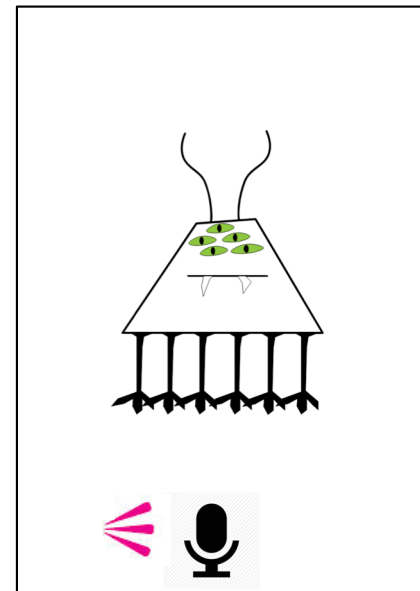
Feedback

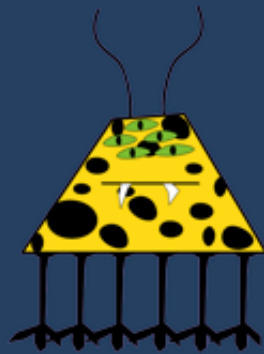


Production Trials

Active task

Feedback





Dependencies:

Number Agreement

Gender Agreement

Adjacent

Non-Adjacent



Vok	Safok	Magok	Chag	Ot	Zevok	Hullem
The	Yellow	Monster	Spots	With	Moves	Planet

Artificial Language:
Tool for
experimental control

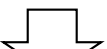


Voko	Safoko	Magoko	Chag	Ot	Zevoko	Hullem
The	Yellow	Monsters	Spots	With	Move	Planet

60 Comprehension Training
122 Mixed 62 Production



Vocabulary Screening Test (Threshold: 80% Correct)
52 Comprehension 104 Mixed 52 Production



Forced Choice Comprehension Measures

- Vocabulary in Phrases Test
- Suffix Understanding Test

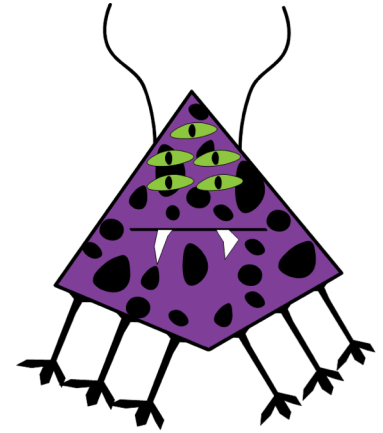
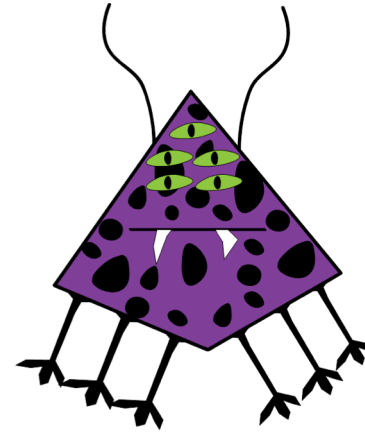
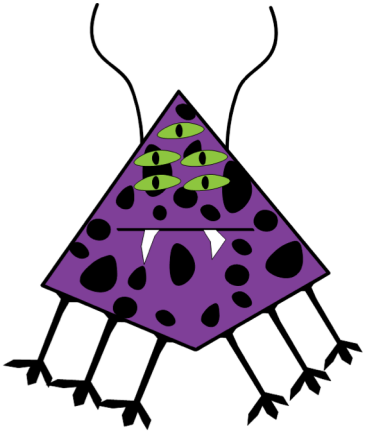
52 Comprehension 104 Mixed 52 Production



Error Monitoring during Comprehension Measures

52 Comprehension 52 Mixed 52 Production

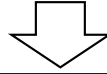
Forced Choice - Suffix Understanding Test



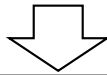
“Voko Fumoko Weemoko Chag Ot”

Training

```
graph TD; A[Training] --> B[Vocabulary Screening Test (Threshold: 80% Correct)]; B --> C[Forced Choice Comprehension Measures]; C --> D[Error Monitoring during Comprehension Measures];
```

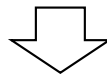


Vocabulary Screening Test (Threshold: 80% Correct)



Forced Choice Comprehension Measures

- Vocabulary in Phrases Test
- Suffix Understanding Test



Error Monitoring during Comprehension Measures

- Word Order Error Test
- Suffix Agreement Error Test

Error Monitoring - Suffix Agreement Error Test

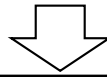


“Vok Fumok Zoutoko Stam Ot Pavok Kredel’

Training



Vocabulary Screening Test (Threshold: 80% Correct)



Forced Choice Comprehension Measures

Accuracy

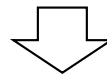
- Vocabulary in Phrases Test

RT

Accuracy

- Suffix Understanding Test

RT



Error Monitoring during Comprehension Measures

Accuracy

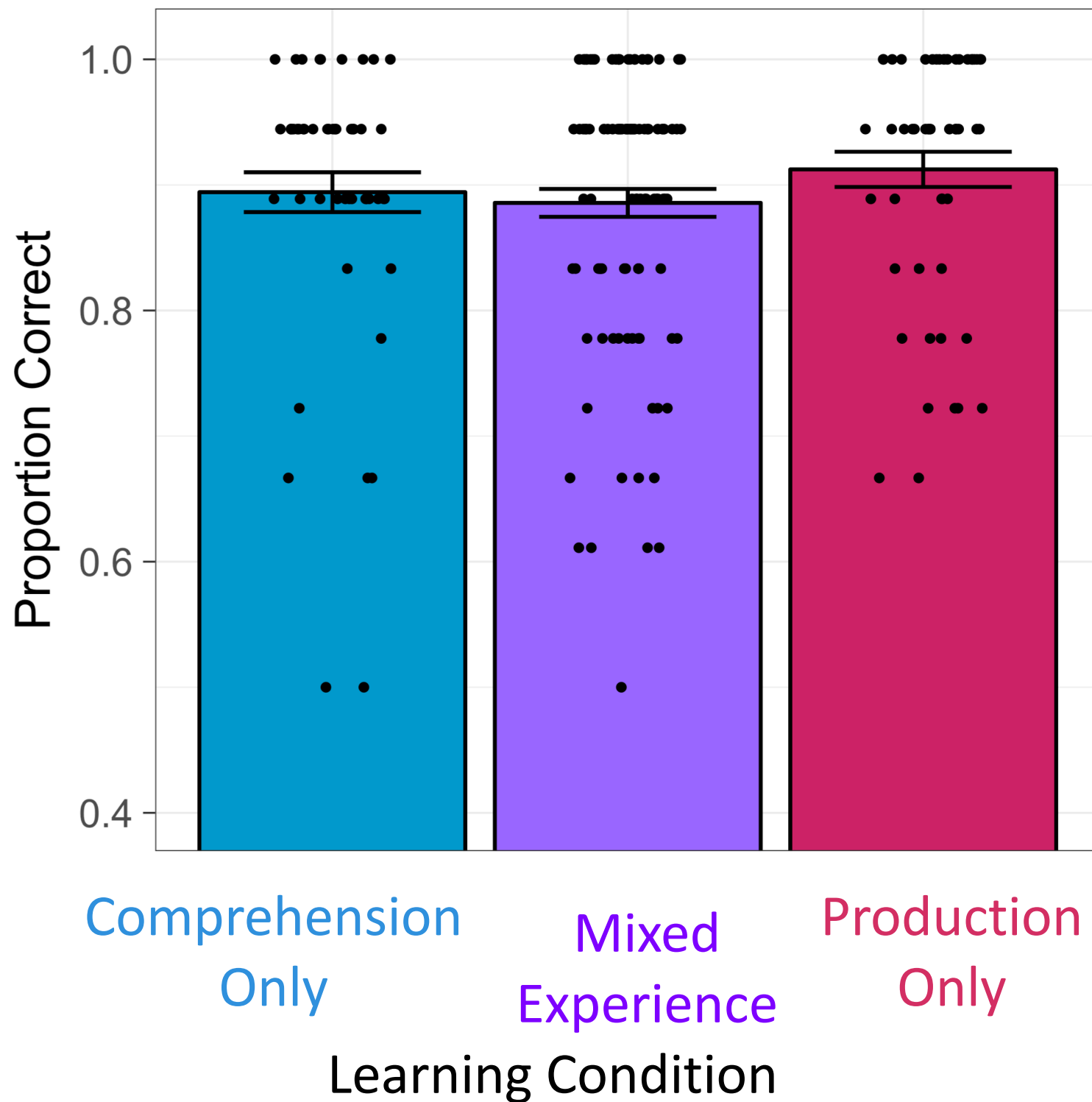
- Word Order Error Test

RT

Accuracy

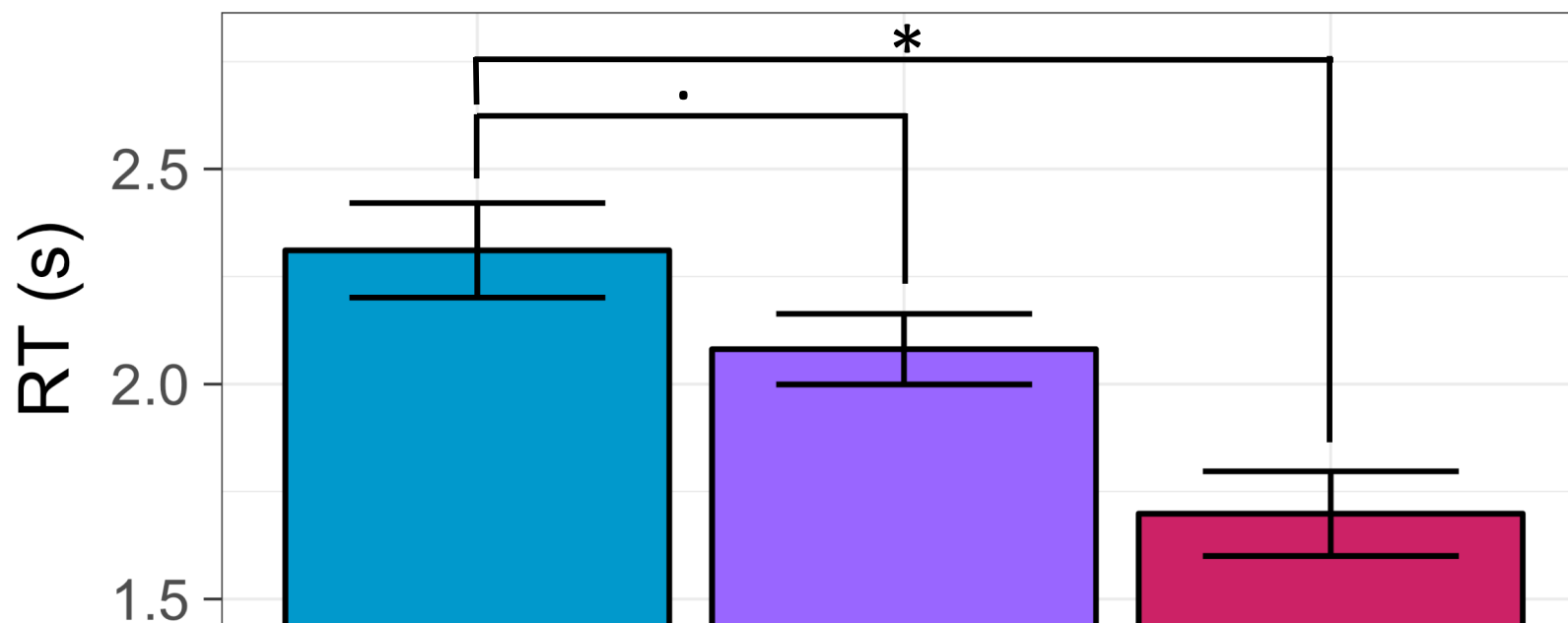
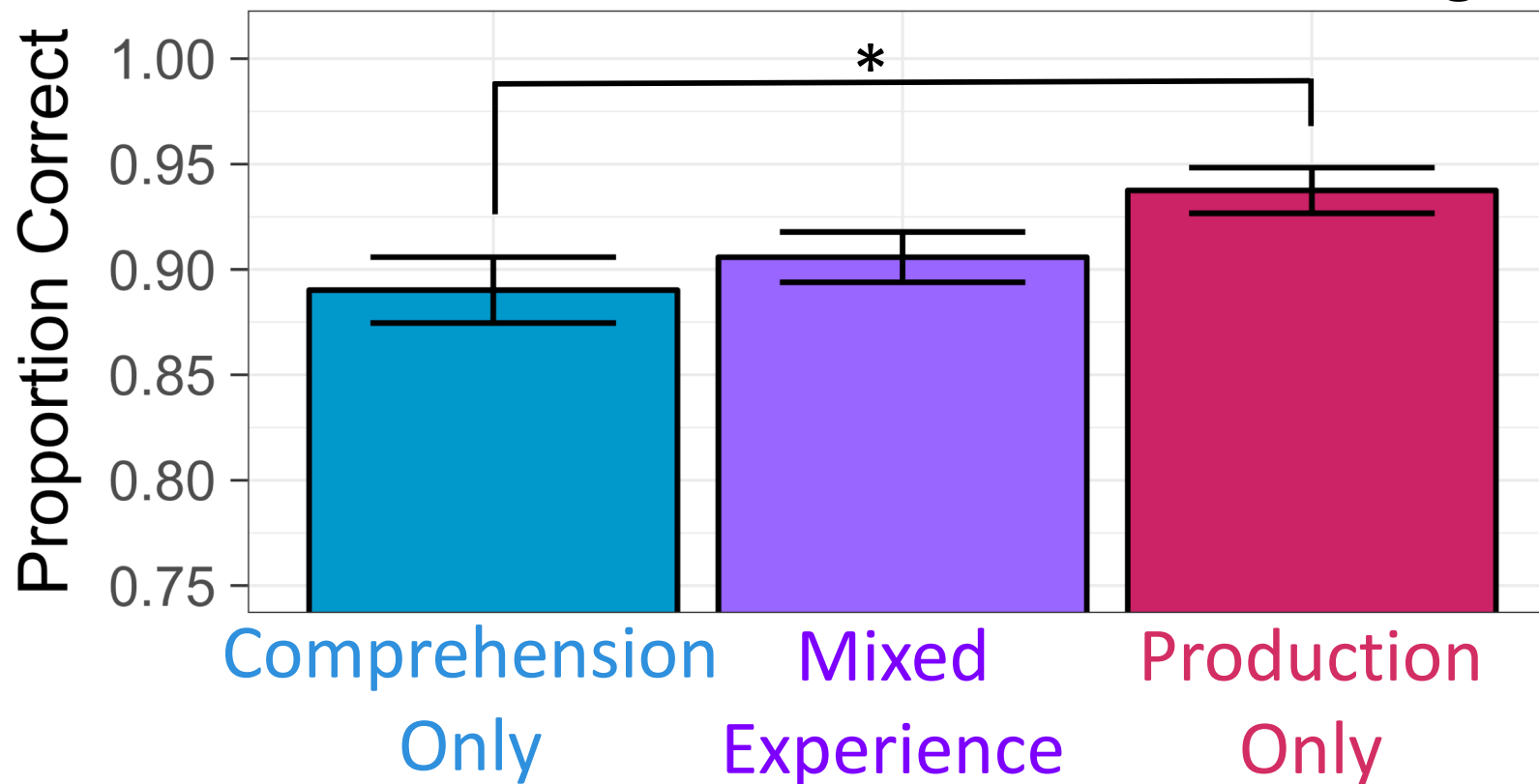
- Suffix Agreement Error Test

RT

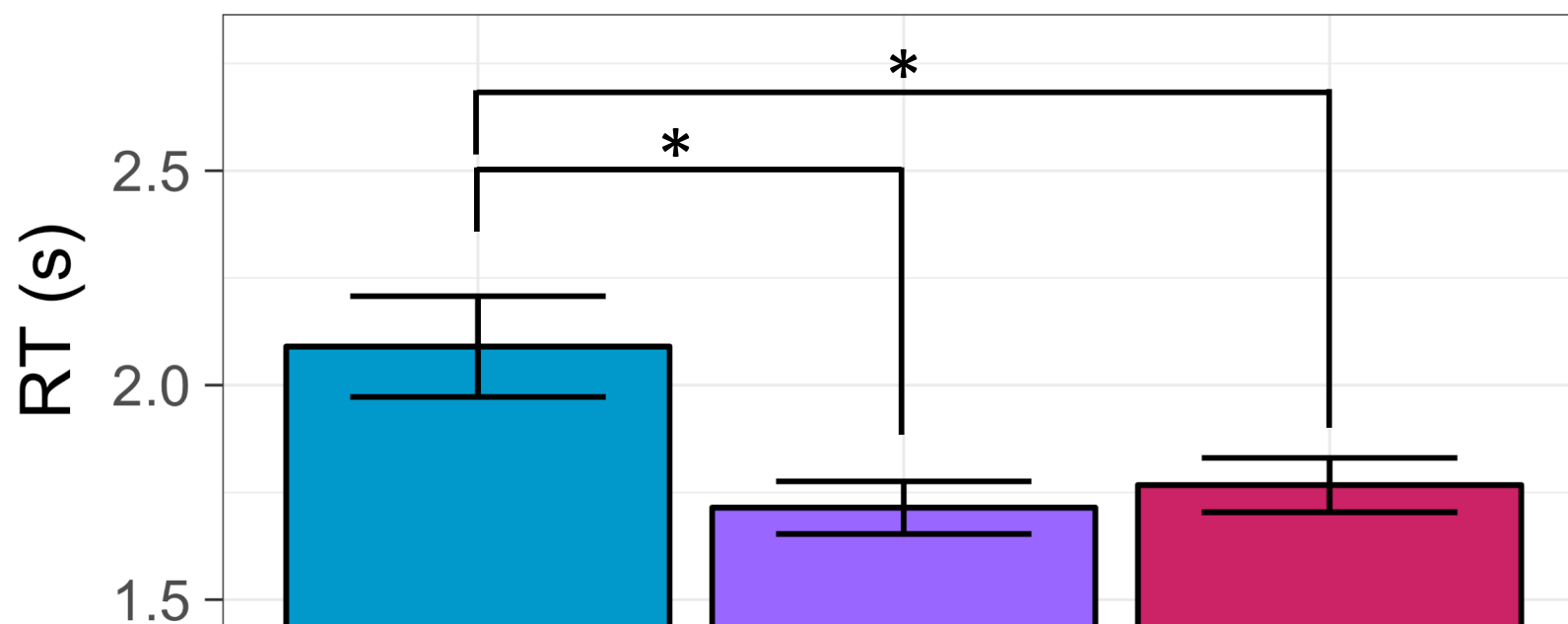
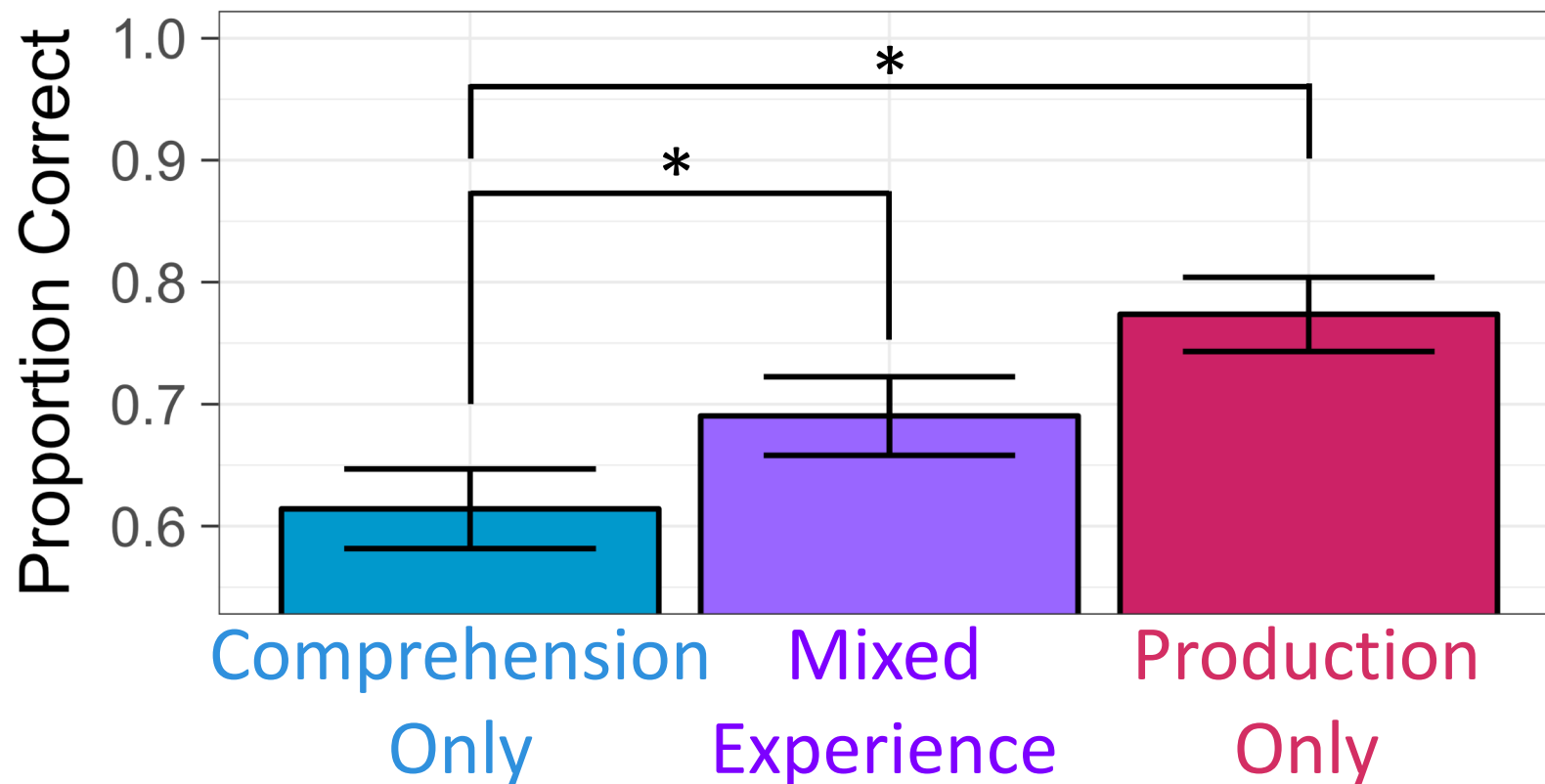


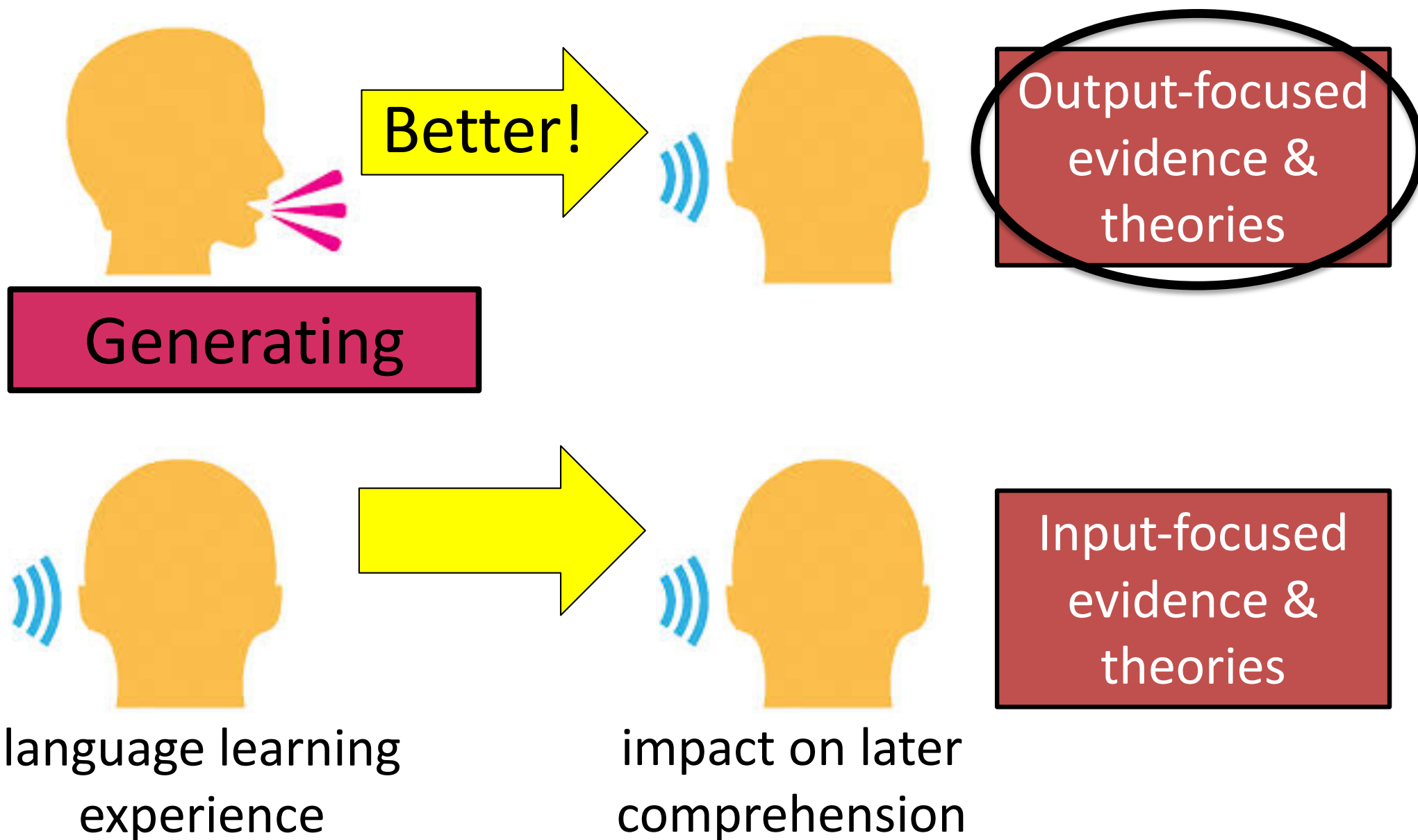
Covariate

Forced Choice – Suffix Understanding Test



Error Monitoring – Suffix Agreement Error Test







Research Article

Production Practice During Language Learning Improves Comprehension



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Psychological Science

1–11

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DOI: 10.1177/0956797618754486

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Thanks!

RAs:

Megan McClement

Teresa Turco

Gabriela Zayas Alom

Sarah Engel

Ann Chapman

Sarah Wang

Alma Reinebach

Mackenzie Ludin

Jamie Dawson

Emily Perez

Profs:

Mark Seidenberg

Jenny Saffran

Tim Rogers

Grad students:

Mark Koranda

Matt Cooper Borkenhage

Steve Schwering

Chris Cox

Martin Zettersten



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Questions?

