

#### Embodied practice to increase L1 vocabulary acquisition in French kindergarten children

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# Embodied practice to increase L1 vocabulary acquisition in

French kindergarten children









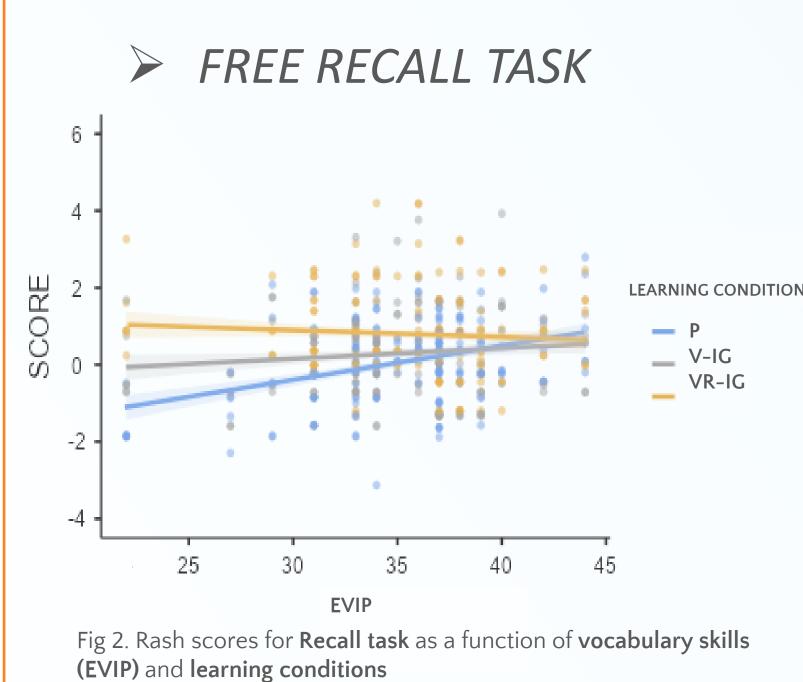
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#### Introduction

- L1 Vocabulary level in preschool children is a predictor of future reading al, 2004 ; Ouelette, (Muter skills 2006)
- Co-speech iconic gestures (McNeil, 1992) : Co-speech gesture illustrating some *semantic properties* of the *word referent* → An efficient tool to support L2 vocabulary learning in both adults and children (see for example Kelly et al., 2009 ; Quinn-Allen 1995 ; Tellier, 2008)
- Embodied (Macedonia, 2019) Pedagogy Framework
- Previous study: Focus on the use of iconic gestures to support L1 vocabulary acquisition (action verbs & nouns) in French Kindergarten children in comparison with picture presentation
- 1) The effect of learning conditions depends on the tasks: beneficial effect of iconic gestures for free recall & recognition task
- 2) Learners' vocabulary skills modulates the effect of learning conditions for definition task
- 3) No difference in the effectiveness of learning conditions depending on word types & learners' manual dexterity level.
- Objectives of the current study: Replicate and extend previous results obtained by adding 1) long-term measurements and 2) a third learning method i.e. gesture visualization -> To ensure that the (potential) benefits of the iconic gestures are explained by the children's motor engagement.

### (Preliminary) Results



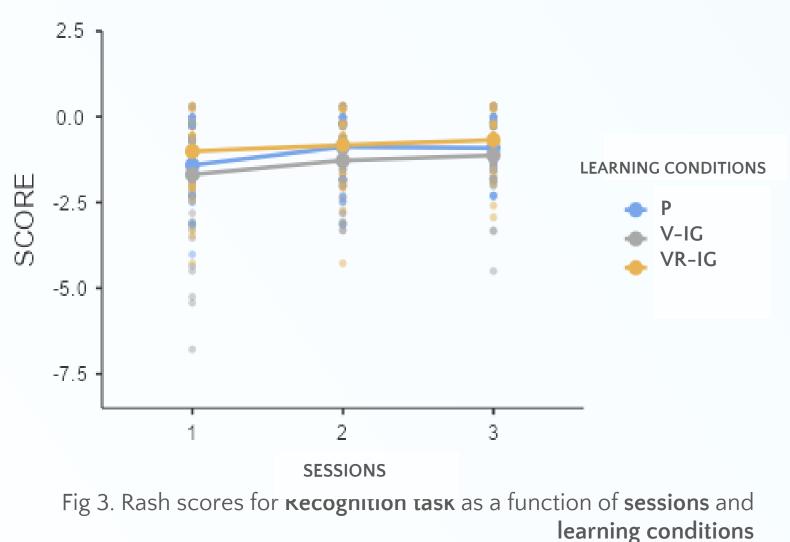
An interaction effect between learning conditions and vocabulary skills (p=0.001) ie. For children with a low/medium level of vocabulary:

- 1) More wore recalled in gesture conditions (V- IG & VR-IG) than in picture condition (P) (p <0,001)
- 2) More words recalled in VR-IG condition than in V-IG (p<0,05)

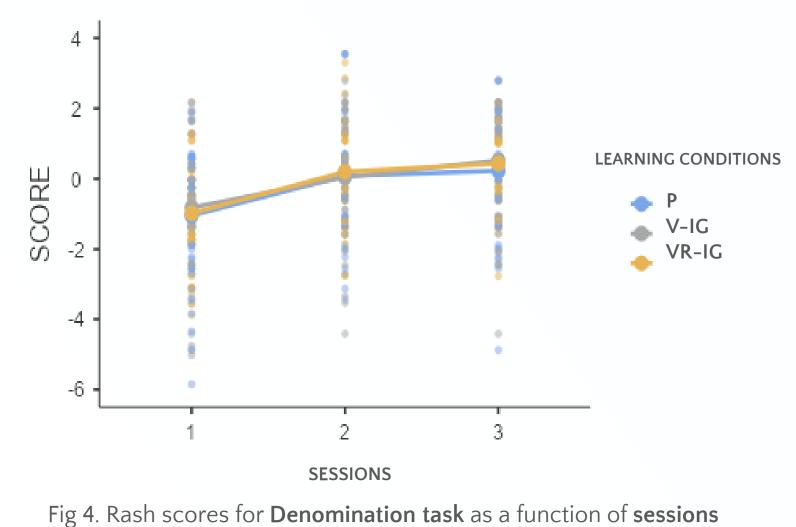
#### RECOGNITION TASK



- 1) No difference between gesture (V- IG & VR-IG) and picture conditions (P)
- 2) For gesture conditions, more words recognised in VR-IG than in V-IG.



### DENOMINATION TASK



and learning conditions

No main effect of learning conditions, only an effect of sessions with more named words

- In S2 than in S1
- 2) In S3 than in S2

#### Method

- 30 kindergarten (12 Girls & 17 Boys) aged to 5,6  $\pm$  2 months from medium to high socioeconomic backgrounds
- 30 new words to learn with videos: 15 action verbs ("to crumple") & 15 nouns ("suspenders")
- 3 learning conditions (see Fig.1):
- Pictures (P) presentation
- Visualization of iconic gestures (V-IG)
- Visualization & Reproduction of (VR-IG) iconic gestures
- Before vocabulary training: evaluation of reasoning (WIPSSI-IV, Wechsler, 2014), vocabulary skills (EVIP, Dunn & coll, 2013) and manual dexterity (MABC-2, definition task Henderson
- Vocabulary training: 2 sessions/ method in on week by group of 3 or 4 children through videos
- Evaluation with 4 tasks in short & long term (D+7 & 21): free recall, recognition, denomination and definition task







Fig 1. Examples of learning session for each experimental conditions: A) Pictures (P) for « straps »; B) Visualization of iconic gestures (V-IG) & C) Visualisation and Reproduction (VR-IG) for « to knead »

#### Discussion

- Results corroborate those of the first study: benefit of the gesture conditions depends on the tasks -> superior effect for recall and recognition tasks
- For recall task: modulation of the effect of learning conditions according to learners' initial vocabulary skills -> children with a low/medium level benefit most from the gesture conditions. To be seen for the definition task?
- Benefits of gestures are due to the learners' physical engagement: in line with the "embodied pedagogy" framework (Macedonia, 2019)
- Effects maintained at D+ 7: what about at D+ 21?
- Interestingly, no difference in the effectiveness of enrichment conditions depending on word types
- Next steps :
- Contextualization of vocabulary learning (story reading)
- Include children from low socioeconomic backgrounds

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