Kindergarteners’ statistical learning is influenced by instruction

Spit, S.B.; Andringa, S.J.; Rispens, J.E.; Aboh, E.O.

Citation for published version (APA):
Kindergarteners’ statistical learning is influenced by instruction
Sybren Spit, Sible Andringa, Judith Rispens & Enoch O. Aboh, University of Amsterdam

**Statistical learning**
Inferring word boundaries (Safran, Johnson & Aslin, 1996; Endress & Bonatti, 2007; Gomez & Gerken, 1999)
Learning words and referents (e.g. Vouloumanos, 2008; Yu & Smith, 2007; Smith, Suanda & Yu, 2014)
Acquiring agreement markers (e.g. Lany, 2014; Lany & Safran, 2013; Monaghan, Mattock, Davies & Smith, 2015)
Learning a meaningful agreement marker (Spit, Andringa, Rispens & Aboh, under review)

**Research questions**
Can we replicate our findings that kindergarteners learn a meaningful agreement marker on the basis of distributional properties?
Does explicit instruction influence the acquisition of such a marker?

**Participants**
102 Dutch speaking children (51 females, $M = 5;7$), 50 were explicitly instructed, 52 were not instructed

**Method**
- Exposure
  - Miniature language:
    - Four proper names, three verbs, two grammatical markers,
    - six frequent nouns and twelve infrequent nouns
  - Exposure: 108 training sentences (+ 12 fillers)
- Rule
  - Pli: probability that the noun has multiple referents = 1
  - Tra: probability that the noun has multiple referents = .5
- Test
  - Picture matching task with eye tracking

**Results**

**Conclusion**
Explicit instruction did not increase accuracy, but it did lead to earlier predictive eye movements.
In a follow-up experiment, we will test children on a delayed post-test, to investigate the effect of sleep on the development of kindergarteners’ knowledge.