Insights from novel measures of visual statistical learning in children

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Insights from novel measures of visual statistical learning in children

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BACKGROUND
Statistical learning is usually tested through:
• Exposure to continuous stream of stimuli
• Offline test-phase: 2-AFC

Importance of online measure: provides information about the learning trajectory during exposure.
Several researchers have shown that online measures provide reliable results with adult participants [1, 2, 3].

Present study: we assessed children’s VSL abilities using
• an online reaction time (RT) measure [3]
• two distinct offline question types

RESEARCH QUESTIONS
1. Are children able to extract statistical regularities from visual input?
2. Can we improve the methodology to measure statistical learning in children?

RESULTS
Offline test phase measures
• Comparison children’s performance to chance level:
  • Not above chance on 2-AFC questions (p = .372)
  • Above chance on 3-AFC questions (p = .042)

Online RT measure
• Main effect of alien:
  • Alien 1 > Alien 2 (p < .001)
  • Alien 1 > Alien 3 (p < .001)
  • Alien 3 > Alien 2 (p = .037)

REFERENCES

CONCLUSIONS
1. 3-AFC and online measures show that children are able to learn the structure.
2. Online measure provides additional insights about the learning trajectory.