

Preference matters: Children show improved learning of information sampled in their preferred manner

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Background

- Although young children strategically explore their environment to seek optimal information, the benefits of active learning is quite variable.
- Partridge et al. (2015)**: children learn words better when they choose the order in which they are presented with labels for specific objects.
- Ackermann et al. (2020)**: children show improved learning when they are presented with object-label associations passively.

Current study

- Some children may prefer to receive information passively, and if forced to actively choose learning materials, may perform worse than their counterparts.
- Is an active sampling benefit associated with the extent to which children choose to be an active learner?**

Hypothesis

- Evidence for **active learning boost**: improved learning of novel word-object associations in active sampling.
- Evidence for **children's sampling preference**: improved learning of novel word-object associations in children's preferred sampling strategy.

Methods

Participants

- 53 3-year-olds (27 boys, 26 girls, $M_{age} = 31.45$ months)
- 51 6-year-olds (24 boys, 27 girls, $M_{age} = 76.65$ months)

Stimuli

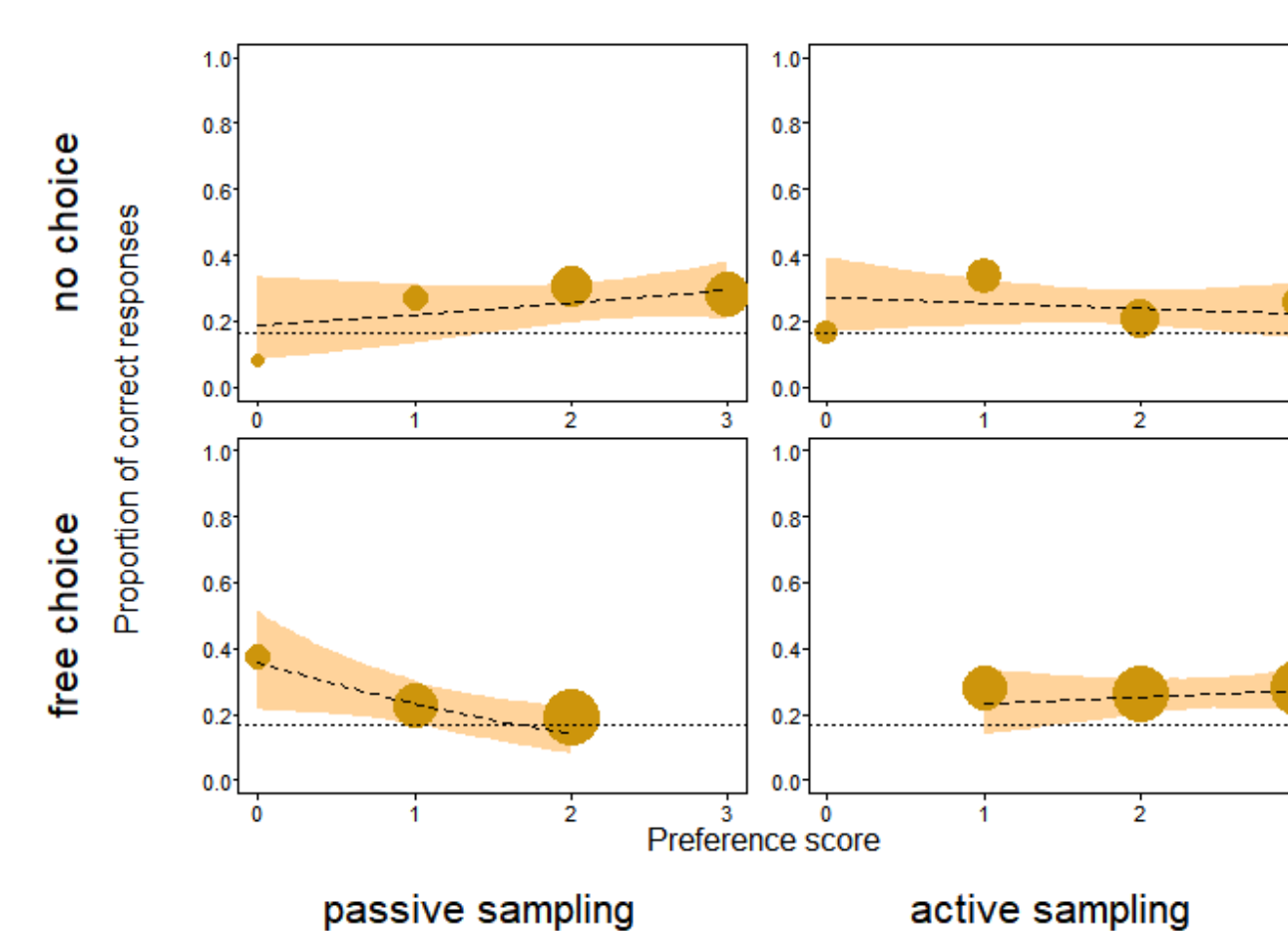
- Novel labels: *anak*, *bumi*, *goyang*, *lauhu*, *tido*, and *krete*.

Design

Phase	Number of blocks and trials	Example of a trial
Warm-up	1 block (3 trials)	
Training	2 "choice" blocks (3 trials each) - free choice - no choice: active or passive	
Test	2 blocks (6 trials each)	

Results

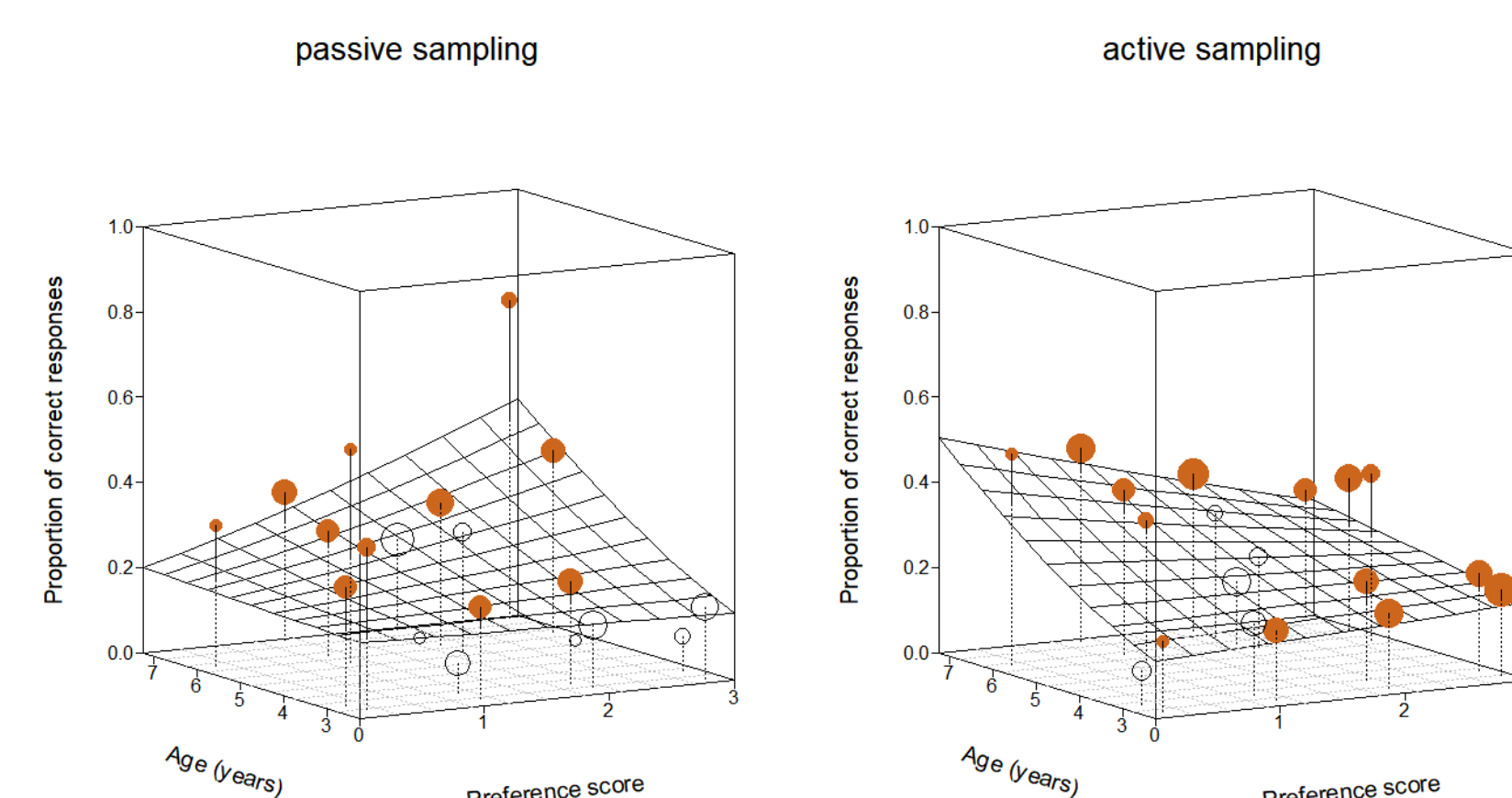
- 3-way interaction: choice (free, none), sampling method (active, passive), & active preference (0-3 active trials).



Passive sampling, low active preference: the proportion of correct responses was higher in the free-choice than no-choice block.

Active sampling, high active preference: the proportion of correct responses was higher in the free-choice than no-choice block.

- 3-way interaction: sampling method (active, passive), active preference (0-3 active trials), & age (3-, 6-yo).



Passive sampling, high active preference: the proportion of correct responses increases with age.

Active sampling, low active preference: the proportion of correct responses increases with age.

Implications

- Children actively choose what to learn as well as how to learn.
- A sense of agency improves children's learning even in passive trials.
- Active learning does not befit a one-size-fits-all approach and may vary across development, and across children's individual preference for active learning.

Acknowledgements

We thank all families who participated in the study and the research assistants who assisted with data collection. We also thank the leadership and staff of Forum Wissen, Dr. Sandra Potsch and Nina Knohl, for allowing us to test in their facilities and for administrative support during children's visits, as well as Dr. Christina Keller for coordinating with the local museum.

References

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