

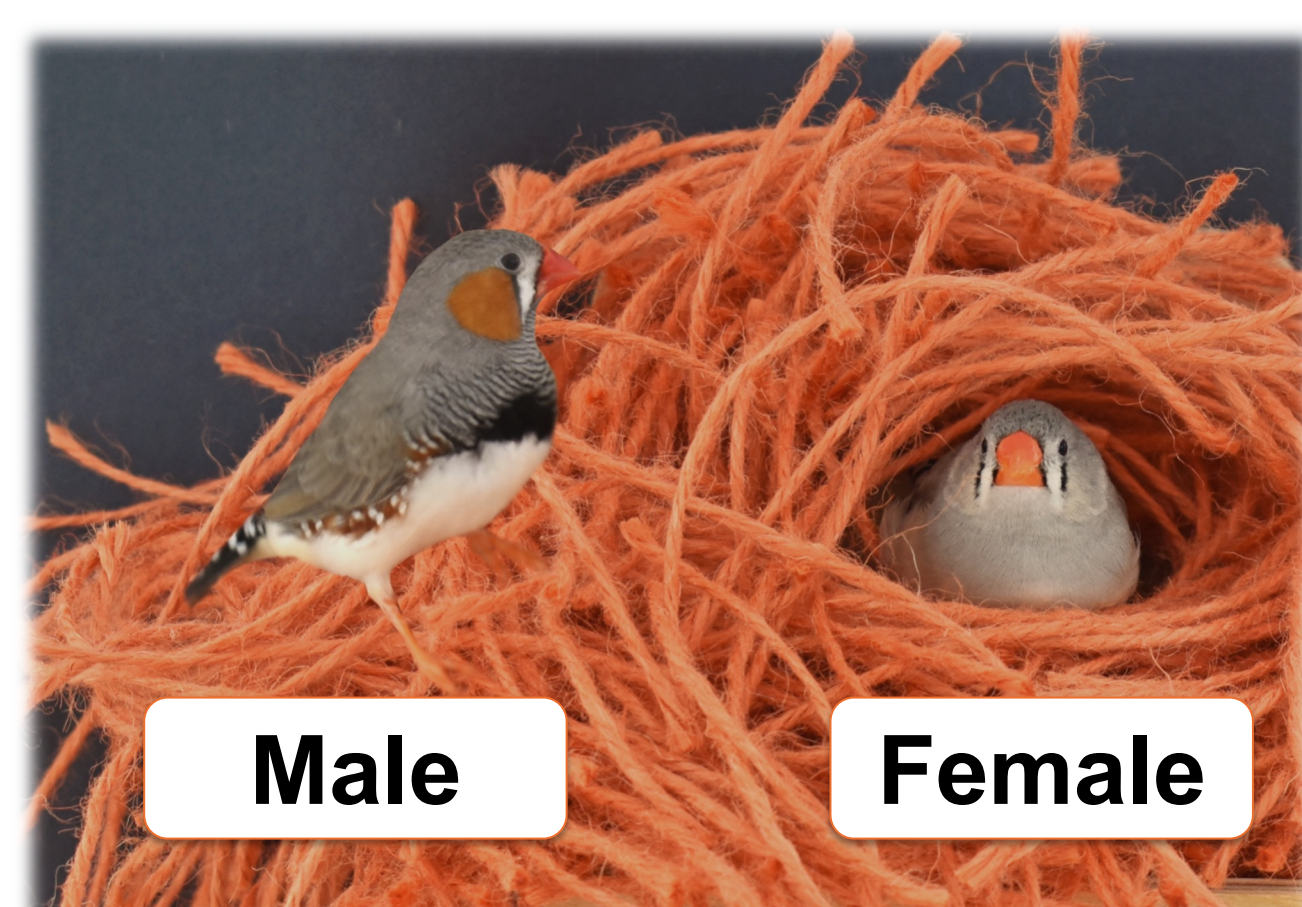
Sex differences in nest building are reflected in memory for a physical cognition task

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Introduction

The male zebra finch is the primary nest builder.



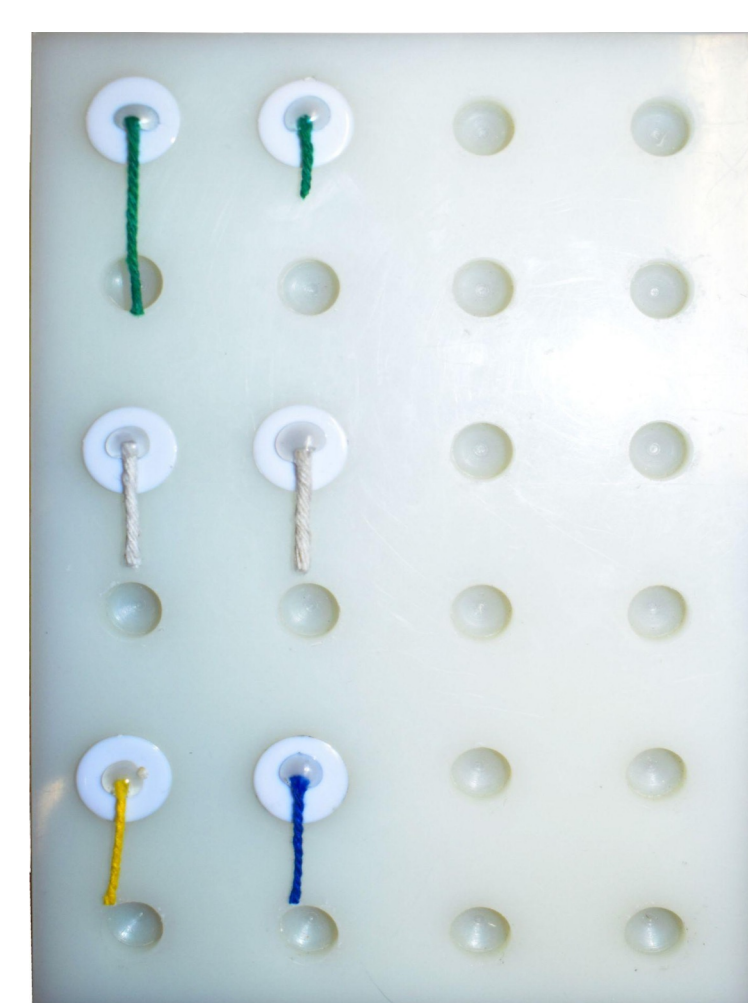
Research Question: Do sex differences in nest-building behaviour relate to sex differences in memory for material properties?

Predictions: Male zebra finches will have better memory than females for the structural properties of materials.

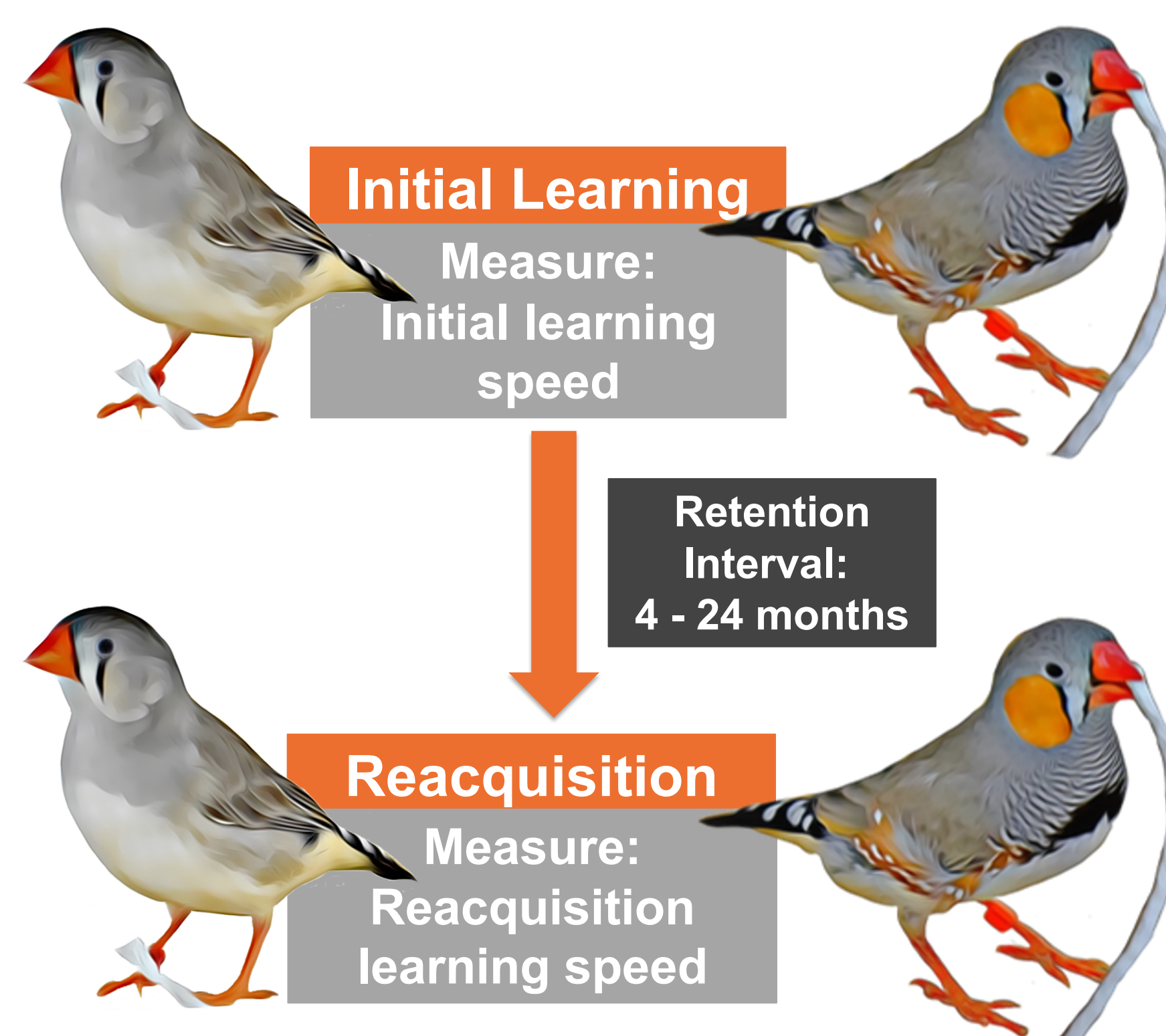
Methods

28 M and 26 F were retested on three previously learned material discrimination tasks:

1. Length →
2. Flexibility →
3. Colour →



(Lambert *et al.*, 2022)



Compared **initial learning speed** to **reacquisition learning speed** to measure memory.

Learning speed: Trials to criterion (lower number = faster learner).

Results I

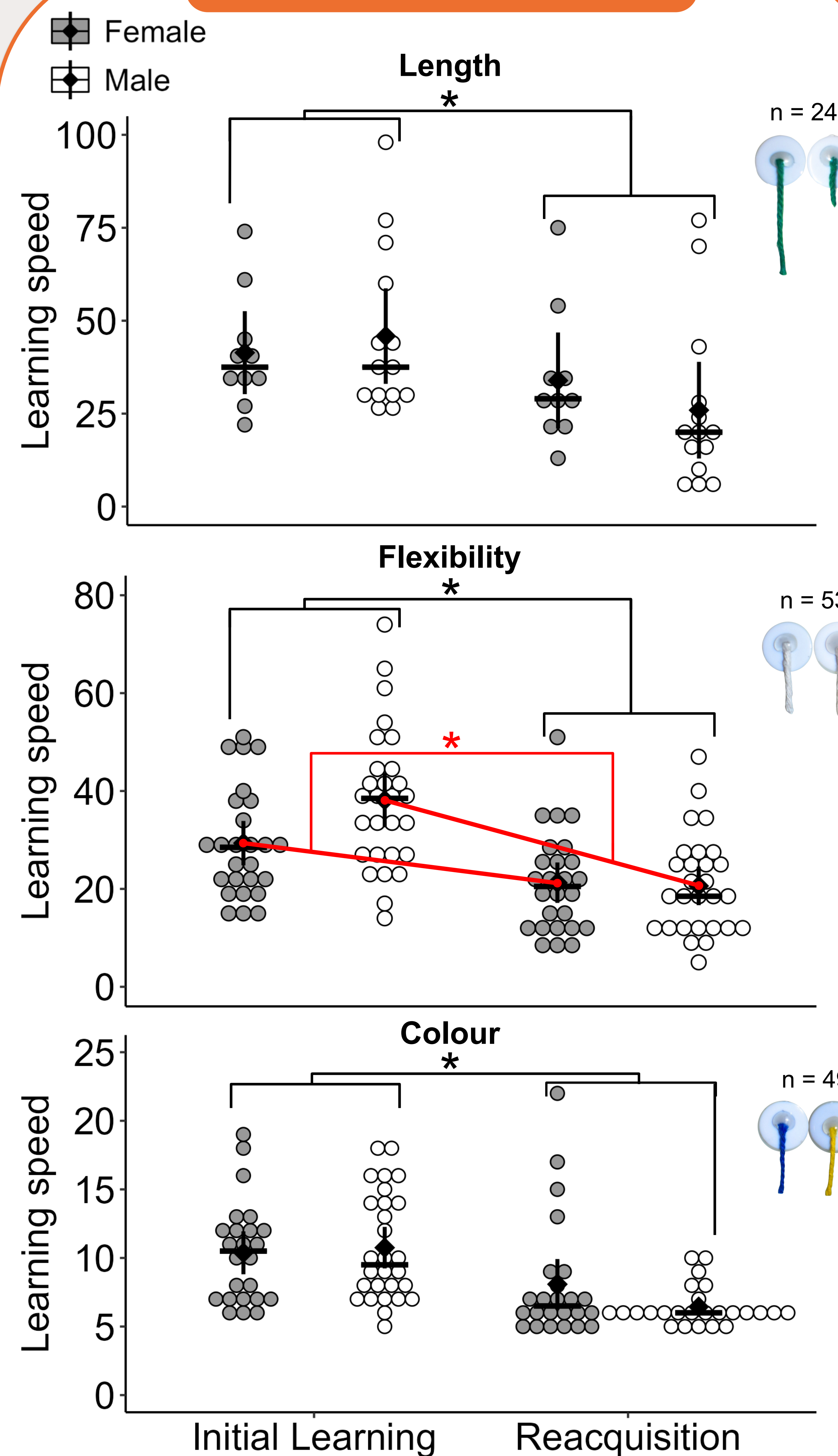


Figure 1. Each circle represents one individual. Horizontal bars represent medians; diamonds represent means; vertical bars represent 95% confidence intervals. Red lines show the difference between initial learning speed and reacquisition learning speed.

Results II

Memory

Birds learned each of the three tasks significantly faster in reacquisition compared to initial learning.

Sex differences

No sex differences in reacquisition learning speed for any of the three tasks.

Males improved significantly more than females on flexibility between initial learning and reacquisition.

Males spent significantly more time than females interacting with material in initial learning for the flexibility task.

(Lambert, Self *et al.*, in prep)

Females learned the flexibility task significantly faster than males in initial learning.

(Lambert, Self *et al.*, in prep)

Conclusions

Sex differences in nest-building behaviour may be related to sex differences in memory for some material properties.

Sex differences in material interaction may have interfered with learning measures.

(Lambert, Self *et al.*, in prep)