



Comprehending written and spoken text: the same or different?

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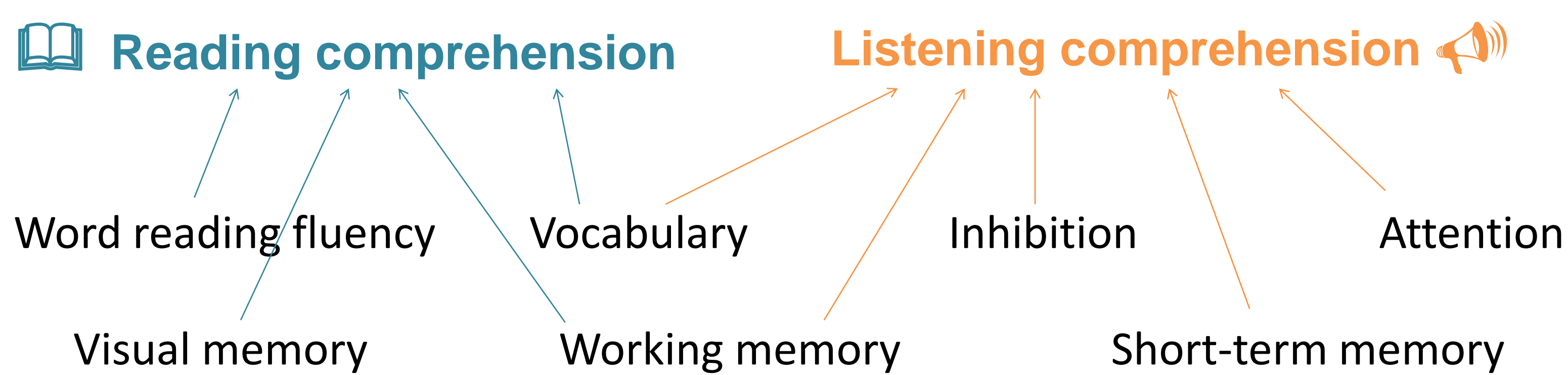


1. INTRODUCTION

- Audio-visual information intake is on the rise among children
- Literary reading is in decline
- Only** reading comprehension is an important subject in primary education
- Listening comprehension is given much less attention

What is then the relationship between reading and listening comprehension?

- They correlate highly, not perfectly: thus overlap, but there are differences
- Overlap: creation of situation model of text, regardless of modality
- Difference: modality-specific skills that help processing the information presented in a specific modality



This study

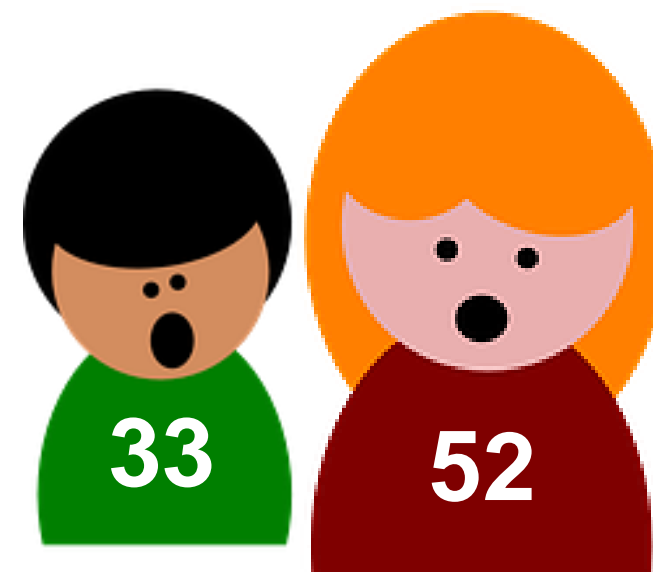
The relationship between reading (RC) and listening comprehension (LC)

- Their overlap (explained variance one comprehension type by the other)
- Similarities and differences in contribution of foundational cognitive skill

2. METHODS

Participants

- 85 Dutch children
- M age 8;7 years
- 35 2nd graders, 50 3rd graders



Materials

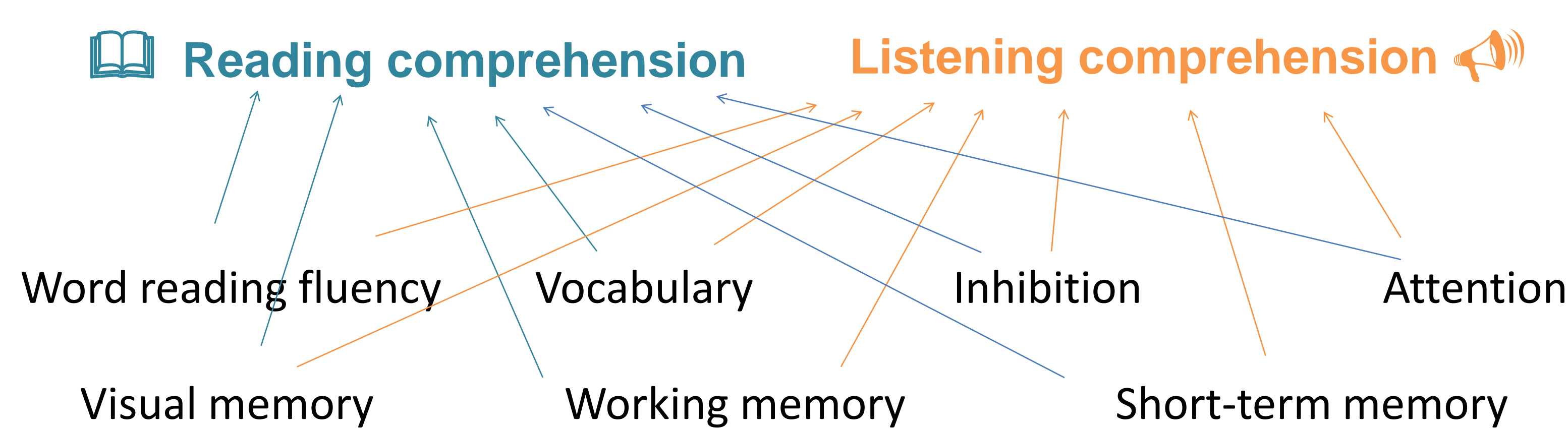
	Reading comprehension	Listening comprehension
Reading comprehension	Cito reading comprehension	Cito listening comprehension
Listening comprehension	Cito listening comprehension	Cito reading comprehension
Word reading fluency	One minute reading task	
Vocabulary	Peabody Picture Vocabulary Test	
Short term memory	WISC forwards digit span task	
Working memory	WISC backwards digit span task	
Visual memory	Visual retention test 2D line drawings	
Sustained attention	NEPSY II Auditory Attention subtest	
Inhibition	Stroop test	

Regression analyses

Analyses research question 1:



Analyses research question 2:



REFERENCES

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- Vellutino, F. R., Tunmer, W. E., Jaccard, J. J., & Chen, R. (2007). Components of reading ability: Multivariate evidence for a convergent skills model of reading development. *Scientific studies of reading*, 11(1), 3-32.

CONTACT

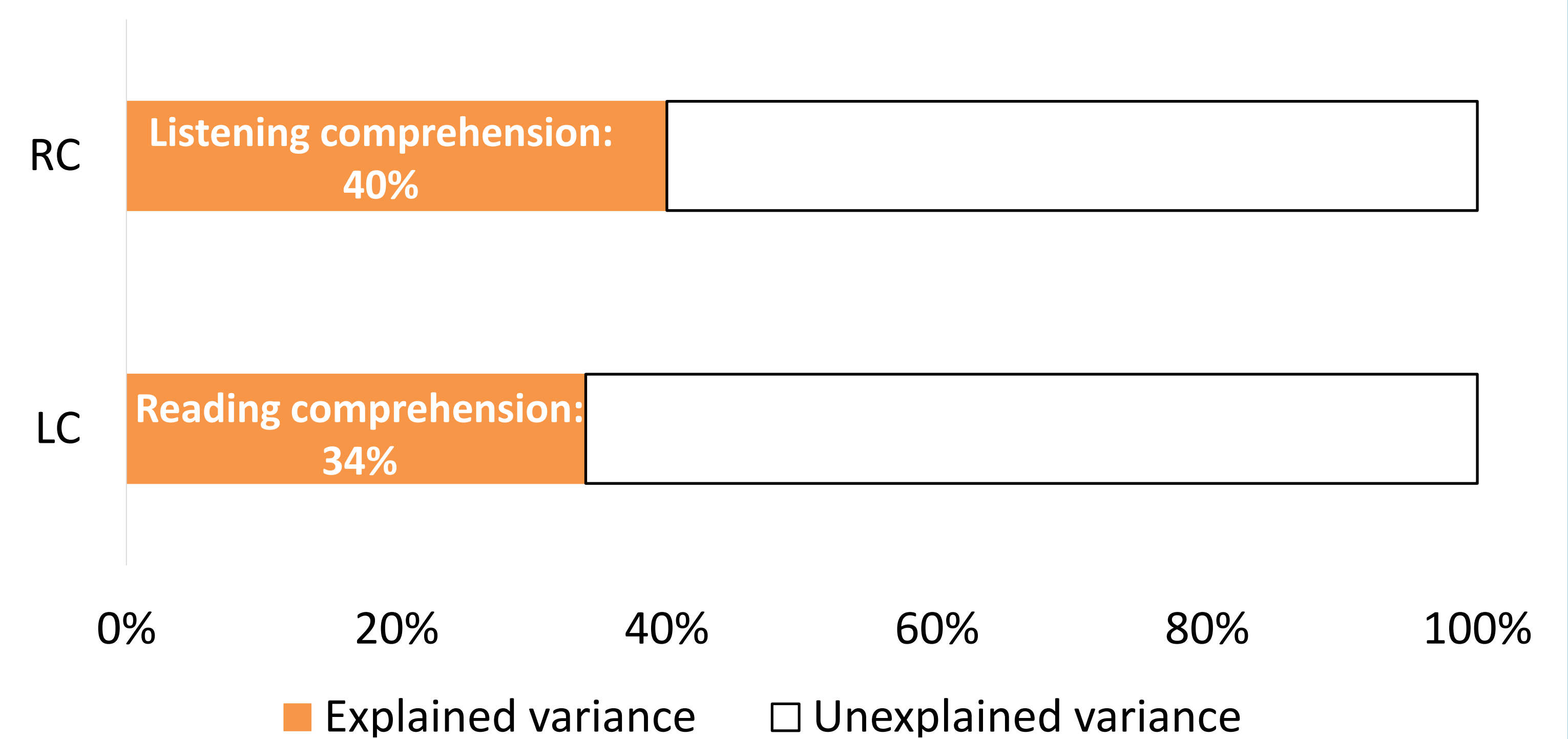


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3. RESULTS

1. Overlap reading (RC) and listening comprehension (LC)

Explained variance of one comprehension type by the opposite type



2. Similarities and differences in contribution foundational skills

Predictor	Reading comprehension		Listening comprehension	
	ΔR^2	β	ΔR^2	B
Step 1 ^a	.01		.18*	
Grade		-.27**		.13
Step 2	.60**		.32**	
Word reading fluency		.56*		.25*
Vocabulary		.48*		.50**
Verbal STM		.07		.02
Verbal WM		.13		.03
Visual memory		.06		.08
Sustained attention		-.10		-.03
Inhibition ^b		.14		.04
Total R^2	.61**		.49**	

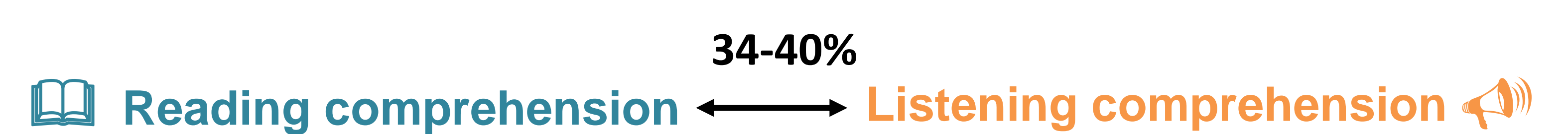
^a The effects of the variables (β and p -value) displayed in step 1 are those from the final step.

^b Inhibition is scored reversely, with high scores indicating lower levels of inhibition

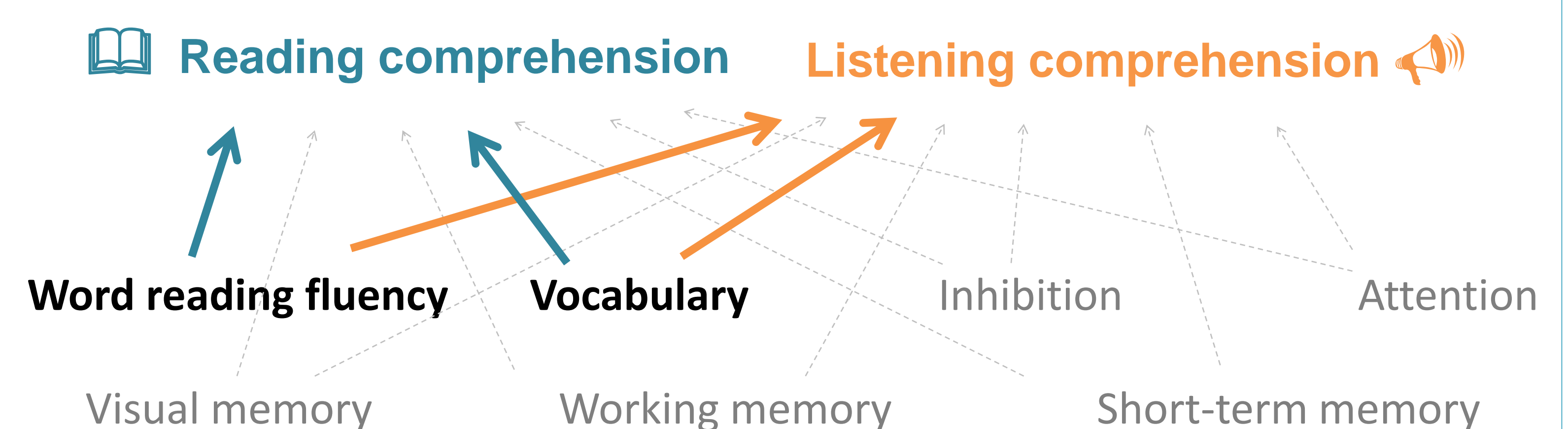
* $p < .05$ ** $p < .001$

4. DISCUSSION

1. Overlap reading (RC) and listening comprehension (LC)



2. Similarities and differences in contribution foundational skills



Conclusions:

- Neither comprehension type can fully explain the other
- Thus: reading and listening comprehension partly overlapping constructs, but substantially different
- Overlap: shared contributors word reading fluency and vocabulary
- No unique contributors to either comprehension type

Construction situation model is different in different modalities, but precise process differences are yet unknown. With declining literary reading, listening comprehension should get a prominent place in education