OVERVIEW

PROBLEM

Contextual
Classroom of 21 beginner students: how to target pronunciation?

Pedagogical
How to develop learner autonomy in pronunciation practice?

Methodological
Does this new task actually help pronunciation?

STUDY DESIGN

Task
Asynchronous Canvas task to *shadow* (listen and mimic) an Italian speaker at the sentence and paragraph level.

Analysis
Mid-semester and end-of-semester student recordings acoustically analyzed by 2 measures of fluency (double consonants and word-linking) and statistically analyzed by recording context (shadowing or not
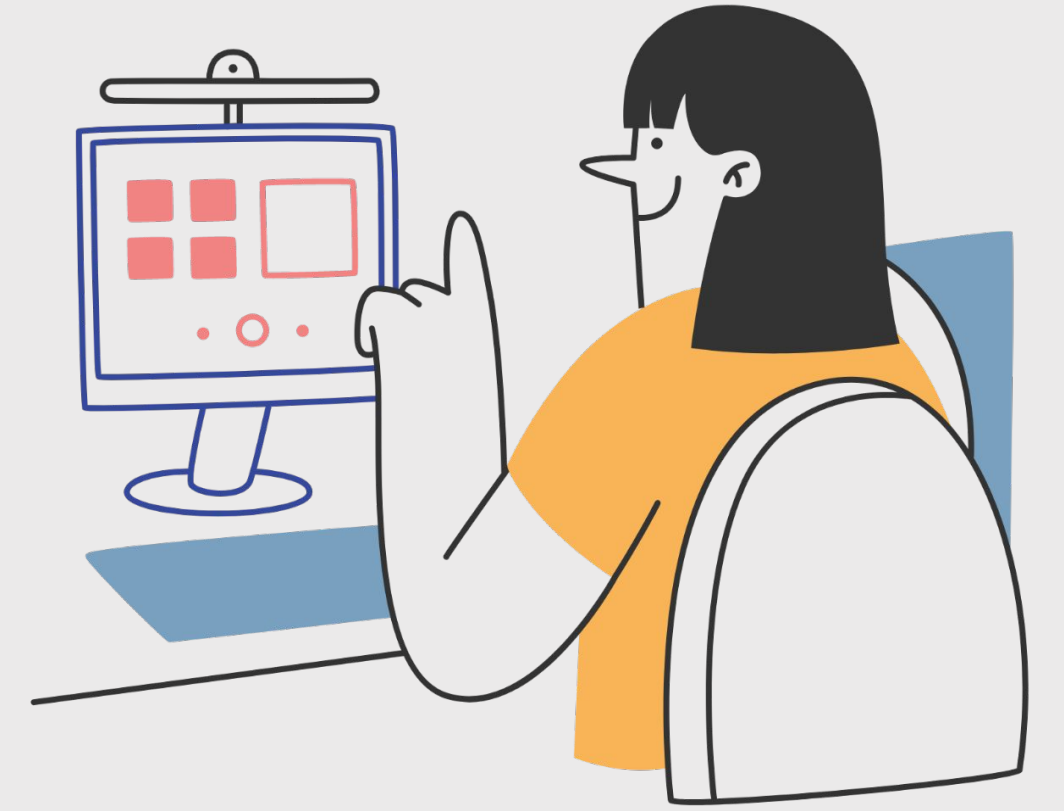
RESULTS

- Students' word-linking improves when shadowing sentence-by-sentence.
- No improvement from mid- to end-of-semester.
- Students' confidence grew.

CLASSROOM APPLICATION

Canvas shadowing task useful for sentence-level pronunciation.

CANVAS TASK

Welcome to a fun and productive pronunciation task! This take-home is designed to help you focus on your speaking fluency, and to develop your own self-introduction, delivered with confidence. The time limit (90 minutes) is not designed to make you rush, rather, to help you not spend too much time on each task so that you can continue moving forward. You will not be able to go back in the task and modify your responses, so please double-check before submitting each time.

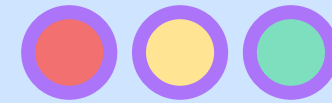|	
Quiz Type	Graded Quiz
Points	0
Assignment Group	Chapter Exams
Shuffle Answers	No
Time Limit	90 Minutes

Answers   No

Attention!

Once you have submitted an answer, you will not be able to change it later. You will not be able to view the previous question.

Begin

In an external program (Audacity, Voice memos, etc.), you will record yourself saying the following paragraph. Please **do not rehearse** this paragraph, as this is a timed assignment and you are not being evaluated on the accuracy of your pronunciation in the initial recording but rather your completion of the assignment as a whole, i.e., your ability to notice areas of improvement and implement such improvement.

- Please test your microphone and make sure it is working.
- Please record in a quiet room.
- Begin recording on your first read of the paragraph.

//

Ciao a tutti!

Il mio nome è Ale, ho 26 anni e vengo dall'Italia. Lavoro come insegnante e ho molti hobby: Viaggiare, conoscere nuove lingue e culture, fare video. Nella mia famiglia siamo cinque persone e una bellissima gatta di nome Crystal. Il mio sogno per il futuro è lavorare nel mondo del videomaking.

//

Upload the mp3 file here, saved as: "**intro_firstname_v1**" (for example: intro_bianca_v1)

CANVAS TASK

Text + target items

1. Ciao a tutti! Il mio nome è Ale, ho 26 anni e vengo dall'Italia.
2. Lavoro come insegnante e ho molti hobby:
   Viaggiare, conoscere nuove lingue e culture, fare video.
3. Nella mia famiglia siamo cinque persone e una bellissima gatta di nome Crystal.
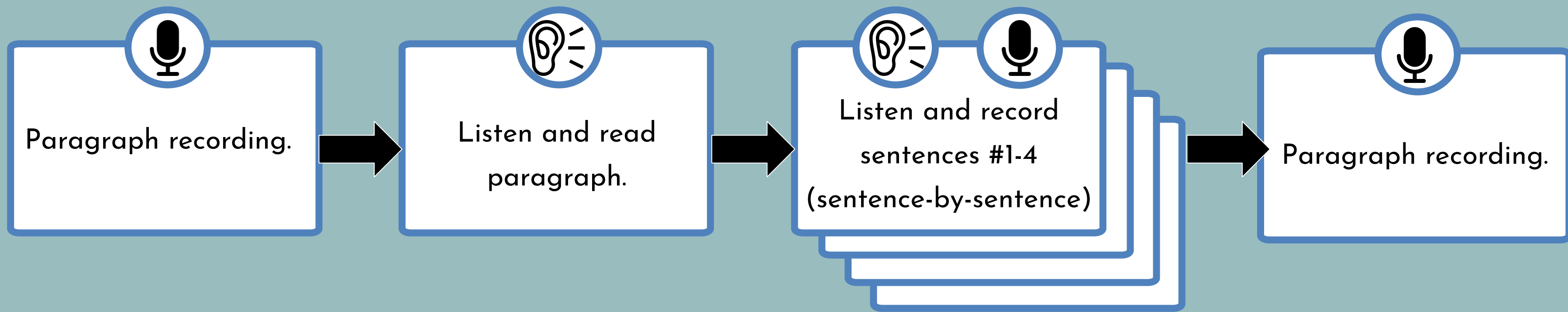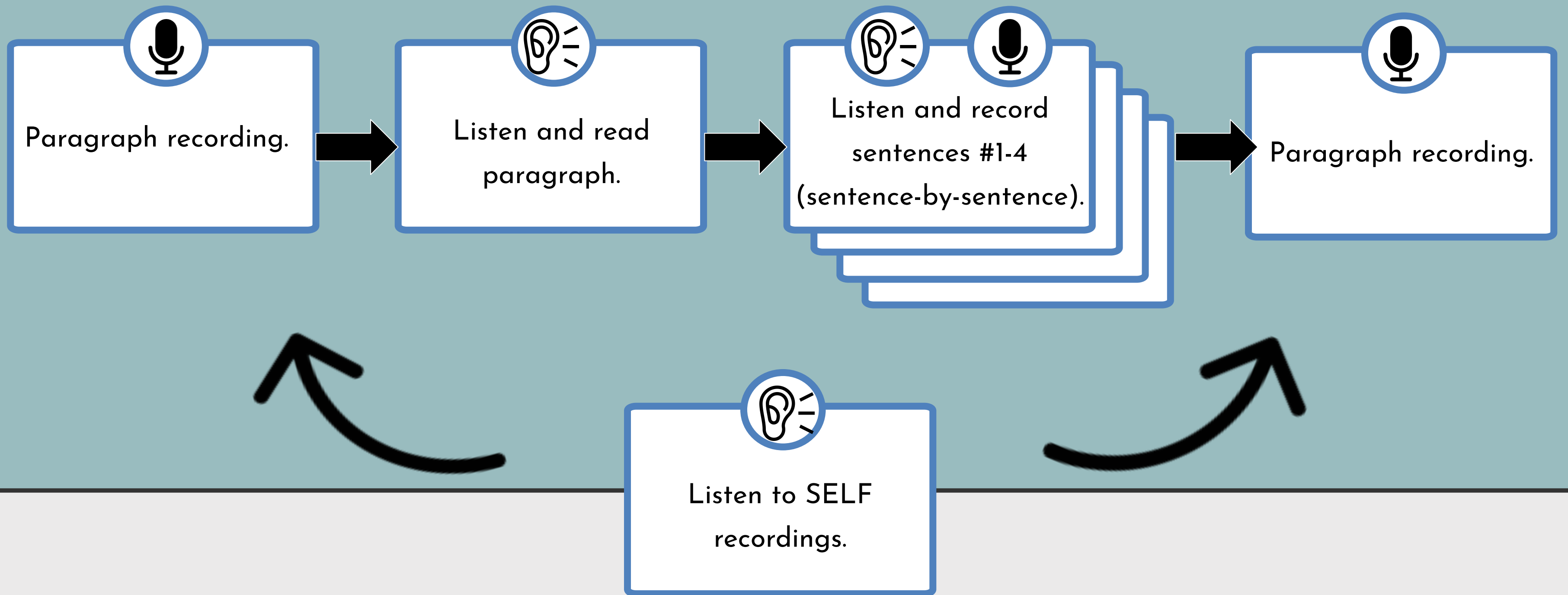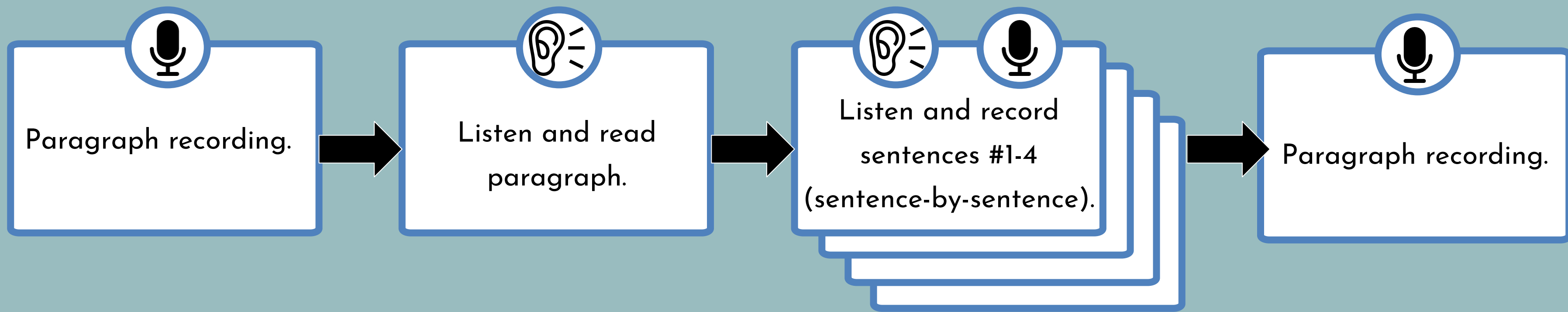4. Il mio sogno per il futuro è lavorare nel mondo del videomaking.

Paragraph recording. → Listen and read paragraph. → Listen and record sentences #1-4 (sentence-by-sentence) → Paragraph recording.

TASK PROCEDURE

Paragraph recording. → Listen and read paragraph. → Listen and record sentences #1-4 (sentence-by-sentence). → Paragraph recording.

Listen to SELF recordings.

TASK PROCEDURE

Paragraph recording. → Listen and read paragraph. → Listen and record sentences #1-4 (sentence-by-sentence). → Paragraph recording.

Listen to SELF recordings.

Self-reflections

Did you improve in any area of pronunciation?
What are some improvements in pronunciation that you could still make?

Mid-semester

End of semester

Student reflections

Did you improve in any area of pronunciation?

"I am more confident, and most of the emphasis is on the correct syllables. I am also faster."

"I think I improved in the flow of my words. I was able to speak more confidently and keep the flow of my words going."

"Yes, I did improve in my pronunciation. In the first recording, I pronounced 'dell'Italia' more like 'dalla Italia'."

Acoustic analysis
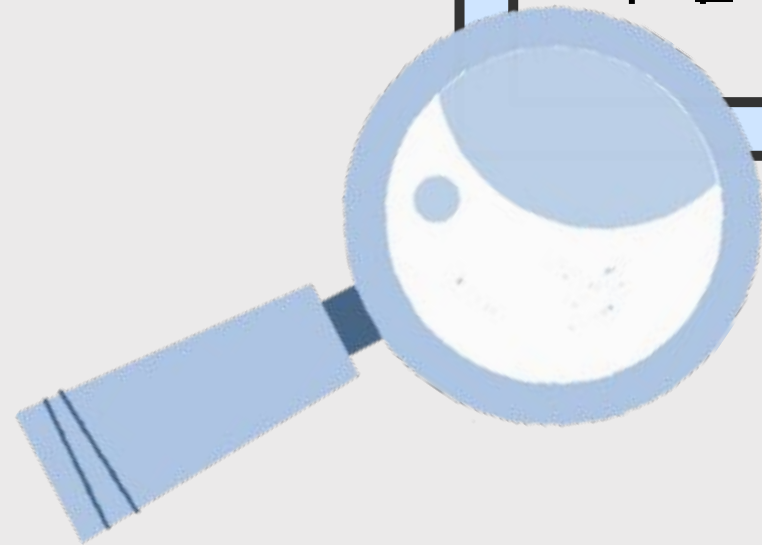
Double consonants

pappa (longer in duration)

papà (shorter in duration)

Word linking

"Flow"

sentence-level prosody

Acoustic analysis

Data points

Independent variables		
Word type	**Recording context**	**Time point**
Double consonant	**No shadowing**	**Time point 1**
tutti, anni, bellissima, gatta	First and second paragraph recordings	mid semester
Linking	**Shadowing**	**Time point 2**
dall'Italia	Sentence recordings	end of semester

Dependent variable
Word duration

Data points

Independent variables		
Word type	Recording context	Time point

Dependent variable
Word duration

5 target items * 3 recording contexts * 2 time points =
30 data points per student

20 students recruited:
    1 student dropped out of class
    1 student removed because too many data points missing
analysis n = 18:
    1 student = 28 data points
    7 students = 29 data points
    10 students = 30 data points

Mixed-effects regression model

Independent variables

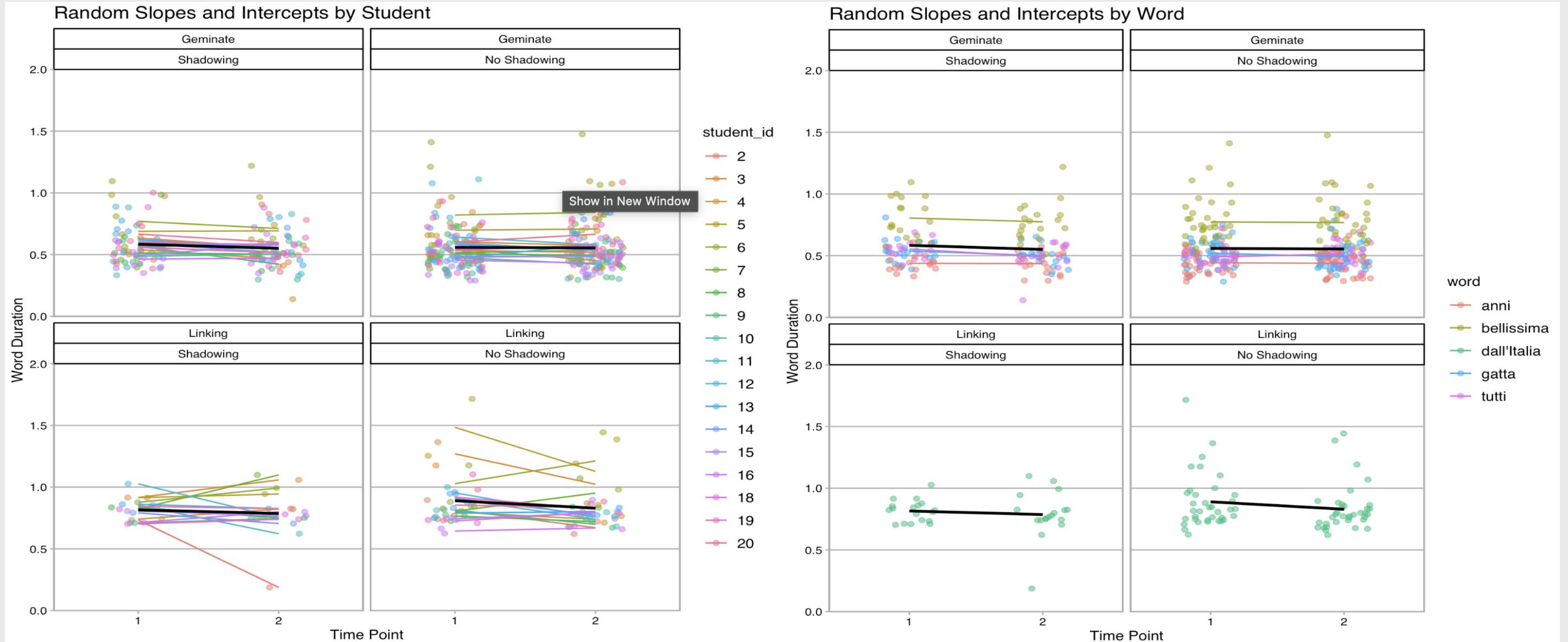| Word type | Recording context | Time point |

Dependent variable

| Word duration |

duration = word type * recording context * time point + (1|student) + (1|word)

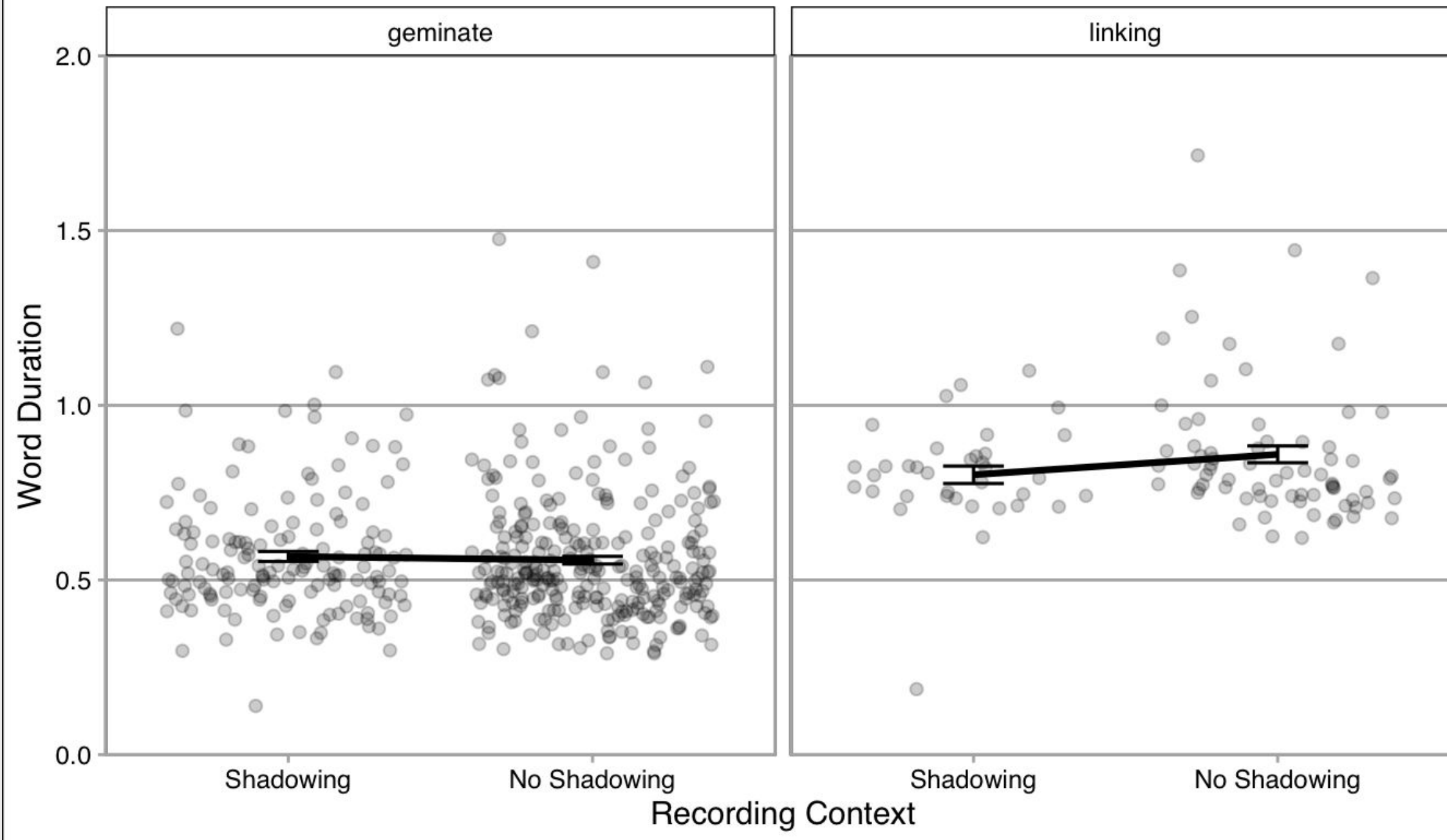three-way interactions and random intercepts

Mixed-effects regression model

duration = word type * recording context * time point + (1|student) + (1|word)

three-way interactions and random intercepts

Results

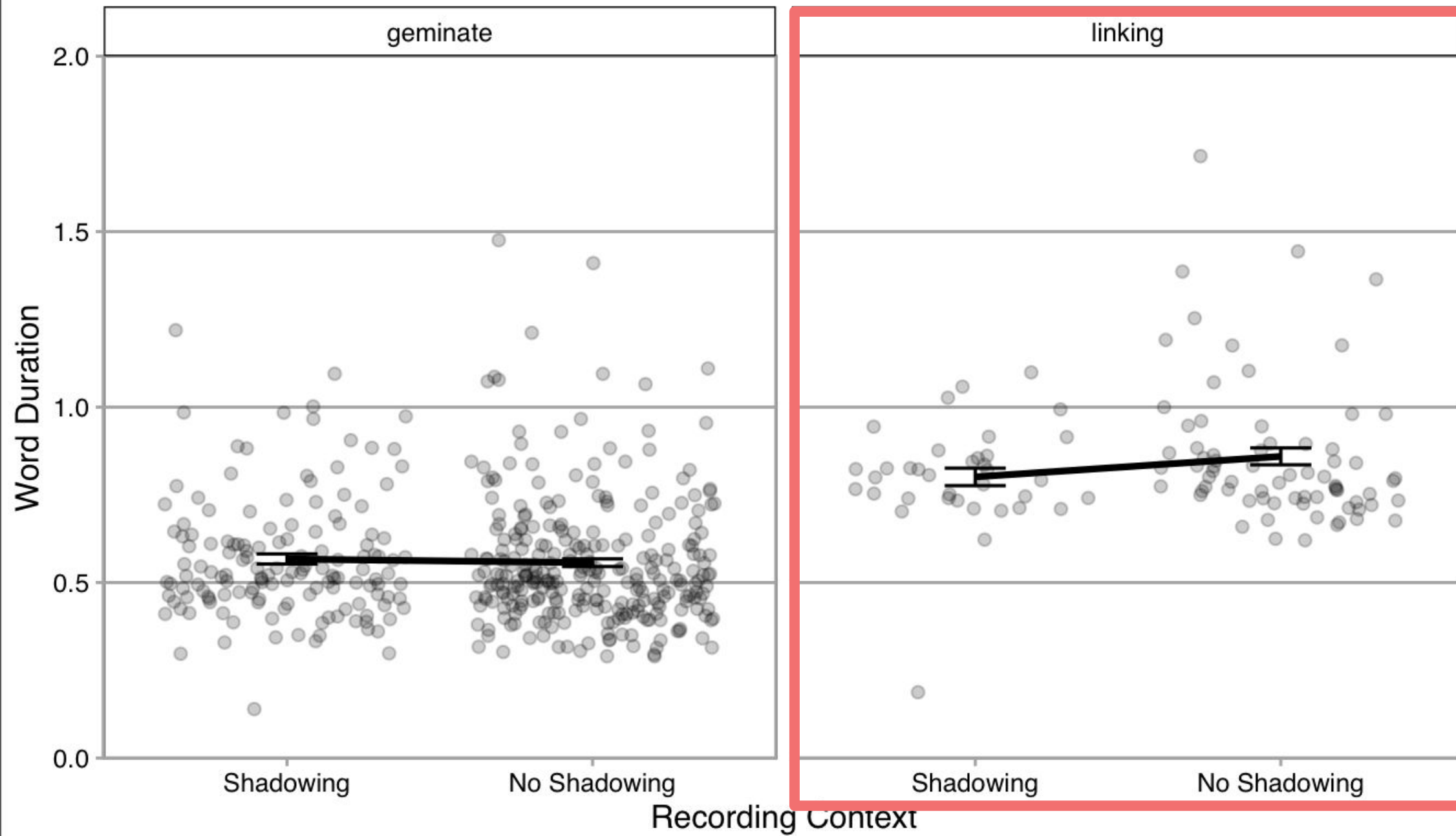**Word Duration Across Recording Contexts by Word Type**

Predictors	duration		
	Estimates	*CI*	*p*
(Intercept)	0.56	0.41 – 0.71	**<0.001**
time point [2]	-0.01	-0.03 – 0.02	0.641
word type [linking]	0.33	0.00 – 0.66	**0.049**
speech model [yes]	0.02	-0.01 – 0.06	0.121
time point [2] × word type [linking]	-0.05	-0.11 – 0.00	0.059
time point [2] × speech model [yes]	-0.03	-0.07 – 0.02	0.213
word type [linking] × speech model [yes]	-0.10	-0.17 – -0.03	**0.005**
(time point [2] × word type [linking]) × speech model [yes]	0.06	-0.04 – 0.16	0.233
Random Effects			
σ^2	0.01		
$\tau_{00\ student\_id}$	0.01		
$\tau_{00\ word}$	0.02		
ICC	0.72		
$N_{student\_id}$	18		
N_{word}	5		
Observations	531		
Marginal R^2 / Conditional R^2	0.240 / 0.785		

Post-hoc testing

Word Duration Across Recording Contexts by Word Type

Predictors	duration		
	Estimates	CI	p
(Intercept)	0.56	0.41 – 0.71	**<0.001**
time point [2]	-0.01	-0.03 – 0.02	0.641
word type [linking]	0.33	0.00 – 0.66	**0.049**
speech model [yes]	0.02	-0.01 – 0.06	0.121
time point [2] × word type [linking]	-0.05	-0.11 – 0.00	0.059
time point [2] × speech model [yes]	-0.03	-0.07 – 0.02	0.213
word type [linking] × speech model [yes]	-0.10	-0.17 – -0.03	**0.005**
(time point [2] × word type [linking]) × speech model [yes]	0.06	-0.04 – 0.16	0.233
Random Effects			
σ^2	0.01		
$\tau_{00\ student\_id}$	0.01		
$\tau_{00\ word}$	0.02		
ICC	0.72		
$N_{student\_id}$	18		
N_{word}	5		
Observations	531		
Marginal R^2 / Conditional R^2	0.240 / 0.785		

Post-hoc testing

Wald chi-square tests for the linear combination of fixed effects in mixed-effects models
Bonferroni correction: alpha level 0.05/4=**0.0125**

Tests 1 and 2 - difference in means within the same recording context across time points
Tests 3 and 4 - difference in means within the same time point across recording contexts

word type = Linking	Shadowing	No shadowing
Time 1	Mean = 0.816 ←Test 3→	Mean = 0.890
Time 2	Mean = 0.787 ←Test 4→	Mean = 0.829

Test 1 (between Time 1 and Time 2, Shadowing column)
Test 2 (between Time 1 and Time 2, No shadowing column)
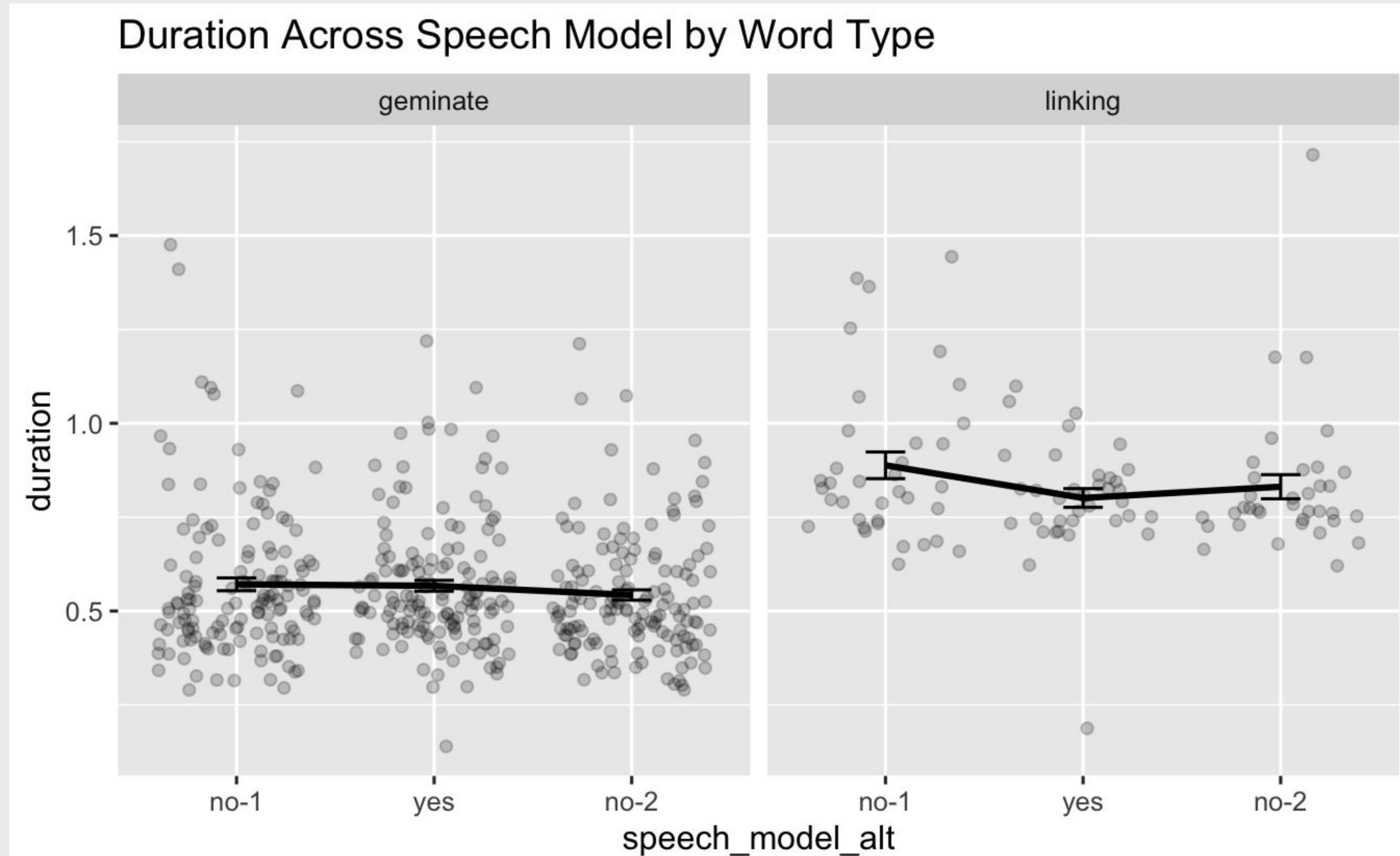
Test 1: p = 0.45
Test 2: p = 0.53
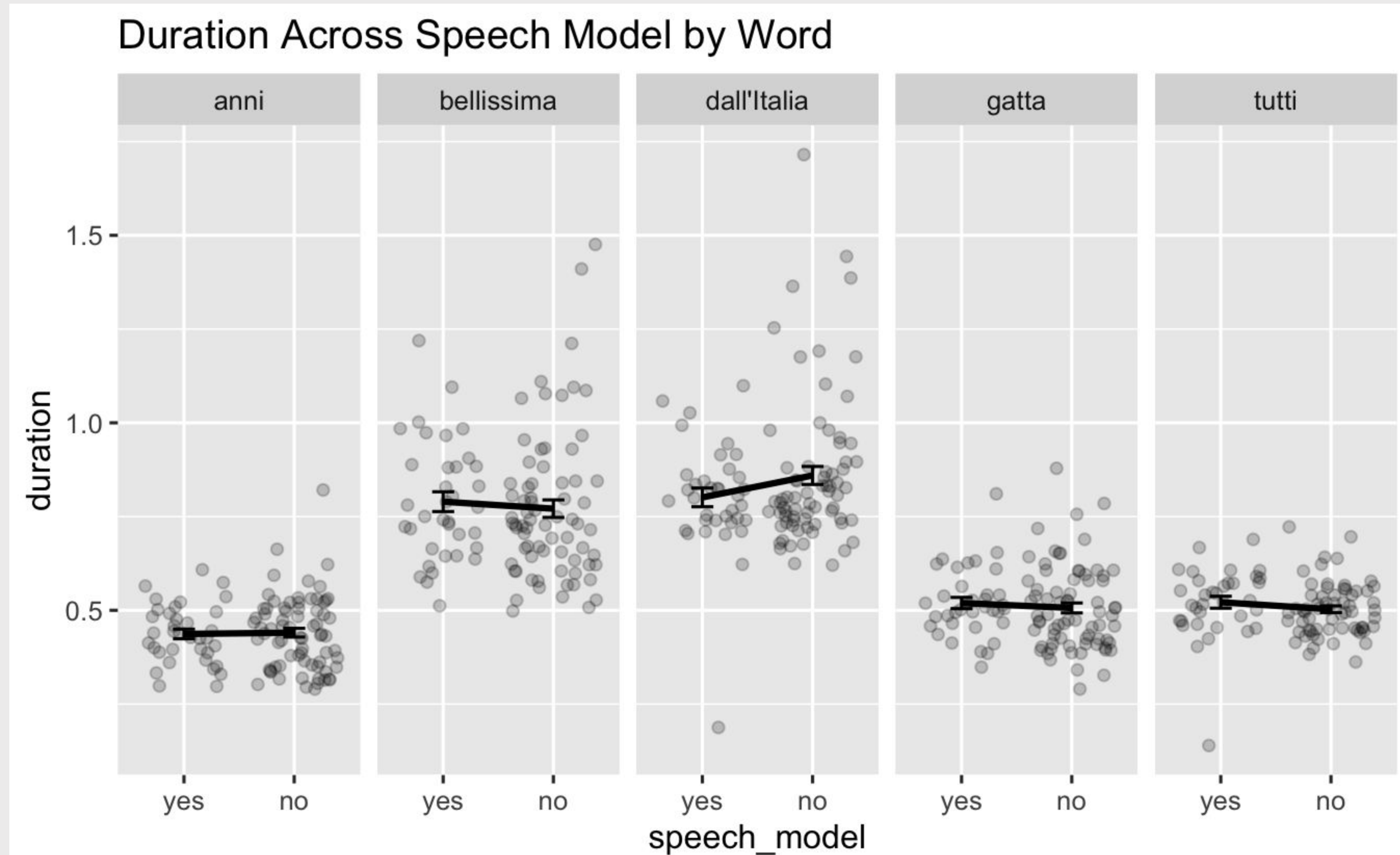**Test 3: p = 0.017**
Test 4: p = 0.0107*

# Alternative graph – in recording order

Extra slides - descriptive statistics

| word type = Geminate (tutti, anni, bellissima, gatta)	Speech Model	No Speech Model
Time 1	**Mean = 0.584**; SE = 0.020 N = 71	**Mean = 0.559**; SE = 0.015 N = 138
Time 2	**Mean = 0.550**; SE = 0.020 N = 72	**Mean = 0.554**; SE = 0.016 N = 142
word type = Linking (dall'Italia)	Speech Model	No Speech Model
Time 1	**Mean = 0.816**; SE = 0.021 N = 18	**Mean = 0.890**; SE = 0.037 N = 36
Time 2	**Mean = 0.787**; SE = 0.046 N = 18	**Mean = 0.829**; SE = 0.031 N = 36

Extra graphs - shadowing not recording order

Extra graphs - recording order with target duration

Duration Across Speech Model by Word

Extra graphs - recording order with target duration

Duration Across Speech Model by Word and Time Point
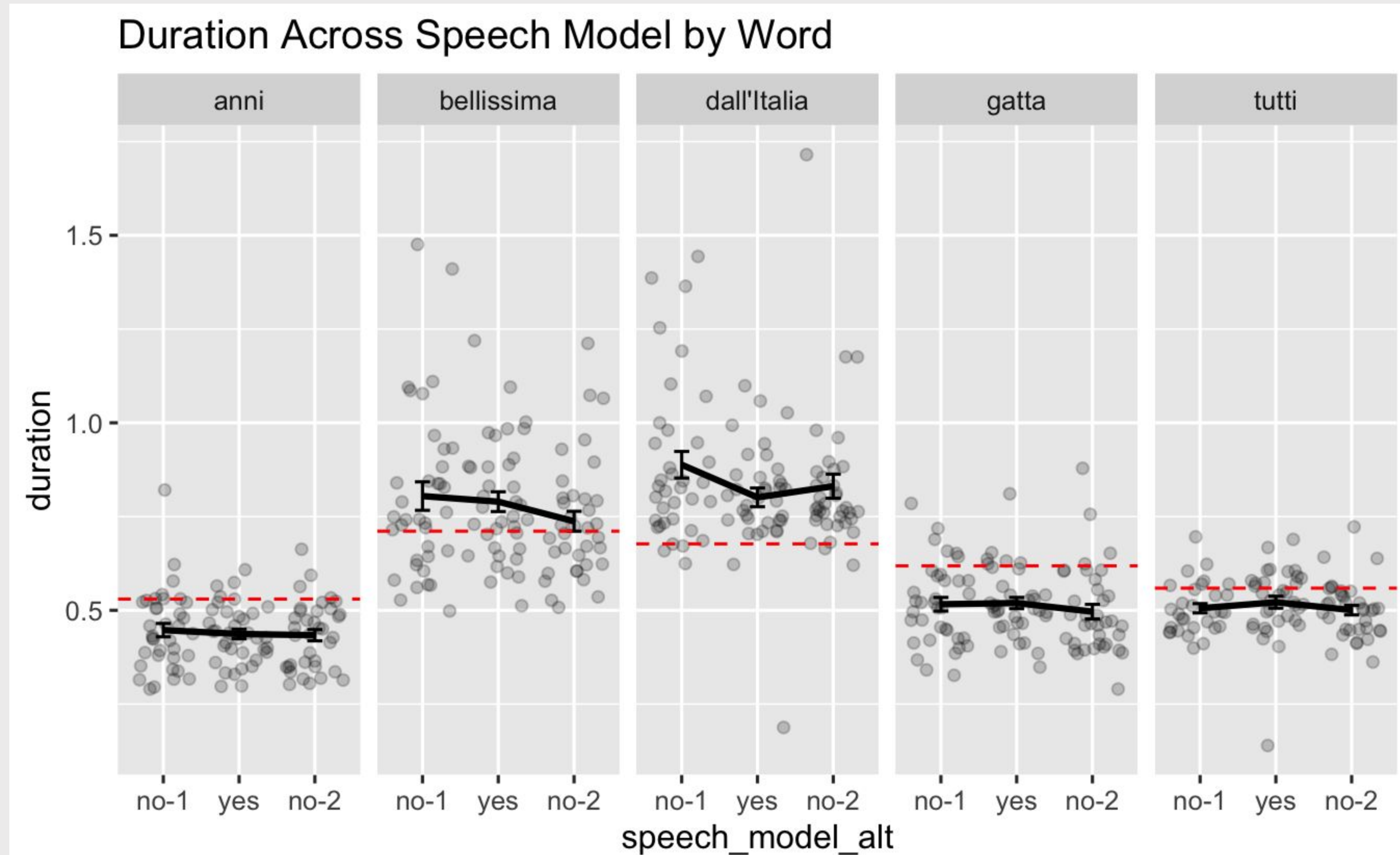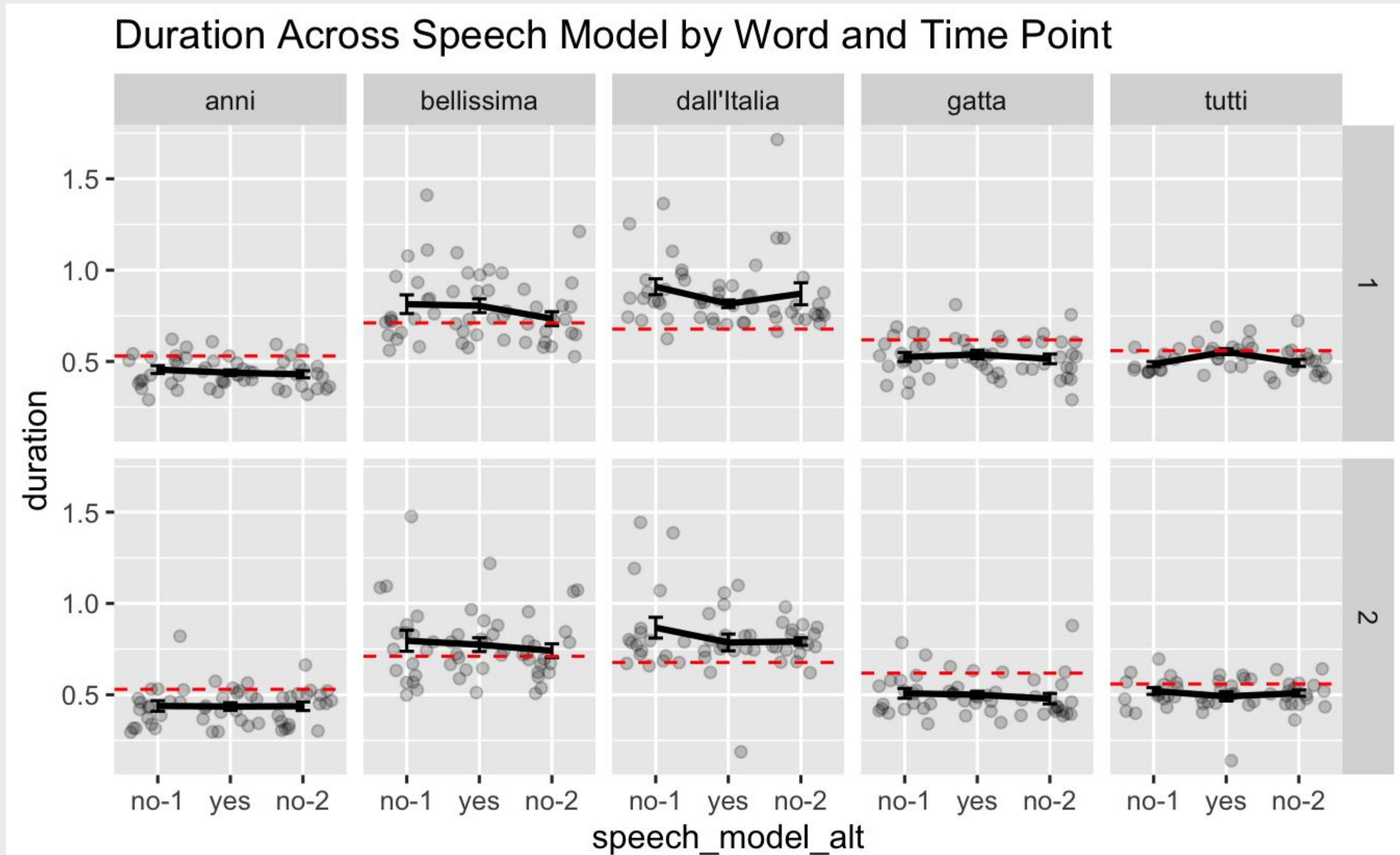
Discussion

MAIN FINDINGS

- Students' word-linking improves when shadowing sentence-by-sentence.
- No statistically significant change from mid- to end-of-semester.
- Students' confidence grew.

PEDAGOGICAL IMPLICATIONS

- student-lead task
- self-evaluation and raise of awareness
- students sense of confidence may improve their investment into learning & monitor self-progress

THEORETICAL & PRACTICAL EXPLANATIONS

- Use of shadowing practice as a mediation tool (Sociocultural theory)
- The effect of repetition on fluency (Automaticity Theory)
- Metalinguistic Awareness
- Short time (mid to end-of-semester) for transfer to occur