

The Sound of Teaching Music

Experts' sound modulation for novices

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Introduction

- Experts tend to modulate their speech and actions for novices (Brand, Baldwin, and Ashburn 2002; Fernald 1985).
- Expression is one of the crucial elements of expertise (Sloboda 2000).

How do music experts modulate expressive performance for teaching purposes?

Methods

Participants

20 expert pianists (years of practice: $M = 14$, $SD = 5.64$) were included for data analysis.

Conditions

Teaching condition:

Pianists were asked to play the excerpt of music as if they were teaching it to students.

Performing condition:

Pianists were asked to play the excerpt of music as if they were performing it to an audience.

Predictions

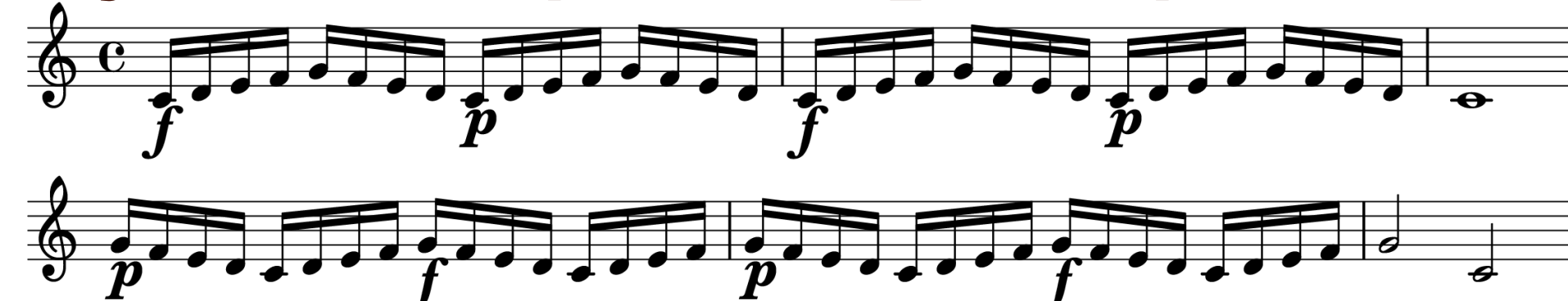
- Pianists will play more slowly during teaching.
- Pianists will exaggerate legato and staccato during teaching.
- Pianists will exaggerate forte and piano during teaching.

Stimuli

Articulation (legato / staccato)



Dynamics (forte / piano)



Procedure

- Step1: Practice with a designated expression
- Step2: Perform the piece with the expression 8 times

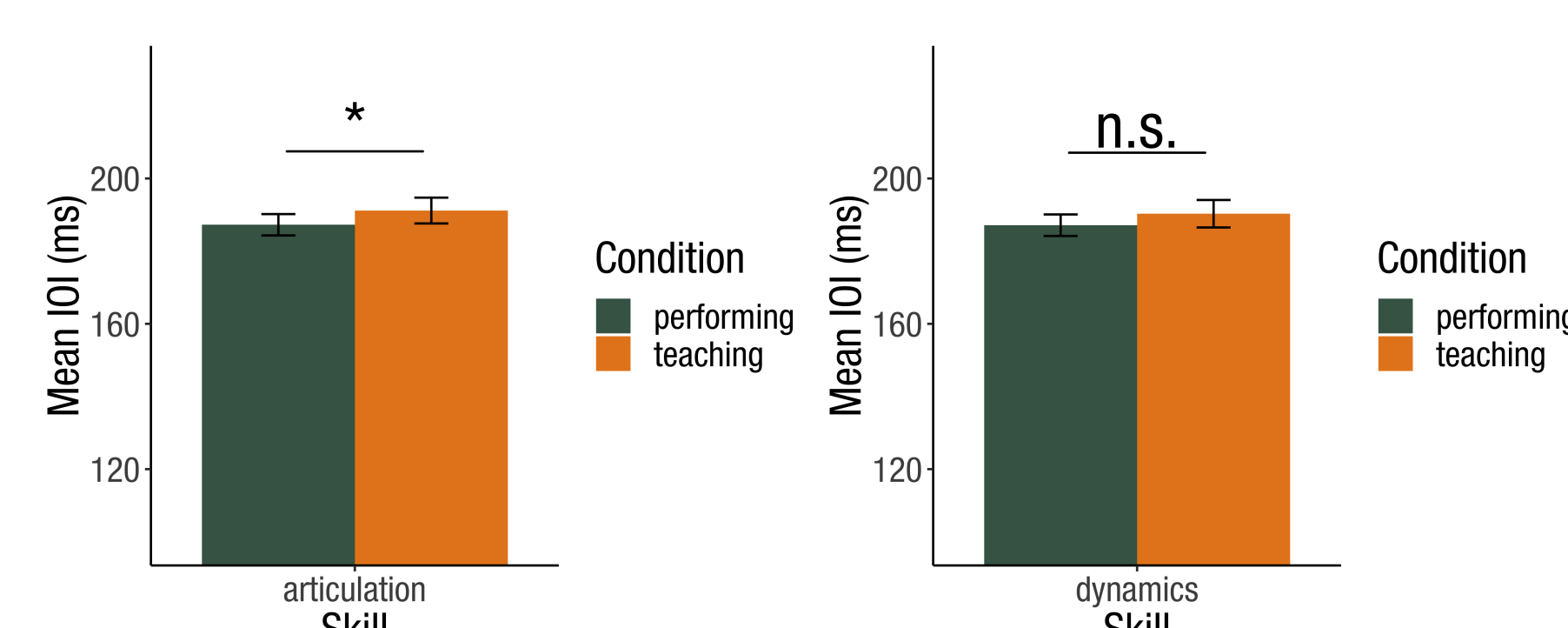
- Repeat Step1 - Step2 for each skill in each condition (32 trials in total)
- The orders of the conditions and the skills were counterbalanced.

Results

1. Tempo

Interonset intervals (IOIs)

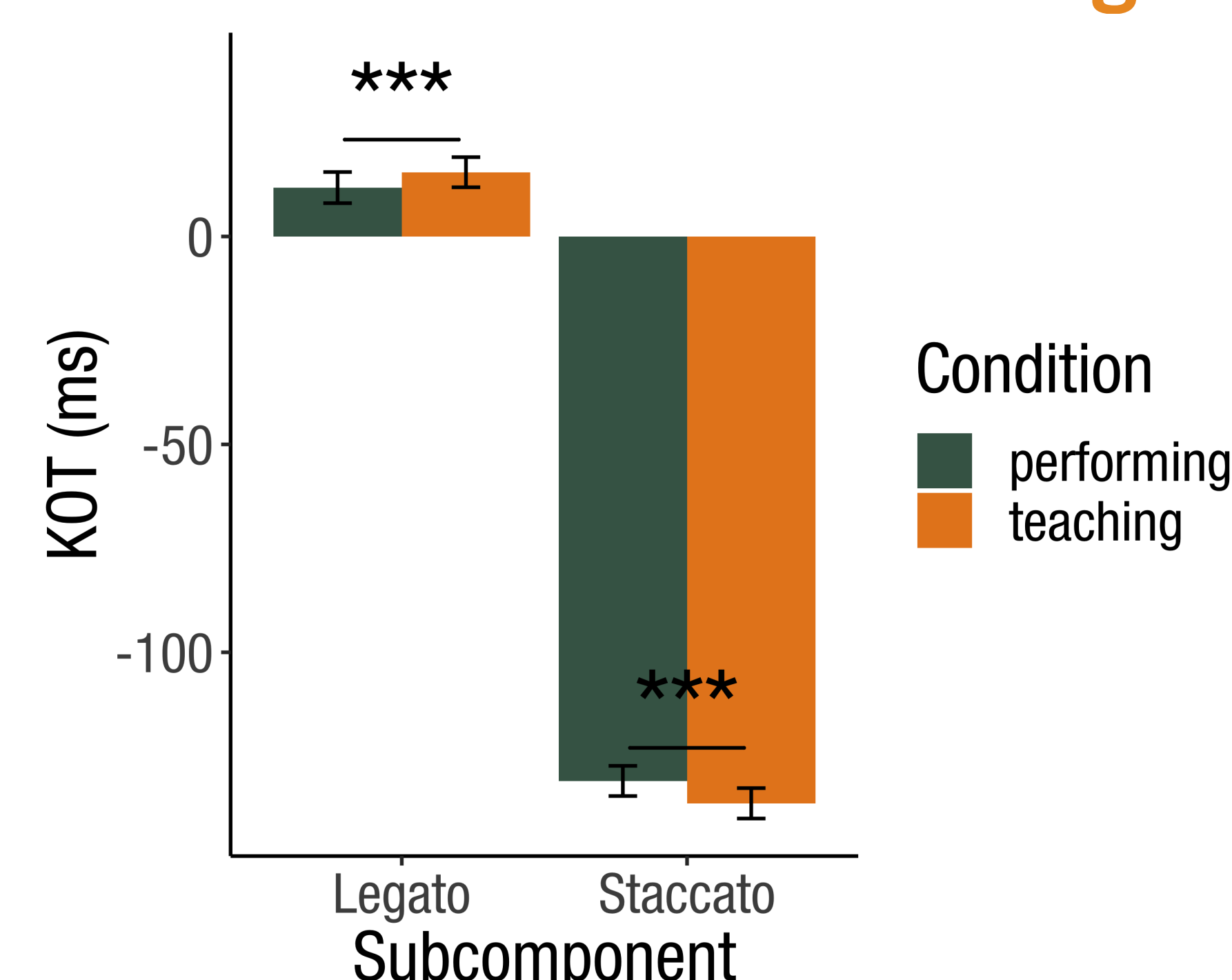
Experts performed more slowly when teaching articulation, but not for dynamics.



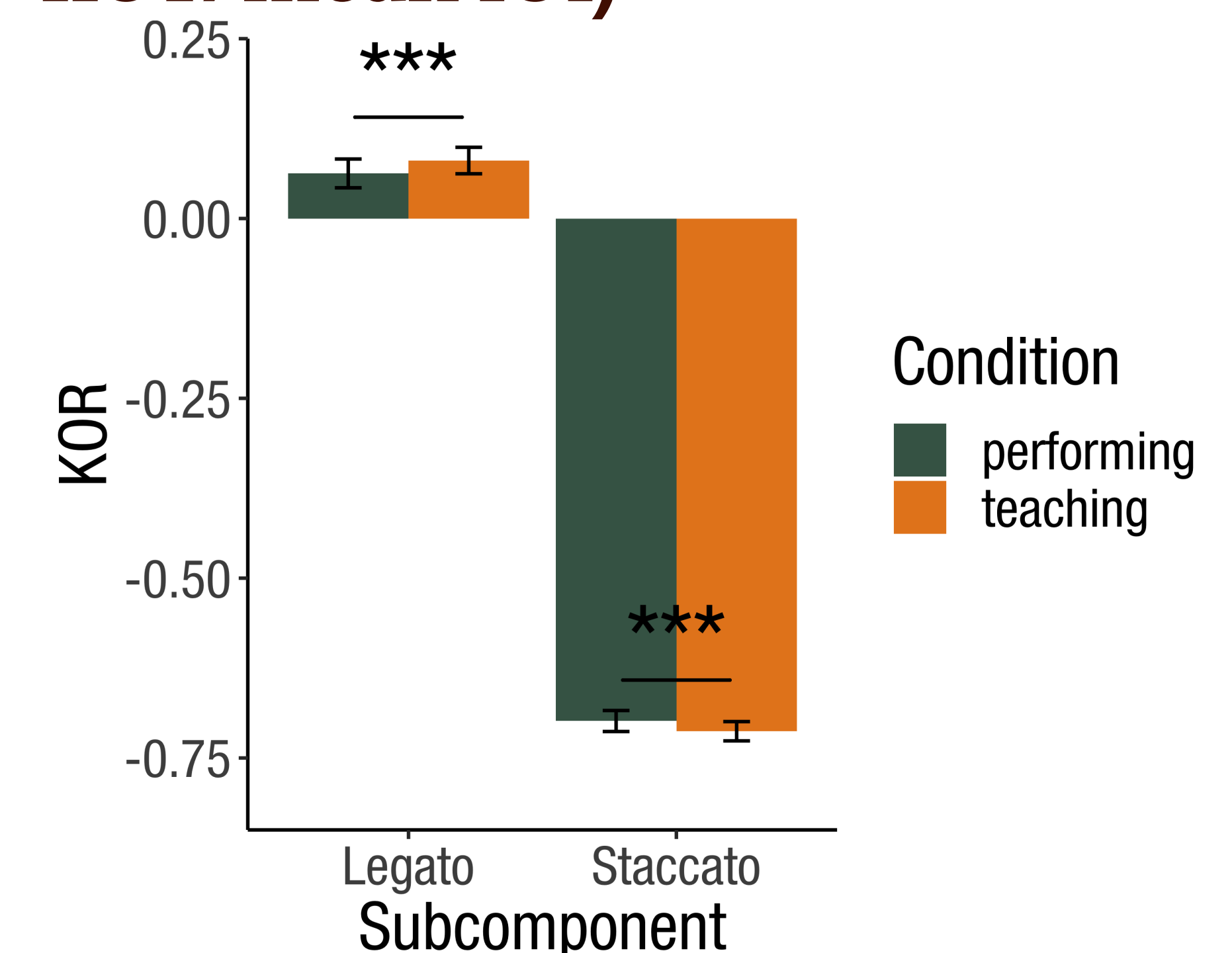
2. Articulation

Key-overlap time (KOT)

Experts exaggerated legato and staccato while teaching.



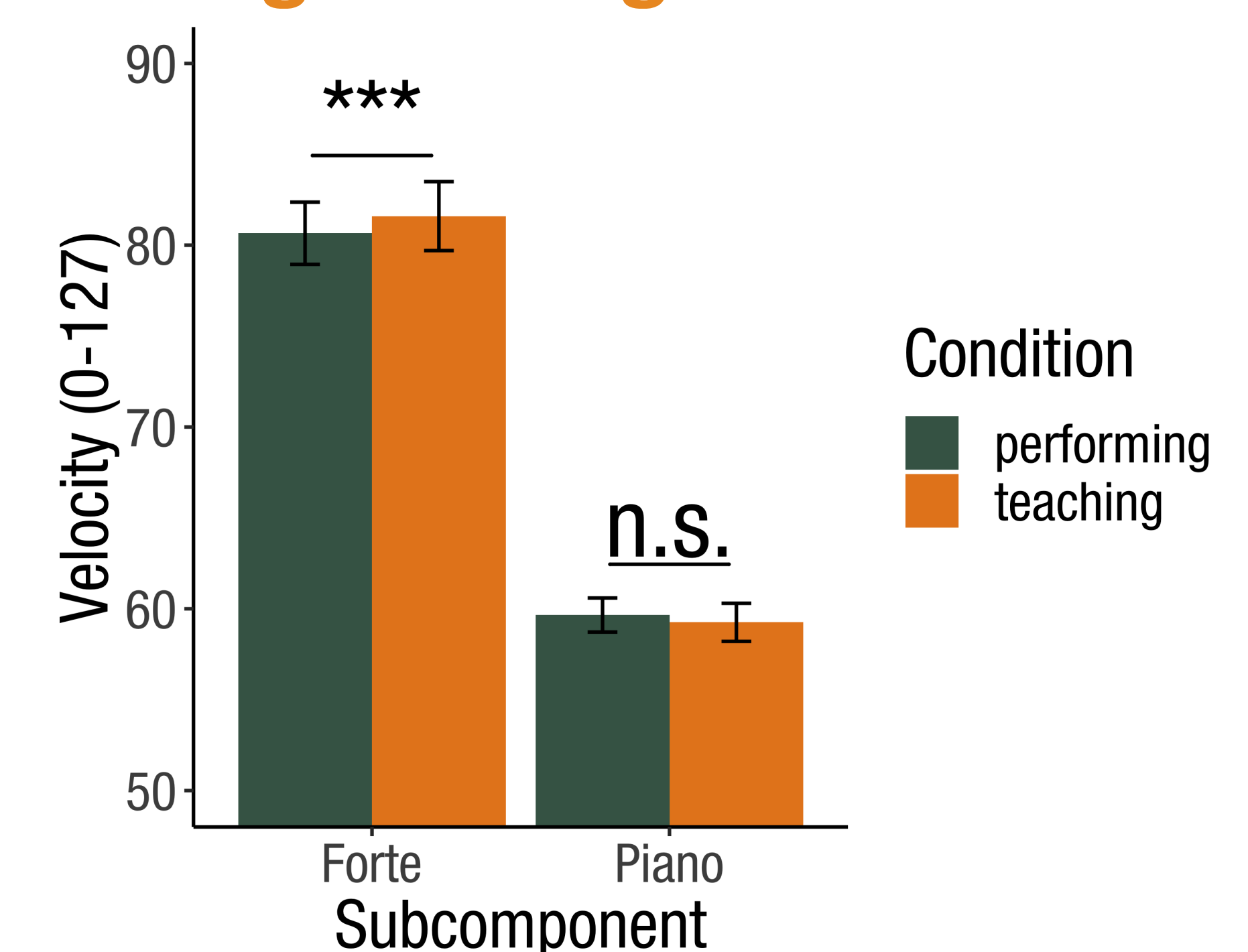
Key-overlap ratio (KOR = KOT/mean IOI)



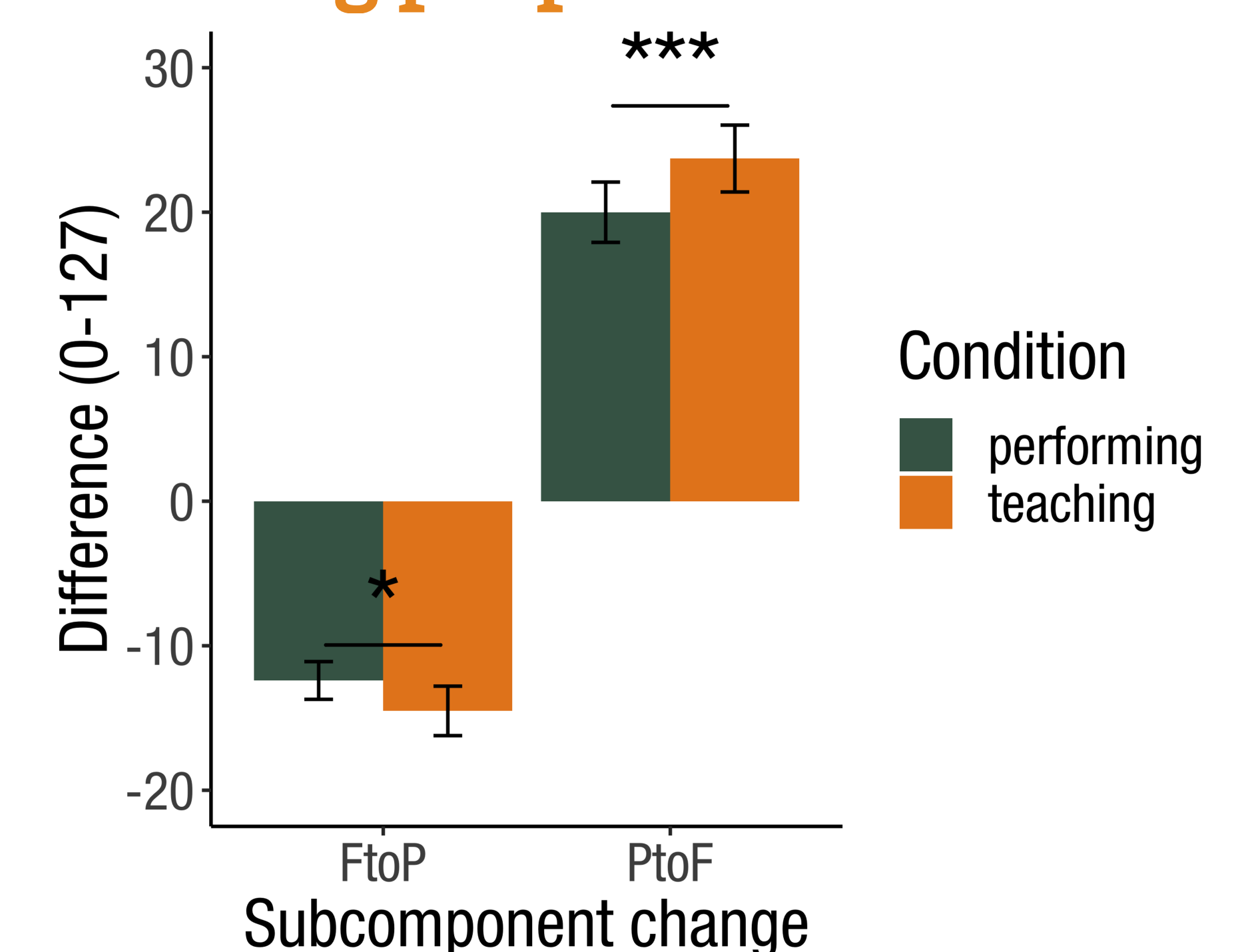
3. Dynamics

Key velocity (KV; 0 - 127)

Experts exaggerated only forte during teaching.



They made a larger contrast between forte and piano for teaching purposes.



Significance: * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

- Can the findings be replicated with more realistic pieces?
- Future studies should examine which cues can be used to facilitate novice learning.

