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Introduction

Pausing when reading aloud is essential to comprehension of both listeners and readers. This skill evolves from the early stage of reading acquisition to reading expertise. The placement and duration of respiratory pauses tell us about the breath-voice coordination and so the planning when reading aloud.

Method

Participants : 61 2nd graders (age :7y11m, 27 girls), 63 5th graders (age : 10y11m, 23 girls), 20 adults (age : 29y5m, 10 women)

Protocol : Recording voice and breathing while reading a 174 words narrative text .
 Control for fluency, comprehension, vocabulary, non verbal reasoning

Analysis :

number, duration and placement of pauses
 number of breathing pauses, their placement and the inhalation-to-phonation delay.
 Pauses classification as grammatical or ungrammatical, and linked to punctuation or not.

Results

Breathing

- 2nd graders breathed more often and longer than 5th graders and adults
- Children planned less their breathing, 2nd graders less than 5th graders

Pausing

- 2nd graders pause made more frequent and longer pauses than 5th graders and adults.
- Children relied less on punctuation than adults.

Discussion

Learning to breath while reading is mostly implicitly acquired. Young children need to breath often and don't plan their pauses, they make more hesitation pauses. Then they tend to choose speed over phrasing, and comprehension and have less, shorter pause, even if more grammatical. We suggest that interventions to train reading-breathing coordination would be beneficial for poor readers /poor comprehenders.

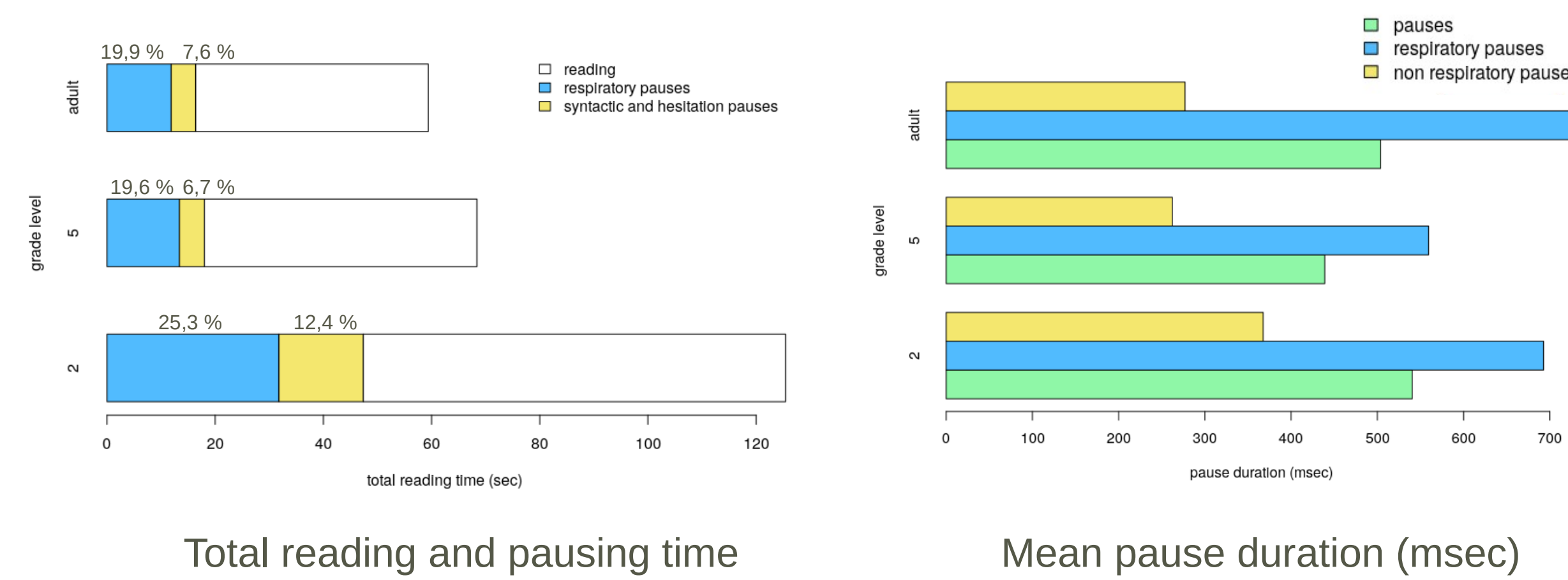
Objectives

Describing pausing acquisition from the beginning of reading acquisition to expertise, including breath-voice coordination while reading aloud

Conclusion

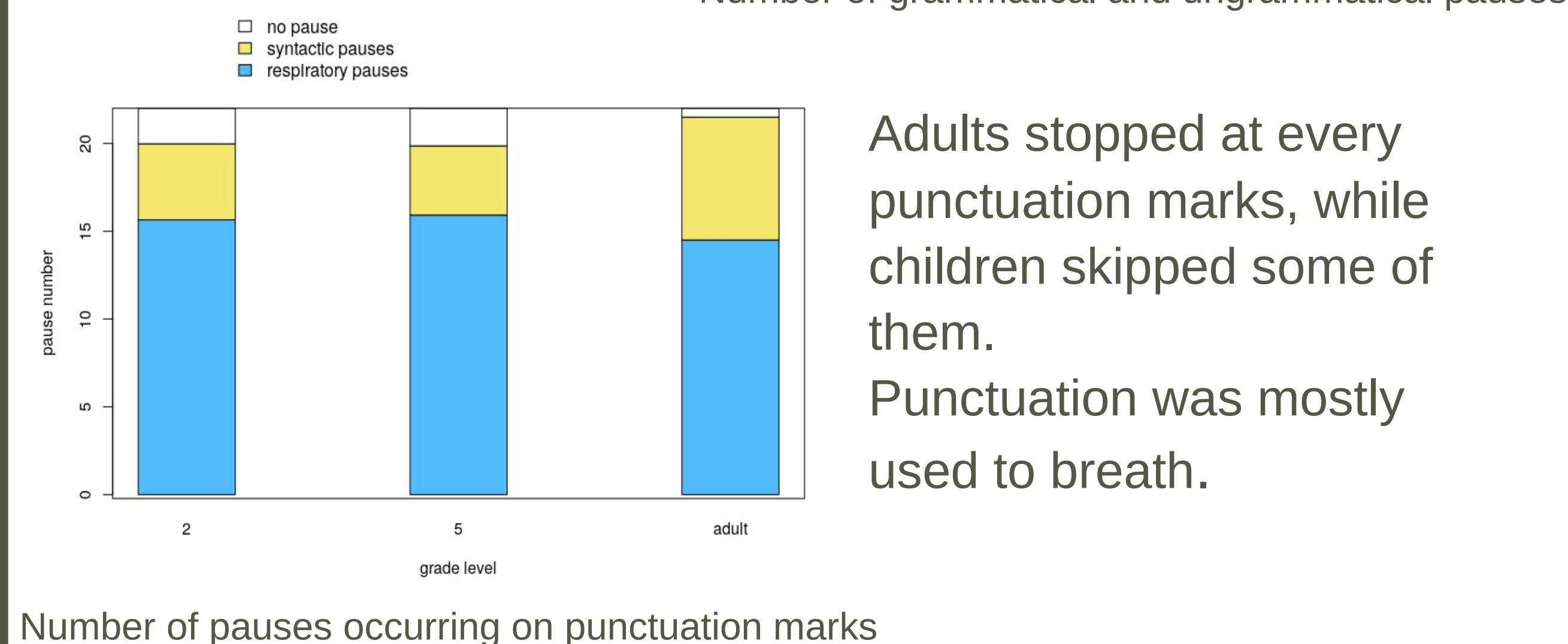
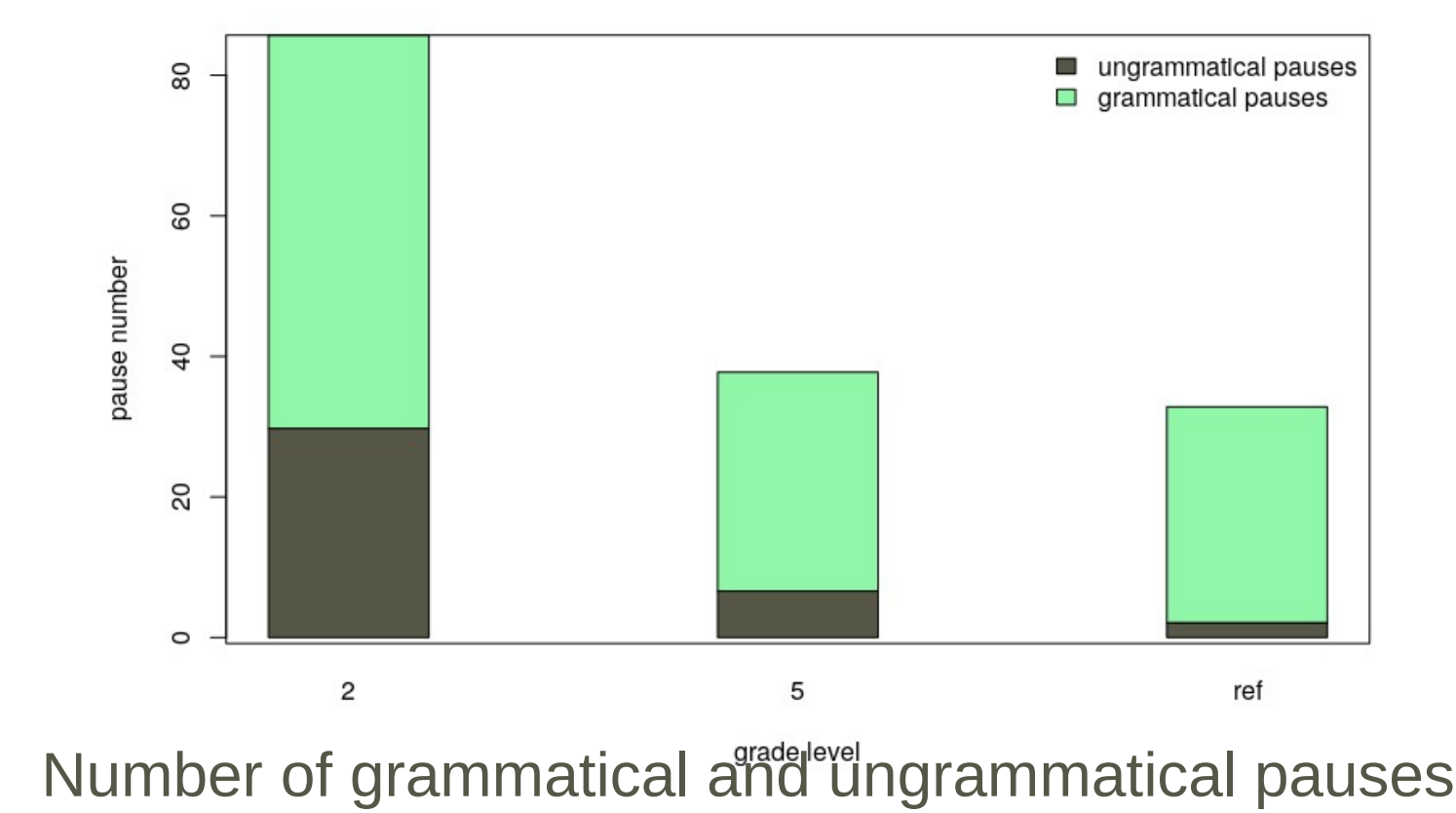
2nd graders spent more time pausing, with more breathing and hesitations. Breathing-reading coordination was not acquired
5th graders paused less and shorter than adults, relying less on punctuation marks, planning their respiratory pauses

Pausing



2nd graders made longer pauses, more often.
 5th graders made less and shorter pauses than adults.

2nd graders made more ungrammatical pauses.

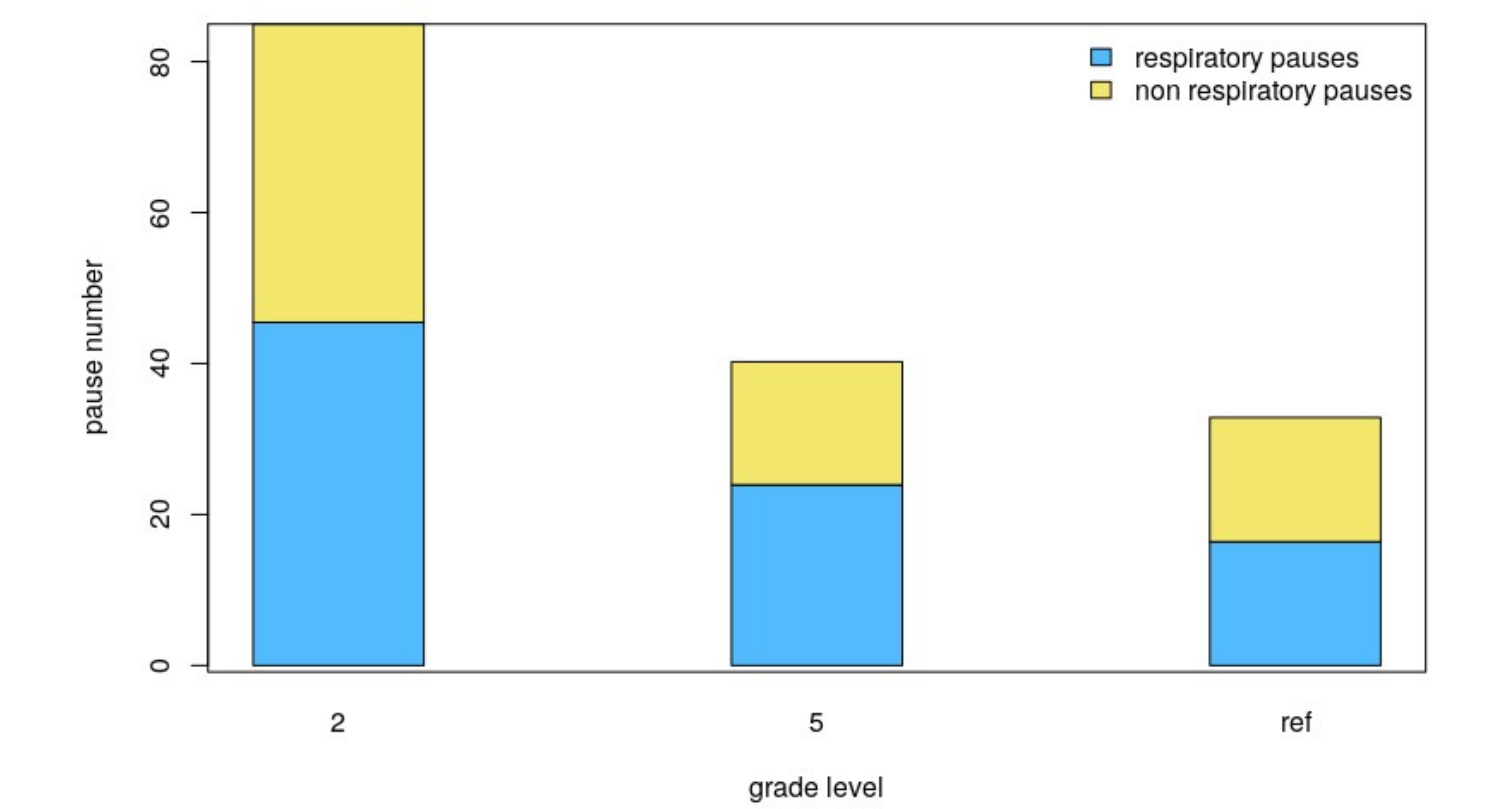


Adults stopped at every punctuation marks, while children skipped some of them.
 Punctuation was mostly used to breath.

Breathing coordination

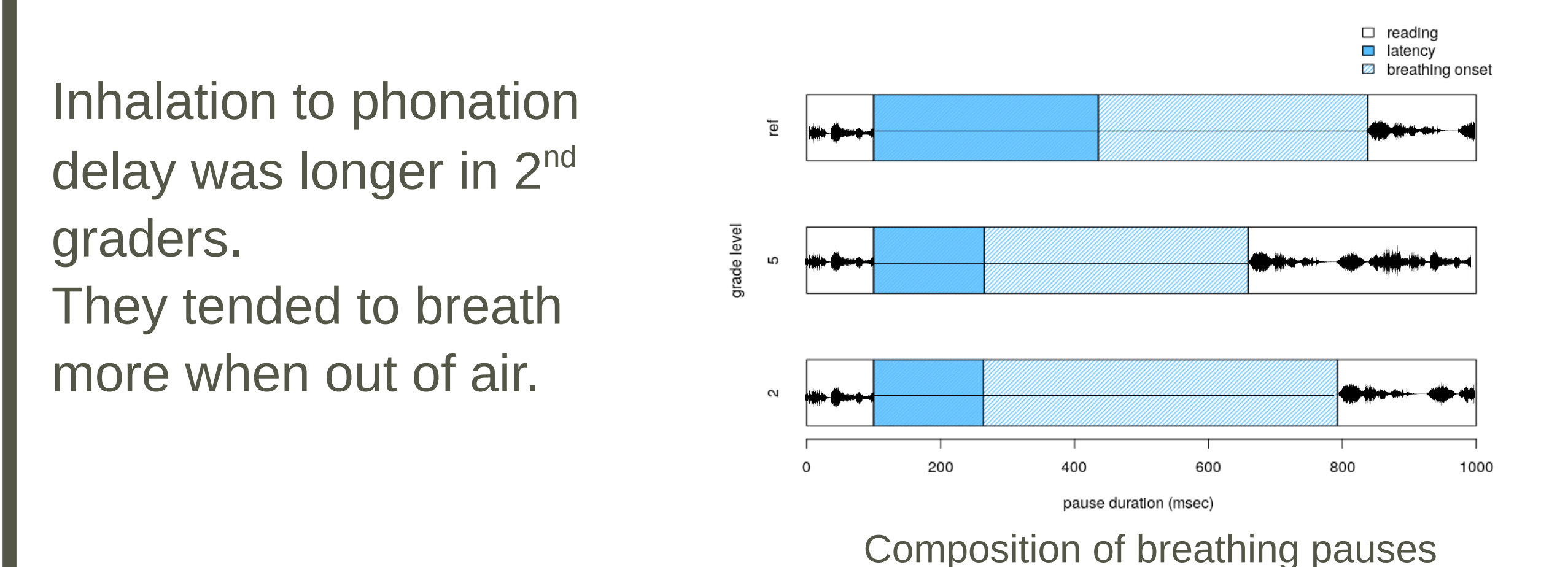
Adults had longer respiratory pauses. They occurred mostly on punctuation marks and were used to emphasize expressivity.

2nd graders breathed more than 5th graders.
 2nd graders made more non respiratory pauses.
 5th graders made less.



2nd grader made more ungrammatical breathing pauses than 5th grader.
 Adults made none.

Number of grammatical and ungrammatical respiratory pauses



Inhalation to phonation delay was longer in 2nd graders.
 They tended to breath more when out of air.