

Review of: "A Review of Prosody, Punctuation, and Dyslexia: Implications for the Use of Speech Technologies"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

This is highly interesting manuscript about important and understudied topic of prosodic and punctuation skills in dyslexia. I like the author's goal to provide a practically -oriented overview of the state in the field, but agree with previous reviewers that there is still plenty of work to do to reach proper depth of a research article. Although this is not written as a meta-analysis, the reader is left to wonder whether this review is comprehensive either in theoretical or empirical sense and how much of relevant literature has left 'under the radar' so to speak. For this end, I suggest the author revise the paper according to comments provided by the two previous detailed reviews. One particularly confusing issue is that although the paper early states that difficulties in punctuation in dyslexia are well-documented, later it is said that the studies provide inconsistent findings. However, the text does not specify what these difficulties are, but only conclude that in fact there is little research on the topic. So, overall I agree with the previous reviewers that the paper requires major revision consisting of reorganization, deepening presentation of theoretical views of prosodic and punctuation processing in typical and dyslexic readers, more comprehensive and detailed review of previous research of these and intervention research, and only then provide a review of highly new field of assistive speech technology studies, instead of mixing it to previous sections also. Below is also minor notes I made during reading the text for the first time.

Minor comments to the text:

Punctuation and prosody:

- I dont understand the meaning of word 'periods' in this context: "which often led to lengthier periods"

Prosodic training in dyslexia:

- I think this sentence should be moved to the section of discussing speech technologies in dyslexia remediation: "Stemming from the above, one may argue that since explicit linguistic prosodic processing is impaired in dyslexia, using TTS technologies for punctuation correction is counter-intuitive."
- Please check if it really contained musical exercices, as I know that the standard GraphoGame does not. Also check if the authors used label 'GraphoLearn' as I know that it is the current label for research of this serious game. The GraphoGame -name is deserved for commercialized versions of the game: "GraphoGame Rime, to its English version. GraphoGame Rime is a phonics game using rhyme and musical interventions to train dyslexic students and was found to be efficient in primary school interventions regarding the improvement of reading and spelling skills (Ahmed et al., 2020)."

- What do you mean that latency is high-frequency oscillation: "Moreover, the pre-remediation ERPs showed increased latency in the P300 waveform for dyslexic students dealing with auditory stimuli, while these high frequencies were not observed post-remediation."
- Please briefly state what was the explicit prosody training: "The programme of Zygouris et al. (2018) shows that incorporating explicit prosody training in dyslexia remediation can be effective and that this improvement can be measured neurocognitively."
- I wonder if it is really so that there are not more studies about explicit training of prosodic skills in dyslexia.
- You may briefly review Reader's theater -approach, e.g.:
Hautala, J., Junttila, E. & Ronimus, M. (2022). Readers' theater projects for special education: A randomized controlled study. *Scandinavian Journal of Educational Research*. <https://doi.org/10.1080/00313831.2022.2042846>

Please also check Chase Young's works as he is the leading research of Reader's theater interventions.

Dyslexia & TTS:

- Double-edged sword. While TTS may work as assistive technology, I believe by definition they may not teach the student to master themselves the assisted skill. Instead explicit teaching of prosody and punctuation and targeted training of these skills may provide more benefits for the student in the long run. Of course the issue is not all-or-none, e.g. also we adults welcome automatic text correction tools.
- This sounds odd without any why-level explanations: "they did not implement the use of TTS in the classroom, which has showed to improve ratings of intelligibility for speech synthesisers (Ní Chiaráin & Ní Chasaide, 2017)."

Implications:

- a typo: "Gosawmi"

Limitations:

- A reader does not remember what they did find: "It is possible that testing prosody and punctuation in non-English speaking individuals would not yield the same results as those of Heggie and Wade-Woolley (2018)."

