

Words that children are taught differ from those they read and hear: Evidence from a popular reading curriculum

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Words are typically selected for reading instruction if they exhibit spelling-sound structure thought to accelerate learning. Little is known about how the properties of curricular words overlap with those that children experience outside of the reading classroom. We examine the issue by aggregating words explicitly taught in a popular reading curriculum for 1st grade students and comparing them against words found in behavioral norms and against those in large text and speech corpora. **QUESTION: *HOW DO CURRICULAR WORDS COMPARE TO THE WORDS CHILDREN READ AND HEAR?***

OBJECTIVE

- Phonics curricula emphasize teaching spelling-sound associations
- Focus on the most decodable words, pointing out exceptional cases
- This prioritizes alphabetic predictability over other properties
- Words are learnable and useful for other reasons as well, including how common they are in print, speech

HOW DO CURRICULAR WORDS COMPARE TO THE WORDS THAT CHILDREN READ AND HEAR?

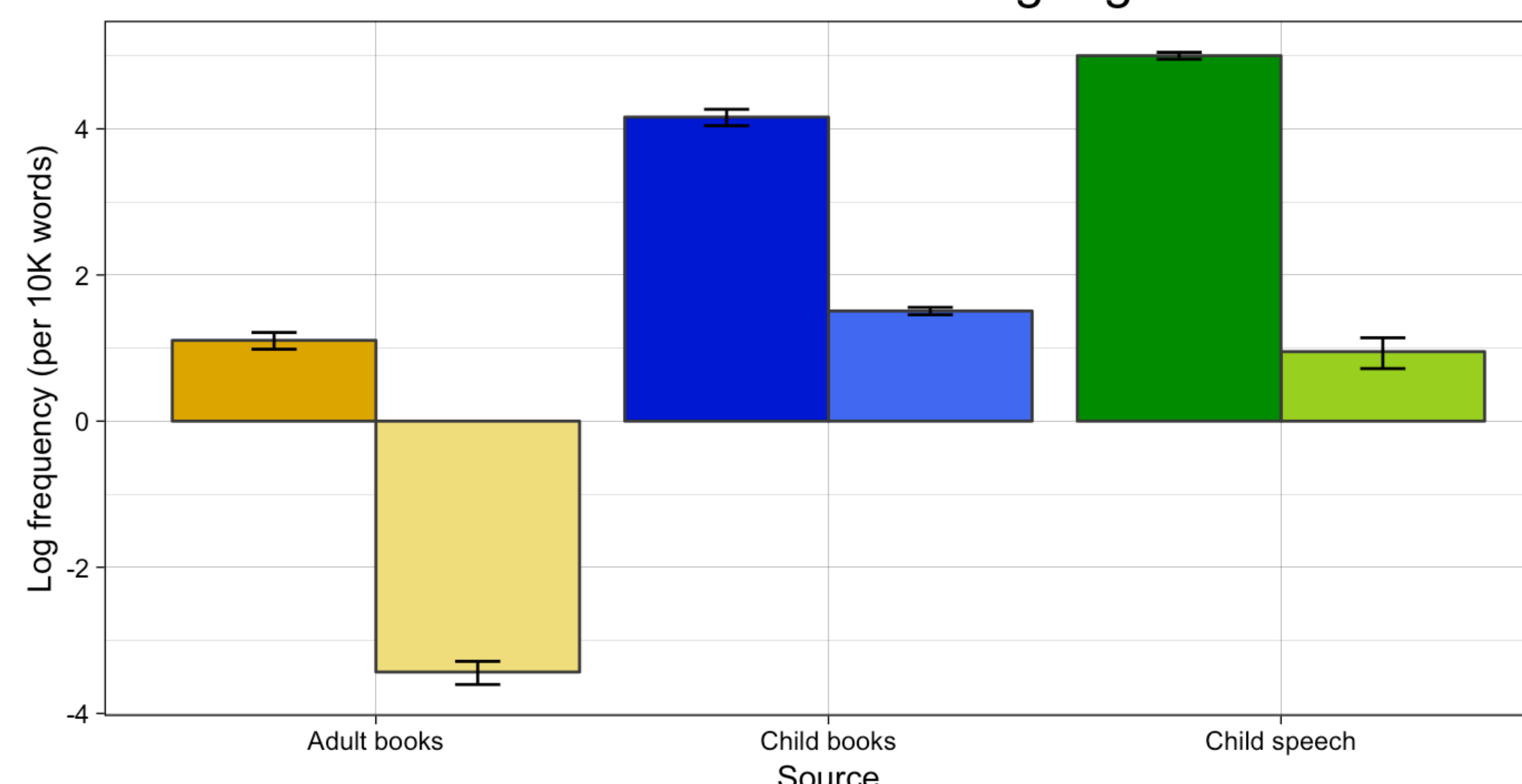
METHOD

- The contents of a popular comprehensive reading curriculum were made into a database
- Words we focused on: words taught during explicit phonics instruction
- Comparison data were included for analysis from other studies and corpora
- Comparison corpora were collected:
 - Child-directed text (Wisconsin Corpus¹)
 - Child-directed speech (CHILDES^{2, 3})
 - Adult speech/text (SUBTLEX⁴)
- Analyses conducted for orthographic, semantic properties important for reading, other language tasks

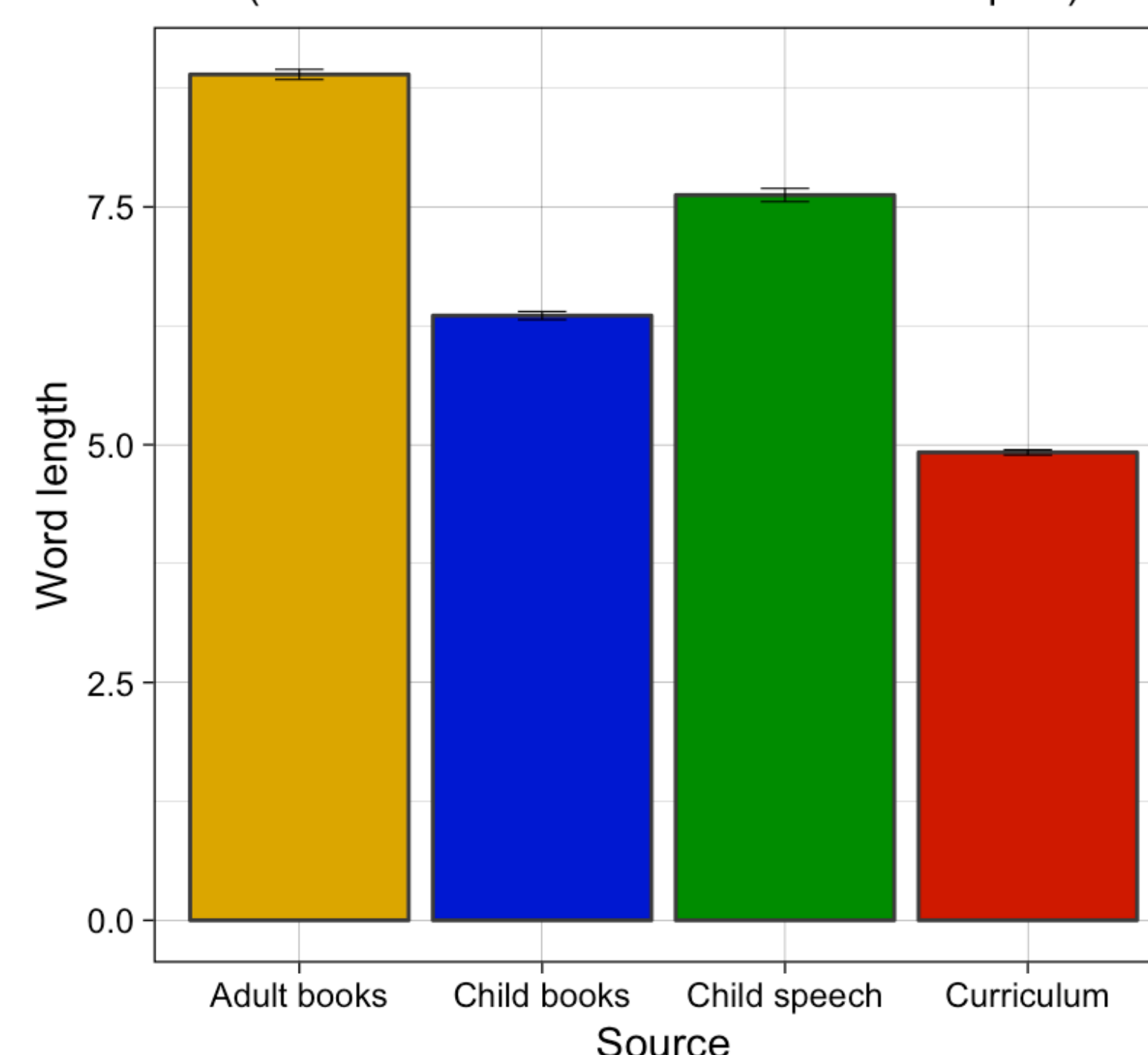
ANALYSES

- Curricular words are far more common than non-curricular words across language corpora (A)
- Curricular words (red bar) tend to be shorter than words from other sources (B)
- Words in curriculum are more imageable⁵ than counterparts in text, speech (C)
- These words are generally learned at an earlier age (age of acquisition⁶) than words from other sources (D)

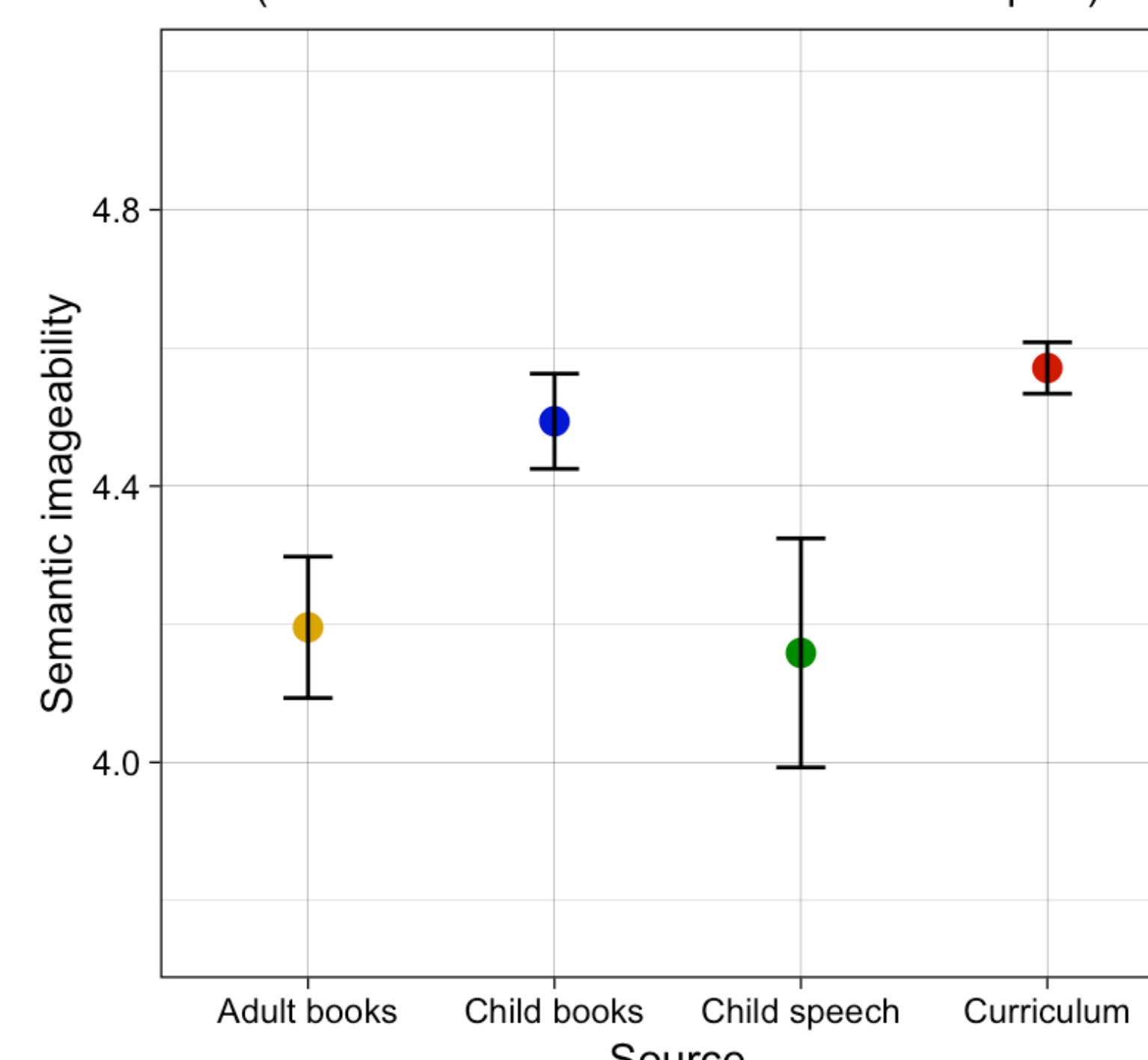
(A) Frequency of curricular words in adult- and child-directed language



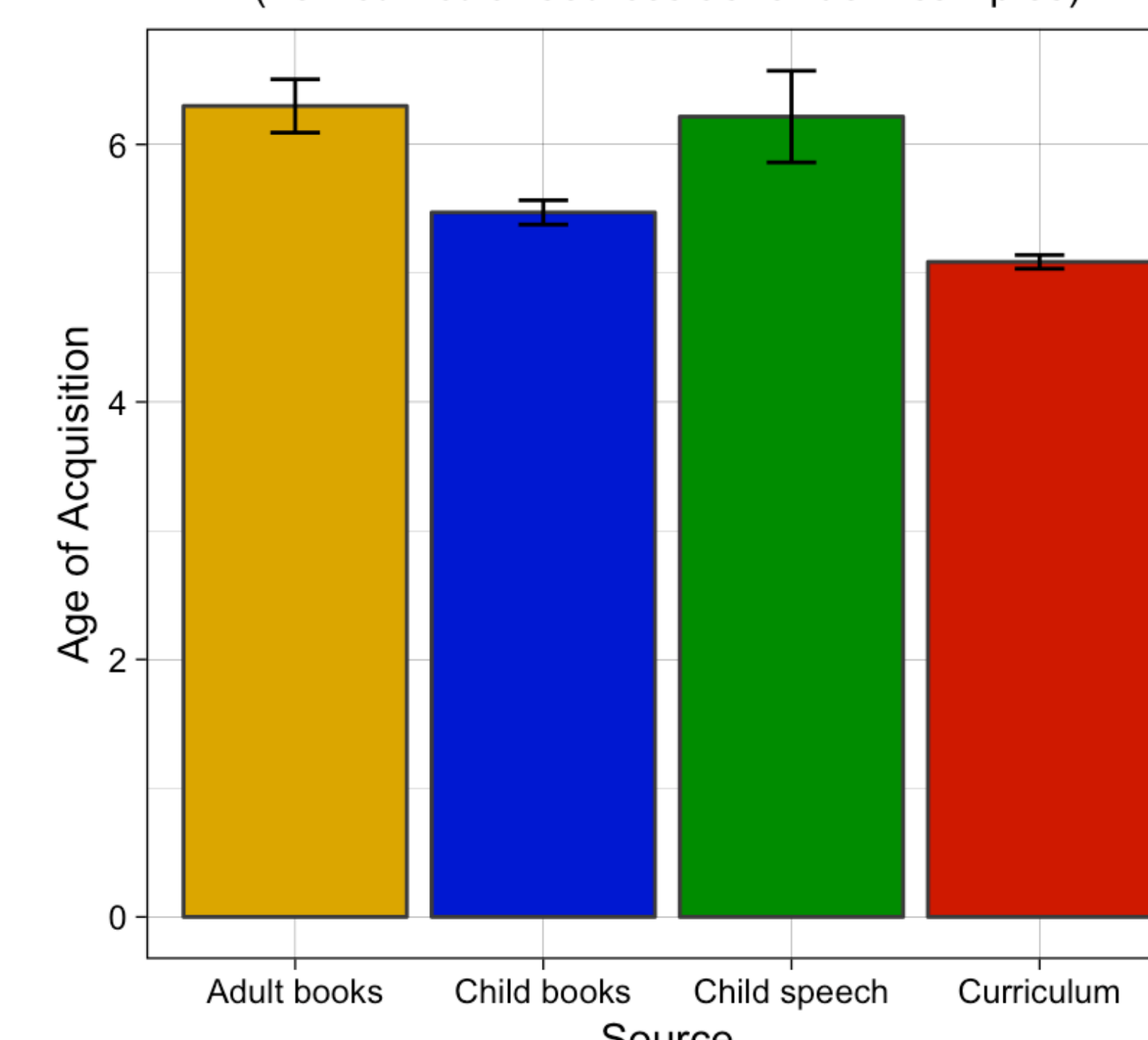
(B) Length of words across sources (non-curricular sources as random samples)



(C) Semantic imageability across sources (non-curricular sources as random samples)



(D) Age of acquisition across sources (non-curricular sources as random samples)



CONCLUSIONS

- Curricular words are orthographically simplistic; curriculum and instruction emphasizes ease of learning
- These words differ from the words that children are commonly exposed to in everyday experience
- Value in incorporating additional information about the properties of words in designing curriculum and instruction; a shift in emphasis to generalizability may be beneficial to students

REFERENCES

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- ⁵ Stadthagen-Gonzalez, H., & Davis, C. J. (2006). The Bristol norms for age of acquisition, imageability, and familiarity. *Behavior research methods*, 38(4), 598-605.
- ⁶ Kuperman, V., Stadthagen-Gonzalez, H., & Brysbaert, M. (2012). Age-of-acquisition ratings for 30,000 English words. *Behavior research methods*, 44(4), 978-990.

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