

Are two languages better than one? Analysis of effects of early bilingualism in basis of language comprehension



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ABSTRACT

According to a recent United States Census Bureau Report, the number of people in the United States who spoke a language other than English at home has increased from 23.1 million in 1980 to 67.8 million people in 2019, see figure 1 (Dietrich and Hernandez, 2022). The increase of bilingual speaking individuals has led to the importance of this research. This research project aims to provide a better understanding of cognitive development, specifically language comprehension, within bilingual school-aged children. This study examined the language comprehension abilities of early bilingual speaking children from other monolingual children. This study also addresses the various factors that contribute to learning multiple languages including, language exposure and socioeconomic status (SES). The method used for this study included analyzing and utilizing qualitative and quantitative data from online scholarly and peer-reviewed sources. Findings revealed that children who are bilingual early in life have shown disadvantages in language comprehension in comparison to their monolingual counterparts but paradoxically have shown advantages in cognitive development, auditory attention, and executive control. This research study will give a better understanding of the potential advantages and disadvantages of early bilingualism. We anticipate our study will be a starting point of incorporating more inclusive bilingual programs in schools, therefore, informing school educators and administration of the importance of having specialized programs and curriculums for specific bilingual student populations.

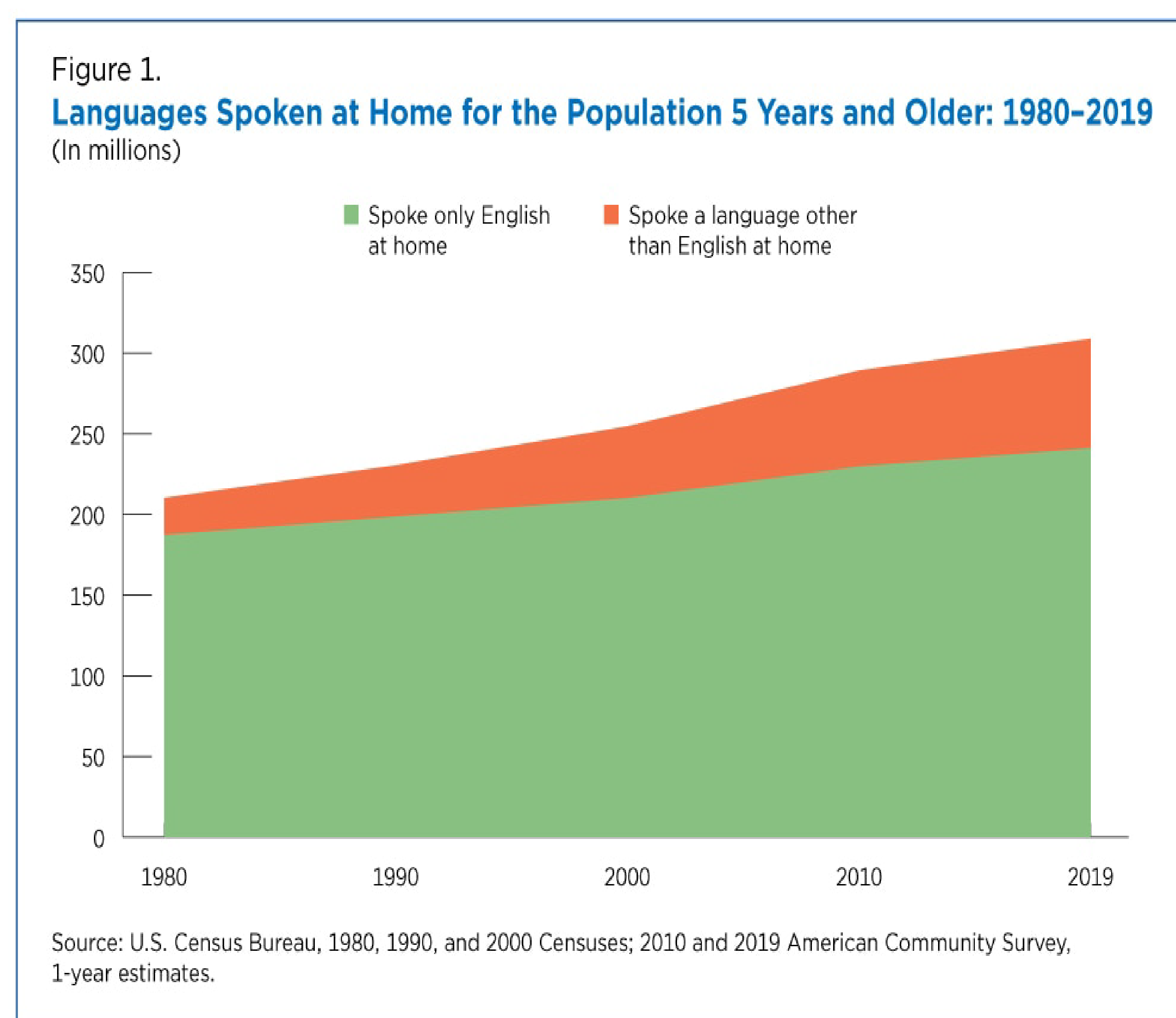
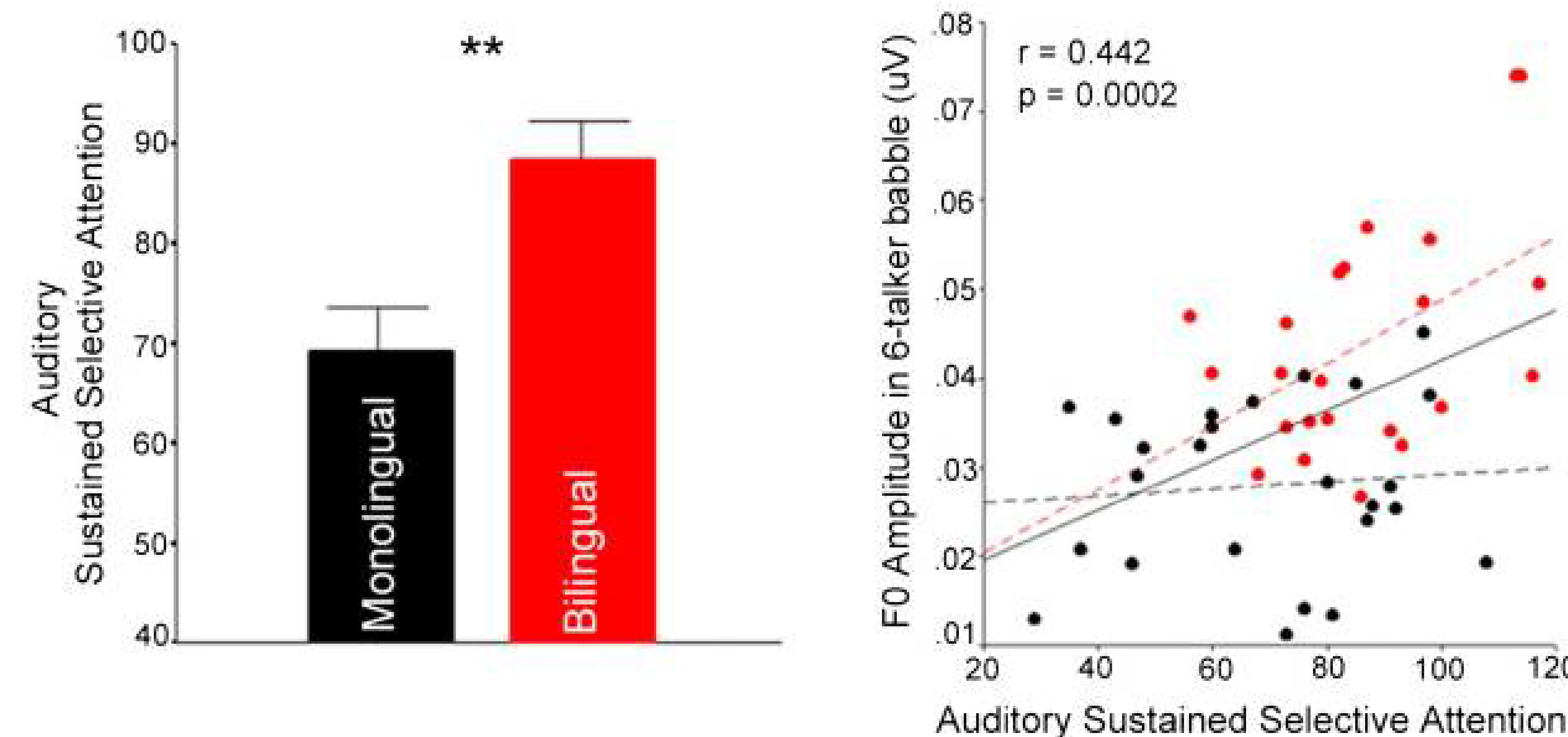


Figure 1: The figure above shows a graphical representation of the languages spoken in the US. It demonstrates a comparison of monolingual and bilingual children (U. S. Census Bureau).

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METHODS:

- PubMed and Google Scholar were utilized to find appropriate literature resources for expository research
- Key search words used were "bilingual", "cognitive development", and "language development".
- Articles were eliminated due to relevance to research objective



Bilinguals' performance on a sustained selective attention task and its correlation with subcortical processing in multitalker babble. Bar graphs: Bilinguals (red) outperform monolinguals (black) on sustained selective attention, regardless of sensory domain. Scatter plot: Auditory attention performance was correlated with F0 encoding at the brainstem. Adapted from Krizman, et al., PNAS 2012; 109:7877-7881

Figure 2. The figure above demonstrates bilingual adolescents performance on selective attention tasks in comparison to monolingual adolescents (Marian and Shook, 2012).

RESULTS

- Bilingual children were slower and less accurate in reading articles in comparison to monolingual counterparts (Bellocchi, et al, 2017)
- Bilingual children exceed their monolingual counterparts in activities that require inhibitory control abilities (Marian and Shook, 2012)
- Bilingual children have greater sustained selective attention with greater auditory attention performance in comparison to their monolingual counterparts(Marian and Shook, 2012), see figure 2.

- Bilingual children were better at responding to different stimulations surrounding environments (Costa, et al. , 2008)
- With higher socioeconomic status parents talk to their children with a more sophisticated approach, therefore language comprehension skills are more advanced in populations with higher SES (Lervag and Lervag, 2014).

CONCLUSION

This research project has analyzed the relationship between early bilingualism and language comprehension skills in school aged children. Furthermore, results of this research have indicated that there are both advantages and disadvantages for early bilingualism. The results of the study have showed far more benefits for early bilingualism than disadvantages. The results of the study can be used for more future research in this field.

FUTURE WORK

This research study will give a better understanding of the potential advantages and disadvantages of early bilingualism. We anticipate our study will be a starting point of incorporating more inclusive bilingual programs in schools, therefore, informing school educators and administration of the importance of having specialized programs and curriculums for specific bilingual student populations.

REFERENCES

- Bellocchi, S., Tobia, V. & Bonifacci, P. Predictors of reading and comprehension abilities in bilingual and monolingual children: a longitudinal study on a transparent language. *Read Writ* 30, 1311–1334 (2017). <https://doi.org/10.1007/s11145-017-9725-5>
- Hernandez, S. D. and E. (2022, December 13). Nearly 68 million people spoke a language other than English at home in 2019. *Census.gov*. <https://www.census.gov/library/stories/2022/12/languages-we-speak-in-united-states.html>
- Marian, V., & Shook, A. (2012). The cognitive benefits of being bilingual. *Cerebrum : the Dana forum on brain science*, 2012, 13.
- Melby-Lervåg, M., & Lervåg, A. (2014). Reading comprehension and its underlying components in second-language learners: A meta-analysis of studies comparing first- and second-language learners. *Psychological Bulletin*, 140(2), 409–433. <https://doi-org.proxy.ulib.csuohio.edu/10.1037/a0033890>

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