Predictive processing in bilingual children: effects of language dominance, cross-linguistic influence and literacy

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Listeners use linguistic cues to anticipate upcoming words, but L2 speakers may sometimes be slower and experience cross-linguistic influence from their L1 (Kaan & Grüter, 2021; Pickering & Gambi, 2018). We know that monolingual children use predictive processing from a young age (Mani & Huettig, 2012), but to date very few studies have focused on bilingual children (Brouwer et al., 2017; Lemmerth & Hopp, 2019). We aim to fill this gap, by investigating to what extent linguistic prediction in different groups of bilingual children is influenced by language dominance, cross-linguistic influence and literacy. We created different visual world eye-tracking experiments to test whether children would anticipate nouns on the basis of preceding gender and number cues. Study 1 tested gender processing and cross-linguistic influence in German-Italian bilinguals with varying dominance profiles (N = 63, age 6-9), Study 2 tested L1 and L2 processing of number in Italian early L2 learners of English (N = 36, age 7-8), Study 3 tested the effect of linguistic differences on gender and number processing in Arabic- and Mandarin-Italian sequential bilinguals compared to monolingual controls (N = 78, age 8-12), and Study 4 explored the relation between reading and prediction in multilingual and monolingual Italian children (N = 70, age 8-12). Overall, our results show that bilingual children anticipate nouns on the basis of morphosyntactic cues, although in some cases they were slower than monolingual peers when tested in a non-native or non-dominant language. This was the case especially when children had to rely on a grammatical feature was absent in their L1, or when they experienced cross-linguistic influence due to gender incongruency. With respect to literacy, we found a relation between reading and prediction for monolingual children but not for multilingual children. The implications of these findings for future research will be discussed.

References

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