

Early vocabulary development in multilingual toddlers: input and language interaction

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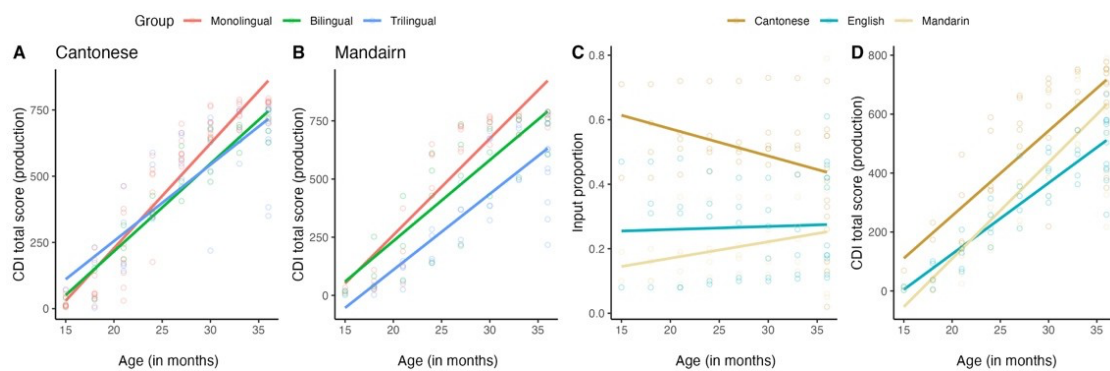
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Abstract

In early bilingual development, relative exposure to a language is a strong predictor of outcomes in the same language (Place & Hoff, 2011). Nevertheless, in trilingual acquisition, the proportion of input in a language does not always correspond linearly to acquisition rate of that language, probably due to cross-linguistic reinforcement between two closely related languages in the triad (Mai & Yip, 2022). This paper investigates intricate relations in vocabulary development in early bilinguals and trilinguals raised in ethnically Chinese families in Hong Kong and Guangzhou.

Longitudinal data from 1;6 to 3;0 were sampled from 4 Cantonese-Mandarin bilingual and 13 Cantonese-Mandarin-English trilingual children in the Early Additive Child Multilingual Corpus (Mai et al., in prep), with matched monolingual Cantonese ($n = 9$) and Mandarin ($n = 6$) children from the same corpus as controls. Multilingual CDIs and parental questionnaire were used to assess lexical development and input properties in all relevant languages at 3-month intervals.

Mixed effect models revealed a significant group effect. Trilingual children had lower scores than monolinguals in both Cantonese (Fig 1A) and Mandarin ($ps < .05$, Fig 1B). Notably, the trilingual-monolingual gap widened with increase of age in Cantonese (Fig 1A) but remained stable in Mandarin (Fig 1B). Although bilingual children did not have lower scores overall, significant age and group interaction suggested lower-than-monolingual performance in both languages at older ages. Within the trilingual group, despite significantly larger proportions of input in Cantonese than Mandarin (Fig. 1C), the children displayed comparable outcomes between the two languages across the age span ($p > .05$, Fig. 1D). Additionally, although the input ratio in English was higher than in Mandarin (Fig. 1C), vocabulary score in Mandarin surpassed that in English at around 2;0 (Fig. 1D). Overall, our findings suggest positive transfer from the “input-rich” Chinese variety (Cantonese) to the closely-related yet “input-poor” Chinese variety (Mandarin), mitigating the effects of severely reduced input in trilingual acquisition, supporting cross-linguistic reinforcement in trilingual development. Word-by-word analysis of the CDI items to investigate the role of form similarity in acquiring translation equivalents in Cantonese and Mandarin in the bilinguals and trilinguals is in



progress.

Figure 1. A-B: CDI scores of three groups of children; C-D: input-outcome within the trilingual group.