

Beyond Words: Referential Gesturing in Bilingual and Monolingual Mother-Child Dyads and Its Role in Early Development

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Abstract

This study investigates language use and referential gestures during bilingual and monolingual mother-child dyads to determine their relationship and impact on early development. Research has suggested a bilingual advantage in leveraging eye gaze and pointing for vocabulary acquisition (Yow et al., 2017) and connections between parental gesture, child gesture, and child language (Salo et al., 2018; Wray & Norbury, 2018). We examine these relationships in Cantonese-English bilingual children, focusing on 1) variation in gesture frequency by language and bilingual status; 2) associations between child/mother gesturing and lexical diversity; and 3) links between children's early gesturing and subsequent visual processing skills.

Participants included 14 Cantonese-English bilinguals and 20 Cantonese monolinguals aged 3;0 in Hong Kong, with their mothers. Data came from the Early Additive Child Multilingual Corpus and its associated dataset. Mothers provided the main sources of input in relevant languages since birth, with bilingual mothers speaking Cantonese (L1) and English (L2). Mother-child standard kitchen toy play sessions were videotaped, transcribed, and coded for three gesture types (contacting, pointing, gaze direction) accompanying verbal reference. Gesture rates per 100 words and lexical diversity, indicated by the number of different words used, were calculated for children and mothers. Results were compared with age- and activity-matched English monolingual mother-child dyads from CHILDES. At 5;8, children's visual processing skills were assessed using the WPPSI-IV Bug Search subtest.

Results indicate more gesture use in English than Cantonese sessions across children and mothers (Figure 1). Bilingual children gestured less than monolinguals in Cantonese sessions ($p=.027$) while the bilingual-monolingual differences in gesture rates were not significant for English sessions. These variances might reflect language differences in gesture use and the bilinguals' lower English proficiency. In English, higher gesturing among bilingual children was associated with greater lexical diversity ($r_s=.711$, $p=.004$), suggesting gestures facilitate vocabulary development in their weaker language. However, their gesturing negatively correlated with maternal lexical diversity in English sessions ($r_s=-.618$, $p=.019$), implying that richer verbal input from mothers may decrease children's need for gestural support. Cantonese gesturing at 3;0 strongly correlated with visual processing skills at 5;8 ($r_s=.85$, $p=.007$), demonstrating continuity between early gesturing and subsequent cognitive development.

(350 words)

References

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