Heterogeneity in Emergent Bilinguals: Linking Child Language Profiles to Parent Home Language Support and Child Self-Regulation

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Background

Sustaining emergent bilinguals' home language during the transition to school benefits cognitive and social-emotional development. But how parents do parents actively support the home language during this critical time, and do they adapt their strategies to their child's bilingual abilities?

RQ1: What distinct profiles emerge from children's Spanish and English oral language skills?
RQ2: How do children's self-regulation and observed language use differ across these profiles?
RQ3: What language-supportive strategies do parents use during toy play, and do they differ by child language profile?

Methods

Study Design: Secondary analysis of **baseline data** from an RCT.
Participants: 126 families recruited from government-subsidized preschools in Texas (analytic subset)
- **Inclusion:** Caregivers (98% mothers) that preferred Spanish for study communication and spoke Spanish at home
- Children: 52% boys, M age = 53 mos (SD=6)

School-Based Assessments
- Conducted in a quiet room across two separate days
- EOWPVT-4 and PLS-5 (Spanish & English)

Home Visit
- Parent-child toy play video observation
- Child self-regulation tasks and parent surveys

Analysis Plan

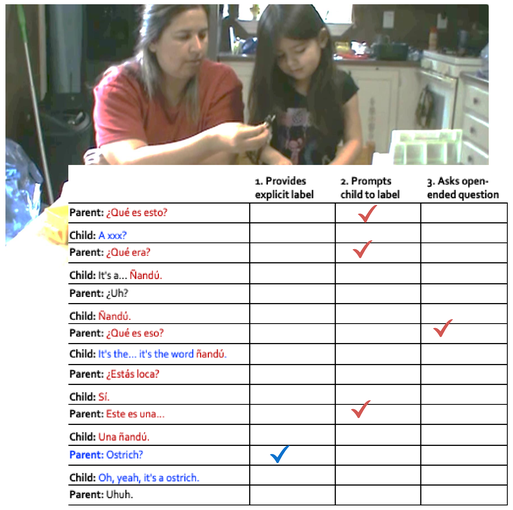
- **Latent Profile Analysis (LPA)** using 6 standardized Spanish and English scores.
- The best-fitting model that was theoretically meaningful was a **3-profile solution** with varying variances and zero covariances
- Due to skewed distributions and unequal variances, non-parametric **Kruskal-Wallis** tests and post-hoc **Dunn's tests** (Bonferroni corrected) were used for all outcomes.

Novel Video Coding (5-minute toy play)

Language Use (rated 1-5)
- Parent & child Spanish vs. English;
- Child total language use,
- Child Spanish utterance length

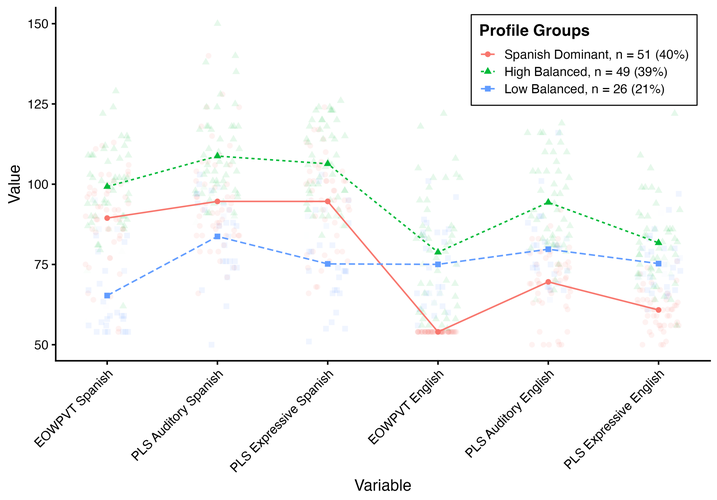
Frequency of Parent Strategies
For each 30 second segment, 2 coders watched video 2-3 times and coded presence or absence of the following behaviors in Spanish only or English/both:
- Providing explicit labels
- Prompting child to label
- Asking open-ended questions

Interrater reliability for full coding scheme >.90



Results

RQ1: Profiles

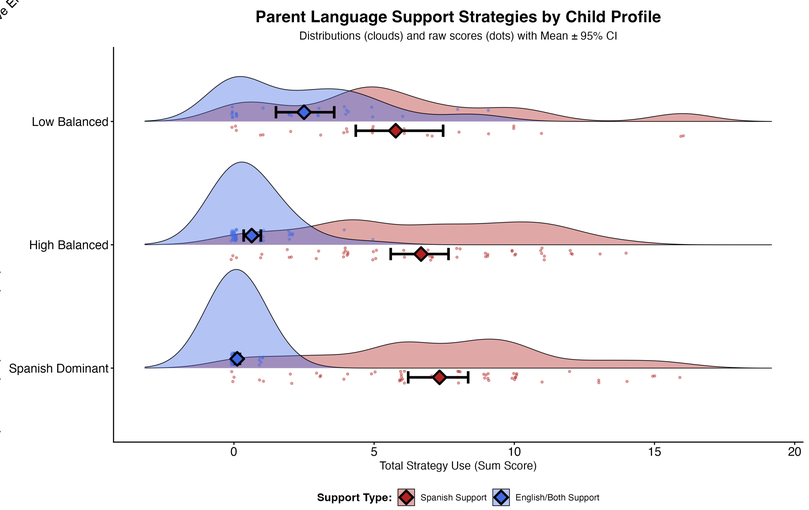


RQ2: Child Self-Regulation and Language Use

	Spanish Dominant Mean (SD)	High Balanced Mean (SD)	Low Balanced Mean (SD)	Significant Contrasts
Child Self-Regulation				
Bear-Dragon inhibition (lower=greater inhibition)	9.24 (4.67)	5.02 (5.54)	8.41 (4.99)	SD > HB
Latency to peek at gift	30.10 (27.05)	48.19 (20.20)	25.31 (24.50)	HB > SD, LB
Latency to touch gift	75.43 (48.90)	83.27 (43.31)	74.12 (44.78)	*None*
Child Language Use				
Overall Language Use	2.82 (1.23)	3.45 (1.21)	2.73 (1.04)	HB > SD, LB
Relative Spanish Use	4.94 (0.31)	4.45 (1.10)	3.27 (1.73)	SD > HB > LB
Spanish Utterance length	2.80 (0.98)	3.06 (1.05)	1.96 (0.96)	HB > SD > LB

RQ3: Parent Language-Supportive Strategies

	Spanish Dominant Mean (SD)	High Balanced Mean (SD)	Low Balanced Mean (SD)	Significant Contrasts
Relative Spanish Use	5.00 (0.00)	4.82 (0.57)	3.69 (1.74)	SD, HB > LB
Spanish-supportive strategies				
Provides Explicit Labels	3.53 (2.45)	3.24 (2.02)	2.77 (2.58)	*None*
Prompts Child to Labels	1.10 (1.60)	1.18 (1.33)	1.04 (1.46)	*None*
Asks Open-Ended Qs	2.71 (2.27)	2.24 (1.88)	1.96 (1.84)	*None*
English-supportive strategies				
Provides Explicit Labels	0.12 (0.33)	0.41 (0.64)	1.65 (1.65)	LB > SD, HB
Prompts Child to Labels	0.00 (0.00)	0.12 (0.53)	0.35 (0.80)	LB > SD
Asks Open-Ended Qs	0.00 (0.00)	0.10 (0.47)	0.50 (1.14)	LB > SD, HB



Key Takeaways

- Children in the **High Balanced** profile had stronger self-regulation compared to the Spanish Dominant profile, suggesting a cognitive benefit to balanced bilingual development.
- Parents of **Low Balanced** children may adapt their support by increasing English-supportive strategies and using less Spanish overall.
- Despite having children with high English proficiency, parents of **High Balanced** children look nearly identical to parents of **Spanish Dominant** children. They maintain high-intensity Spanish support and rarely use English-supportive strategies, suggesting that sustained, responsive home language support may be foundational to successful bilingual outcomes.

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