**Background**

Research is needed that addresses language acquisition in typically developing bilingual children, which incorporates influencing and contextual factors such as instructional program type (e.g., structured English immersion, dual language) (Hammer et al., 2014).

Likewise research on bilingual children concerning the prevalence and effects of first language (L1) loss with more than one to two participants over three or more longitudinal data points is essential (Anderson, 2012; Hammer et al., 2014).

The phenomenon of L1 loss is evidenced in both lexical and grammatical measures, with an apparent influence of academic instruction when provided predominantly in the second language (Anderson, 2012).

**Purpose:** To map dual language development in a sample of typically developing, bilingual (Spanish-English) children enrolled in an English immersion school across four academic semesters, with a specific focus in detecting whether the children experienced L1 loss over time.

**Methods**

**Participants:** 37 bilingual preschool children (mean age at onset, 51.2 months) enrolled in an English immersion program.

**Longitudinal language sampling**: Narrative retell language samples were collected in English and Spanish in each of four consecutive academic semesters, beginning with the fall semester of preschool. Four wordless picture books about a boy and his frog (counterbalanced for story order and language) were used to elicit the samples (Mayer, 1969; 1974; 1975a; 1975b).

**Language sampling analysis**: Proportion of grammatical utterances (grammaticality) was specifically calculated, as it has been previously used as an indicator of L1 loss in bilingual children (Anderson, 2012). The language samples were analyzed using the Systematic Analysis of Language Transcripts (SALT) software (Miller & Iglesias, 2012).

**Results**

Paired sample t-tests and effect sizes were conducted for percent grammaticality in both languages to statistically contrast the first and fourth semester of collection.

**Spanish:** Participants demonstrated non-significant change in grammaticality from the first to the fourth semester ($t(22) = -1.06$, $p = .302$, $d = -.31$).

**English:** Participants demonstrated a positive and significant increase in grammaticality from the first to the fourth semester ($t(32) = -5.76$, $p < .001$, $d = -1.25$).

Because the Spanish samples did not show significant growth nor loss, exploratory growth plots were conducted in order to visually inspect the individual growth trajectories of each participant for L1 loss, maintenance, and growth.

**Discussion**

Findings showed overall maintenance of L1 grammaticality over the course of four academic semesters, beginning in preschool. Negligible L1 academic support in the context of an English immersion program may have been a contributing factor.

Individual growth plots showed largely nonlinear trajectories of L1 growth (e.g., JL 079), maintenance (e.g., JL 055), and loss (e.g., JL 076) of grammaticality over four semesters. Further analyses may reveal L1 loss in a subgroup of the children in the cohort.

Findings also showed positive and significant change in English grammaticality over time, but at a slower rate than may have been expected. The children’s mean grammaticality in English remained below 80% after four semesters of English immersion.

**Selected References**
