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# Production of onset clusters by Bi-TD and Bi-SLI children: Evidence from German

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## Abstract

### Production of onset clusters by Bi-TD and Bi-SLI children: Evidence from German

This study investigated the production of onset clusters in German by typically developing bilingual (Bi-TD) children and bilingual children with Specific Language Impairment (Bi-SLI). The rationale of the study was to examine error frequencies and patterns in onset clusters as possible indicator of SLI in bilingual acquisition (see Barlow 2001; Ott et al. 2006 for monolingual children).

Method: Onset cluster production was assessed via the LITMUS-NWR (Chiat, in press), a nonword-repetition task focusing on syllable complexity. We concentrate on items containing an extrametrical /s/ and /S/ sound, resulting in sC(X) clusters (skufapi, Splaklu; 20 items). The following error types were analyzed: substitutions (Spukif gStukif), omissions (Splukif gplukif), additions (Spukif gSplukif), and metatheses (Spukif gskupif). We expected a higher error rate and differences in the frequencies of error types in the Bi-SLI group compared to Bi-TD children (Barlow 2001; Fox & Dodd 2001; Ott et al. 2006; Yavas 2010).

Research questions: Two questions were addressed in this study: (Q1) Do the Bi-SLI children show more cluster errors compared to the Bi-TD children? (Q2) Are there differences between the groups with regard to the frequencies of error types?

Participants: 49 bilingual children (Bi-TD, Bi-SLI) acquiring different first languages participated in the study. The mean age of the Bi-TD group (n=44) was 5;6 years (SD=3 months), they had a mean Length of exposure (LoE) of 51 mths (SD=16). The Bi-SLI group (n=5) had a mean age of 5;6 years (SD=3 months) and a mean LoE of 53 mths (SD=19). SLI was diagnosed by speech-language therapists.

Results: With regard to Q1, no significant group differences were found or the overall error rates (. The analysis of the error types showed a significantly higher rate of omissions by Bi-SLI children in the LD part ( $p < .05$ ); but no significant difference in the error frequencies in the LI part. A closer examination of the omission pattern indicated that the children tend to preserve the obstruent; omission affected the extrametrical sound (spifakugpifaku, Splaklug plaklu) or, in rare cases, the sonorant (Splaklug Spaklu).

Discussion: The Bi-SLI children produced more omissions in the language-specific s-clusters

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compared to Bi-TD children. No group differences were found for the LI part and for other types of errors. These results are consistent with previous work in several respects. First, the descriptive data shows that Bi-SLI children have more problems than Bi-TD children to produce onset clusters, in particular if clusters contain extrametrical sounds. Second, compared to Bi-TD children, Bi-SLI children more frequently resolve problems with s-clusters by omitting the extrametrical consonant. Third, Bi-SLI children show more difficulties repeating nonwords if language-specific structure is used. The results suggest that the omissions in these particular onset clusters can contribute to a diagnosis of SLI in bilingual children. More data is needed to confirm the results.

## References

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