StarWords: early language development in monolingual and multilingual settings - study overview & challenges of remote longitudinal data collection

Bilingual children have a different linguistic experience than their monolingual peers – they acquire more than one language and in consequence may receive less input in each language in comparison to monolinguals (e.g. Hoff, 2018; Unsworth, 2016). That is why studies that directly compare trajectories of language development in mono- and bilingual children in a longitudinal perspective are crucial – they inform researchers and practitioners which patterns in bilingual language development are typical. We will outline an ongoing longitudinal study concerning the emergence of first words and multi-word utterances in children raised in various linguistic environments (mono-, bi- or multilingual). The study, a part of the StarWords project (Study of parental reports on words, Mieszkowska, et al., 2022), relies on modern technologies and we will discuss issues specific to them.

Our main research tool is a custom-designed mobile application to be used as an electronic language diary in which parents register new words and utterances. Periodically (every 9 days) they are also asked to provide information regarding the language input their child receives and the app collects some background, e.g., demographic, information as well. We recruit parents of children up to the age of two (and follow them until they turn three) and in the original study protocol we included three groups, bilingual Polish-Norwegian, Polish-English, and monolingual Polish.

We hypothesise that as long as we compare general language development between bilingual and monolingual children, we might expect similar outcomes between the groups (cf. Hoff et al., 2012), but we should also see large variation in the data. Furthermore, we expect a positive relationship between the quantity and quality of input in each language and the age of reaching a specific milestone in each language (Patterson, 2002; Pearson et al., 1997; Scheele et al., 2010).

Advantages of collecting data through a mobile app include the ability to reach people wherever they live, without the need to meet them in person (which is useful in times of infection control), and the possibility for parents to provide data at convenient times using their everyday tool. However there are several challenges specific to such a fully online procedure: from technical (e.g., developing and maintaining an app requires plentiful resources), to practical (e.g., although currently, over 4500 parents have installed the app, only a small proportion keep using it and even a smaller one do it on a regular basis), to methodological (e.g., controlling the user base - we currently have speakers of 44 languages, including non-speakers of Polish).

In our talk, we will discuss these challenges in detail and present solutions we adopted to overcome (some of) them. In particular, we will talk about how we expanded the original protocol to accommodate the diversity of the user base (i.e., include more than the original three mono- and bilingual groups) and what strategies we use to maximise retention rate and improve user engagement (e.g., gamification).

word count: 485

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