

# MEASURING EARLY GESTURE AND LEXICAL DEVELOPMENT IN SETSWANA-SPEAKING INFANTS

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## Abstract

Little is known about the early acquisition of Setswana with only a few small-scale studies of children under the age of three years (e.g. Tsonope, 1988). To address this gap, teams from Botswana and South Africa are adapting the MacArthur-Bates Communicative Development Inventory (CDI) for Setswana. The CDI is an assessment tool (completed by parents) which gauges a child's gestures and receptive and expressive vocabulary (Fenson et. al., 1994). This presentation reports on the initial adaptation and first pilot of the Setswana CDI for infants aged 8 to 18 months living in Botswana.

The original American English CDI was adapted by three mother-tongue Setswana linguists. Thereafter, 12 expert informants (pre-school teachers and speech therapists) who work with young children were consulted. The tool was adjusted and piloted on 28 parents/caregivers of infants recruited from two health clinics in Botswana.

Results show that lexical comprehension and production correlate significantly with age. At 8,9 months, children could understand an average of 11,5 words and produce an average of 3 words. Children reached 50 comprehended words and produced 10 words at an average age of 12,94 months. By 18 months, vocabulary had grown to an average of 183 words comprehended and 22,3 produced. In the entire sample, there were 68 receptive and 21 productive lexical items which were commonly known (i.e., by 25% or more of the sample). These were related to specific semantic domains. Nouns made up 50% of receptive vocabulary and 57,1% of productive vocabulary, while verbs made up 33,8% and 9,5% of receptive and productive vocabulary respectively.

The children in this sample produced between 10 and 62 actions and gestures. For each item, there were at least three children that could produce it. Actions and gestures were significantly correlated with age. Children at 8 months old knew an average of 17,5 actions/gestures, which increased to an average of 46,3 actions/gestures by 18 months. At least one item was known by all children at the earliest ages and showed no discriminative value. There was also evidence of a plateau effect around 16 months where gestures no longer increased significantly with age. The onset of speech production can be linked to the development of gestures. When children develop more complex gestures, such as play-actions with a doll while pretending to be a parent and/or mimicking adult actions, they also start producing an average of 10 or more words. This happens around 12 months.

The results of this pilot are in line with findings from other studies, including CDI studies in sub-Saharan Africa (see Alcock et. al, 2015; Prado et. al, 2016; Vogt et. al, 2015). This demonstrates that the CDI we have developed for Setswana will, with possible further adaptations, be a reliable tool for measuring early acquisition.

**Keywords:** infant language, Setswana, Communicative Development Inventory, lexicon, gestures

## References

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