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Find words from age and proportion of acquisition

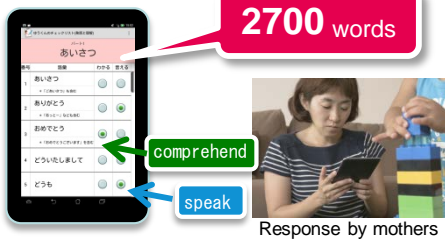
~Creating child language development database by checklist method~

Abstract

Less is known about language acquisition mechanism because it is difficult to efficiently collect data on vocabulary development from parent-child pairs. To clarify language acquisition mechanism, we collected large scale data on early vocabulary development using vocabulary checklist application. Parents were asked to check whether their child comprehended/produced each word (a total of 2,700 words). Based on the data from **1,300 parent-child pairs**, we created **child language database** including word acquisition properties that were estimated by logistic regression. The database system makes it possible to find the corresponding words from the information about the age and proportion of acquisition. We are now investigating whether the database system is useful for the fields of early education (e.g., picture book search) and pediatric care (e.g., speech therapy).

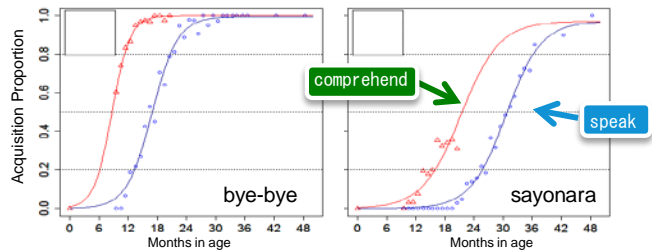
Data Collection

- Created vocabulary checklist application
- Collected data from 1300 mother-child pairs



Child Language Database

- Estimating developmental properties by logistic regression



- Finding words from age and proportion of acquisition

Q: What are the words that 40-50% of 24-month-olds speak?

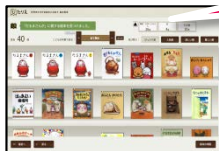


A: Poon, Moshimoshi, Issho

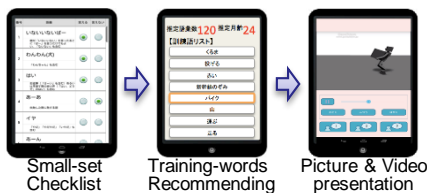
Valuable database for understanding early vocabulary

Education Use

- Picture Book Search



- Word Training Application (for Speech Therapists)



【Reference】

- [1] Kobayashi, T., Okumura, Y., & Minami, Y. "Collecting data on child vocabulary development database by vocabulary-checklist application," in IEICE technical Report HCS2015-59(2016-01), pp.1-6, 2016.
- [2] Kobayashi, T., Minami, Y., & Okumura, Y. "Fluctuating Development of Common Nouns and Predicates in Early Lexical Development: Evidence from Analysis of Large-sample Vocabulary Checklist Data in Japanese children," in Proc. of ECDP, 2015.

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