

Analyzing Child Language Experiences Around the World (ACLEW)

Both the amount and the quality of the language children are exposed to influence children's language development. Certain language environments are associated with earlier language acquisition, greater proficiency, and better literacy outcomes. However, children successfully develop language in widely varying cultural and linguistic environments. It is therefore important to gain a better understanding of these differences (and similarities) in children's language experiences around the world.

Characterizing the variability in children's language experience is very challenging using existing methods, making it difficult to test which characteristics of that experience are most important for children's language development. The ACLEW-project brings together diverse, naturalistic datasets and builds state-of-the-art language processing tools to measure the range and types of variability in children's language experiences and relate this to variability in their language development.

Studies of child language have until recently focused on small samples of children whose interactions were laboriously transcribed in order to be analyzed. However, the recent advent of small wire-free recorders has allowed researchers to easily gather unscripted everyday interactions between caregivers and children over the course of an entire day. New advances in speech processing software hold the key to a more automated approach to analyzing these thousands of hours of audio recording, something that would be impractical to attempt by hand.

Given this background, the key goal of the ACLEW-project is to make these diverse and large-scale collections of audio recordings of child language environments *accessible, comparable, and analyzable* through the development of a shared annotation system and new tools for the automated analysis of noisy, real-world language recordings. As a result, the project allows us to quantify the quality and quantity of language input to language learning children in various cultural and socioeconomic environments.

The project funded by the Academy of Finland is part of a larger international cross-disciplinary consortium that, together with its core collaborators, includes research groups from England (Imperial College London), France (Ecole Normale Supérieure), Argentina (COCINET), the United States (Carnegie Mellon University, Duke University, University of California), Netherlands (Max Planck Institute for Psycholinguistics) and Canada (University of Toronto and University of Manitoba).

Project website:

<https://sites.google.com/view/aclewdid>

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