

Exploring mechanisms of novel classifier learning

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Young children are adept at learning new words, especially nouns, often requiring only a few exposures to acquire new vocabulary. Children also acquire gender markings, a noun classification system, quite rapidly. Numeral classifiers, mandatory for quantification of nouns in many Asian languages, present an intriguing case, as these words are notoriously difficult for typical learners and highly vulnerable in individuals with language learning deficits. In this talk, I will present a series of studies that explore the intricate interplay of semantic variables, input frequency, language background, and implicit learning aptitude in learning novel/invented classifiers. Study 1 (Hao et al., 2026) reveals considerable individual differences in younger children (3-5 years old), older children (6-8 years old), and adults in the learning of two shape classifiers. In addition, the two child groups but not the adult group showed an influence of input frequency. Study 2 (ongoing) compares 3 groups of young adults (Mandarin native speakers, Cantonese native speakers, and native speakers of non-classifier languages) and multi-modal large language models' performance in learning a novel shape classifier and a novel collective classifier. To date, results suggest that learners' language background and implicit learning aptitude, and the semantic complexity of the to-be-learned classifiers jointly shaped the learning of classifier semantics. Moreover, there are significant discrepancies between human and machine learners. Study 3 (ongoing) compares 3 groups (6-9-year-olds, 18-25-year-olds, 65-80-year-olds) of learners' performance in the learning of two classifiers presented in either high or low variability conditions. Data collection is ongoing and preliminary results will be shared at the presentation event. Implications and future directions will be discussed.

Biodata

Professor Li Sheng is a faculty member of the Department of Language Science and Technology at the Hong Kong Polytechnic University. From 2007 to 2021, she worked at the University of Texas at Austin and the University of Delaware. Her research aims to advance our understanding of language learning mechanisms and improve the quality of life of people with speech and language disorders. She studies how learner-internal factors, environmental factors, and linguistic factors, jointly shape learning outcomes. Prof. Sheng's research has been funded by the University Grants Committee of the Hong Kong Government, the National Academy of Education of the United States, the Spencer Foundation, the American Speech-Language-Hearing Association, and the Ministry of Education of the People's Republic of China. Prof. Sheng was an Editor of the American Journal of Speech Language Pathology from 2015 to 2018, and has served as a reviewer for more than 40 international journals and research grant programs.