



Investigating language acquisition in communication sciences and disorders: A case for language diversity

Language acquisition research has a long tradition of including individuals with disabilities as research subjects. Numerous early works had the goal of using what was “missing” in their development to inform theories of how the system “ought” to function. More recent decades have seen a shift toward understanding individuals with disabilities as their own functional systems that are worth describing and also toward ensuring that this research benefits individuals from these communities. This shift has, to some extent, created a disconnect between work on “typical” development and on clinical populations, which have largely progressed independently of each other. The former is concentrated more in departments of Linguistics and (Cognitive) Psychology, while the latter is concentrated more in departments of Communication Sciences and Disorders (and its other associated names). Their shared past and overlapping constructs are masked by differences in goals—to understand basic acquisition processes vs. to support functional communication in those who may not fit within normative societal standards.

Yet despite these differences, the two fields are strikingly similar in their fundamental interests in language and its underlying structure, including issues pertaining to change over development, learning processes, and how these interact. Both fields also use the same range of methods such as corpus analysis and experimental approaches, and both require careful linking of metrics with underlying processes and drawing generalizable inferences based on samples. In doing so, it is critical for both fields to rigorously engage with specific areas of language and communication to define the constructs of interest, and to develop theories and clinical guidelines that will apply across learners and across communicative contexts.

Importantly, researchers in both fields must also grapple with the dominance of English in our knowledge base and ways in which that lack of diversity presents a significant barrier to progress. In a recent article, Kidd & Garcia (2022) analyzed the languages that have been studied in the four major language acquisition journals (*First Language*, *Journal of Child Language*, *Language Acquisition*, *Language Learning and Development*), noting that only 1.5% of the world’s languages have been covered at all in these journals, and that over 50% of articles are about only English. Our editorial team at *Language Acquisition* responded with suggestions that journals can undertake to increase diversity in the languages represented in scholarly work in our field (Arunachalam et al. 2022); this special issue is one part of our effort.

In the context of clinical populations, this imperative to collect data on a larger variety of languages is perhaps both more difficult and more urgent. One key difficulty stems from the incidence of these clinical populations (take the recruitment challenges of any study of typical language development—and then factor in that only a small percentage of the population has the particular diagnosis you are studying) and the heterogeneity of diagnosis, assessment, and treatment across regions. Another challenge stems from the heterogeneity of how the disorders present across individuals and across the lifespan—an oft-quoted refrain about autism, for example, from Dr. Stephen Shore (2017:), is: “If you’ve met one person with autism, you’ve met one person with autism.” Yet, the urgency of understanding their developmental profiles across languages is evident when we consider that standardized language assessments are unavailable for most languages, and/or are culturally inappropriate outside the context in which they were developed. Consequently, speech-language therapists often rely on informal or ad-hoc types of assessment in these situations (e.g., Boerma & Blom 2017, Henderson et al. 2018, Huang et al. 1997). Misdiagnosis of language impairments due to inadequate diagnostic materials has direct impacts on children’s lives as well as on education and healthcare systems.

To address the gaps, we need broad empirical coverage such as descriptions of phenomena across a variety of languages and clinical populations, conducted by individuals who have sufficient understanding of both the languages and the populations that their descriptions can look beyond an English-centric and typically-developing viewpoint. Focusing on languages with different typological properties can offer the most substantial “bang for the buck” in terms of advancing theory. Moreover, we need theory crafting that takes these empirical facts seriously and makes useful predictions about how properties of the acquired language shape acquisition processes. Since language acquisition occurs at the level of individuals, research must rigorously engage with how each child can systematically vary from another, without disregarding such variance as noise. Pursuing these avenues has the potential to yield new paradigms that delineate how language-specific and disorder-specific factors can determine trajectories of language learning. 50 55

It is by now clear that expanding our empirical base to a broader range of languages can have profound implications for theories of how languages work and how they are acquired (e.g., Kidd & Garcia 2022, Nevins 2022, Leonard & Schroeder 2023). Theories of language disorders add further complexity and richness, and considering the clinical practice on which theory is based reminds us that children are using language to communicate in the real world, and that communication that serves the child’s needs is the goal, over and above conformity to a theory-derived standard. 60

Trained as developmental psycholinguists but now in academic departments that focus on clinically relevant research and educating aspiring speech-language therapists, we wanted to showcase the breadth of this exciting field by bringing together researchers studying clinical populations acquiring a variety of non-English languages. This special issue includes seven papers representing six typologically different languages and several populations of clinical interest: developmental language disorder, autism, pre-term birth, and deafness, as well as intersections of these. 65

The issue begins with a tutorial article by Leonard & Schroeder (2023), who provide guidance for those embarking on a study of children with developmental language disorder (DLD) who are acquiring languages other than English. They highlight theoretical and clinical questions that can be addressed by studying a variety of languages, and along the way, they engage with a number of practical issues, including assessment in languages that lack standardized tests and matching ability across groups. In addition to leveraging measures that can be common across languages (e.g., mean length of utterance), they describe ways in which knowledge of language-specific properties such as word order and morphological paradigms can support more robust cross-linguistic comparisons. 70 75

Abdalla and Mahfoudhi’s contribution is also about children with DLD, but focusing on verb agreement production in Kuwaiti Arabic, a language with rich inflectional morphology. The findings underscore the importance of studying verb agreement clinically, as children with DLD struggled with verb agreement production, and importantly, their patterns of errors could be revealing for determining pathways for treatment. However, their language-specific errors also defy a simple explanation according to several current theories. This underscores the challenges that data from heterogeneous clinical populations often pose for theory building. 80

Chanchochai and Schwarz explore the acquisition of personal pronouns in autistic and non-autistic children learning Thai, a language with a particularly rich system of personal reference. The two groups showed both similarities and differences in production and comprehension of pronouns and referential expressions. While all children were highly accurate at producing pronouns, autistic children revealed greater difficulty in comprehension, particularly with the deictic aspects of personal pronoun reference that are socially conditioned, compared to non-autistic peers. 85 90

El-Raziq, Meir, and Haddad explore the lexical skills of Palestinian-Arabic speaking children with and without autism, and they examine the extent to which learners in a diglossic community distinguish between dialects in their usage. Across production tasks, all children preferred to use words from Spoken Arabic (SpA) for everyday speech. However, some autistic children were more likely to also overuse words from Modern Standard Arabic (MSA), which is typically recruited for formal speech and written contexts. These findings underscore the variability of language use across autistic children and their relations to environmental differences in a multi-dialectal society. 95

For Esmer and colleagues, preterm children—who have a higher likelihood of experiencing language delays—offer insight into early word learning in Turkish, a language which makes relatively heavy use of sound symbolism. The results suggest that preterm children may particularly benefit from hearing sound symbolic adverbs in child-directed speech, although these benefits did not seem to be long-lasting enough to predict later outcomes. This work highlights ways in which bootstrapping verb meanings depend on properties of the language and learner. 100

Fortunato-Tavares and colleagues explore word-level reading skills in children with DLD who are acquiring Brazilian Portuguese. The transparent orthography, with consistent grapheme-to-phoneme correspondences, presents a very different task for young readers than a deeper orthography like that of English. Nevertheless, children with DLD struggled with decoding compared to their age-matched peers, suggesting that decoding is a complex task that leverages existing linguistic representations, but also interacts deeply with real-time processes related to the length and novelty of the word. 105

Singleton, Walker, Meier, and Shield present a case study of a Deaf autistic teenager's production of American Sign Language (ASL), to which he was exposed from birth. The study documents language patterns in a highly proficient ASL signer that don't have clear analogues in autistic speakers' use of spoken language and also diverge from non-autistic signers' use of ASL. The authors also offer a critical lens on intersectionality in autism and deafness as well as how to characterize distinctive communication patterns in a fluent language user. 110

This collection of papers showcases the importance of studying a range of languages and clinical groups. Including authors from multiple countries and studies of multiple language families, these papers highlight some of the diversity of language acquisition research being done around the world. The papers reveal patterns that would otherwise be overlooked without considering these languages and raise challenges for existing theories. We are excited to contribute to the growing knowledge base on language acquisition across populations with this special issue, and we look forward to seeing more valuable research in this area. 115

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