

CLINICAL PRACTICE

Masithethe: Speech and language development and difficulties in isiXhosa

Michelle Pascoe, Mantoa Smouse

IsiXhosa is the second most spoken language in South Africa and one of its official languages. Spoken mainly in the Eastern and Western Cape regions it is fitting that much of the research focusing on children's isiXhosa speech and language acquisition has been carried out at the University of Cape Town. We describe what is known about children's acquisition of isiXhosa, and highlight studies which inform our knowledge of the typical development of the language in relation to the acquisition of consonants including clicks and the isiXhosa noun class

system. Little is known about the specific nature of speech and language difficulties in isiXhosa, and the development of isiXhosa resources for speech and language assessment and therapy is in its infancy. Suggestions are made for advancing knowledge and practice which is needed to provide a relevant and quality service to isiXhosa speakers.

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Being able to communicate is a human right and essential to most facets of life. The inability to understand and formulate language and/or produce intelligible speech is devastating for children for whom academic success and development of literacy are linked to intact speech and language skills. Children experiencing difficulties with communication are prone to the psychosocial effects of low self-esteem and vulnerability to bullying. The International Classification of Functioning, Disability and Health (ICF) has been used to detail the activity limitations and/or participation restrictions that extend across the lifespan for children who have early childhood communication difficulties that are either not addressed or addressed only in the school years. These include reading and writing, calculating, relating to authority, relationships with friends and family, and acquiring and keeping a job.¹

Children with speech sound difficulties can be grouped into 4 diagnostic categories² and the nature of the difficulties in these categories has been described in English and other languages.² These categories cannot be described for isiXhosa as there is limited research documenting speech and language difficulties in isiXhosa-speaking children. Sandile Gxilishe, from the School of Languages and Literatures at the University of Cape Town (UCT), commenting on isiXhosa morphology – the structure and form of words, e.g. plural forms and verb tenses – notes that 'the complexity of the ... morphological and agreement systems and the fact that normally developing children acquire them early and error-free make them an interesting context in which to explore the nature of language disorders. All the more so, since children with specific language impairment experience difficulty acquiring ... morphology.'³

Research into typical speech and language development is important because it contributes to: (i) theoretical accounts of

language acquisition and developmental universals; (ii) the basis for understanding difficulties that arise; and (iii) support for speech and language therapists (SLTs) in their valid and reliable assessment of clinical populations. A substantial body of literature describes speech and language development and difficulties in English-speaking children, and a range of assessment and therapy materials that have been developed in mainly the UK/Europe and North America for English-speakers. Clinicians working with speakers of other languages lack such resources. While multilingual and cross-linguistic studies (including monolingual acquisition in different language contexts) have been increasing since the 1980s, little is known about the development of local South African languages, and there are few speech and language assessments and therapeutic materials available in isiXhosa or in other local languages. A survey carried out with SLTs in the Western Cape⁴ identified a need for assessment materials in the dominant local languages; having such materials would increase the confidence of clinicians when assessing children and formulating intervention plans.

IsiXhosa, spoken by an estimated 17.6% of the population, is one of the 11 official languages spoken in South Africa (SA). It is indigenous to the region, and is the second most widely spoken language in the country after isiZulu.⁵ It is a south-eastern Bantu language and part of the Nguni language family that includes isiZulu, isiNdebele and isiSwati. Within the Nguni group, the languages are, to some extent, mutually intelligible, although they differ in phonology, morphology, vocabulary and sentence structure, and are considered separate languages with their unique identities and own dictionaries and grammars. Despite isiXhosa being a 'majority' language in terms of number of speakers, it is a 'minority' language in terms of available resources and what is known about its development.

IsiXhosa is a tonal language, meaning that the same sequence of speech sounds can have a different meaning depending on whether a high or low tone is used. It contains a simple inventory of vowels together with some universally uncommon consonants such as the click sounds. Clicks are produced using a non-pulmonic airstream as well as articulation procedures that are uncommon in many languages of the world. IsiXhosa is an agglutinative language which means that a variety of prefixes and suffixes are used to alter the basic meaning of a root word. We focus firstly on speech (how spoken sounds, words or sentences are realised) and then on language (the

Michelle Pascoe is a speech and language therapist and senior lecturer in the Department of Health and Rehabilitation Sciences, University of Cape Town (UCT). Mantoa Smouse is a lecturer in the School of Languages and Literatures, UCT.

Corresponding author: M Pascoe (michelle.pascoe@uct.ac.za)

Table 1. Summary of studies describing isiXhosa speech development

Author(s)	Participants	Consonants/vowels investigated	Age of acquisition/Main findings
Mowrer and Burger ⁶	70 isiXhosa-speaking children aged 2;6 - 6;0	Consonants	All consonants acquired by 3 years of age with the exception of a small set of challenging consonants acquired by 4;0 years (viz. /j, ɲ, ʃ, s/). Clicks emerge later than all other consonants; first click to emerge is the dental click [ʔ], followed by the palatal [!] at approximately age 2;6 and the lateral click [ʔʔ] at around age 3;6 - 4;0
Lewis ⁷	41 isiXhosa-speaking children aged 1;6 - 5;5	Clicks	Click acquisition emerges from 3;6 - 4;0 and follows a predictable sequence. Palatal clicks appear first at about 3;6
Tuomi <i>et al.</i> ⁸	10 isiXhosa-speaking children aged 1;0 - 3;0 using a longitudinal design	All consonants and vowels	The vowel system of isiXhosa is typically mastered by 1;6 years of age. Findings concur with Mowrer and Burger's study, but /s/ and /z/ may be acquired earlier (by 2;0) than has previously been documented
Gxilishe ⁹	10 isiXhosa-speaking children aged 1;0 - 3;0.	Clicks	The dental click [ʔ] emerges first, followed by the palatal [!] and the lateral [ʔʔ]. Acquisition commences earlier than previously thought, from age 1;0 - 1;6
Conradie <i>et al.</i> ¹⁰	1 isiXhosa-speaking child aged 0;11 - 1;7 using a longitudinal design	All consonants and vowels	Large consonant inventory acquired by 1;7 including some clicks and some of the consonants thought to be later acquired (e.g. /l/); vowel inventory complete by 1;7

choice of words and ways in which these are combined according to the rules of the language).

Typical isiXhosa speech development

The research on isiXhosa speech development has focused primarily on segmental aspects of acquisition (i.e. acquisition of consonants and vowels) rather than on the suprasegmental aspects such as tone. Table 1 summarises key studies, many of which involve collaboration between UCT's Department of Health and Rehabilitation Sciences and the School of Languages and Literatures.

Acquisition of consonants (including clicks) and vowels in isiXhosa happens rapidly in typical development with a complete inventory of sounds acquired by the approximate age of 4 years^{6,7} – possibly much earlier.⁸⁻¹⁰ There is a small set of more challenging consonants that children acquiring isiXhosa master relatively late, equivalent to the 'late eight' group of consonants described for English.¹¹ The consonants which comprise this subset are still debated, but almost certainly include clicks.^{6,7} Further studies focusing on this subset of consonants are important since it is likely that difficulties with phonological development in isiXhosa will centre here. The clicks, in particular, require further research since reports of the ages at which they are reported to emerge, and of their expected order of acquisition, vary widely.

Typical development in isiXhosa

A common linguistic feature associated with Bantu languages is the elaborate noun class system. This means that all nouns can be categorised into one of several categories, and that all related parts of speech must agree with that noun in terms of its class and number. A study of the acquisition of nominal morphology in isiXhosa-speaking children between the ages of 1 and 3 years found that the pre-prefix and prefix are acquired at the same time, around 2 - 3 years, and that by 2 years 6 months children are already sensitive to the rules of the language.¹²

Concerning nominal agreement, only one study has looked at this phenomenon in isiXhosa. An analysis of the spontaneous speech of children between the ages of 1 and 3 years reveals a parallel and steady production of noun class prefixes and subject markers on verbs.¹³ At around age 3 years the accuracy of this production was about 80%. There was no difference in supplying the correct subject marker on the verb regardless of whether the subject was explicit or not, and errors were rare. A similar pattern was also observed in the acquisition of subject-verb agreement. Children supply the correct subject agreement regardless of the presence or absence of the noun class prefix. Although errors of omission were observed, there were no errors of substitution.¹³

A study of the acquisition of tense marking showed that 2 - 3-year-old isiXhosa-speaking children know and use the conditions of

the short and long forms of the present and recent past tenses as observed in adult speech.¹³ More importantly, children do not use any simplified form but are sensitive to the complex rules associated with these forms. An understanding of how children learn these conditions is vital for the development of linguistic theory and for establishing benchmarks that can inform research on language difficulties among isiXhosa-speaking children.

While the acquisition of nominal and verbal agreement in isiXhosa is mastered around the age of 2 years, studies of the comprehension of this agreement system suggest an asymmetry between the age at which the system is acquired and the age at which children show an understanding of these rules.^{14,15} An experiment designed to test whether children can retrieve number information about the subject and object from the verb alone showed they were not sensitive to the morphemes (or meaning units) on the verb that carry number agreement with the subject, e.g. 'iyambona' is contrasted with 'ayababona' – both derive from 'ukubona' (to see) but the form of the verb changes depending on the context.¹⁴ Similar results were obtained in a study that used a different experimental design. Using an act-out activity with 37 isiXhosa-speaking children between the ages of 4 and 5 years, the children did not use verbal agreement to determine the number on the subject.¹⁵ However, from around age 6 they are thought to start showing sensitivity, in contrast with the production studies which report a mastery of the system by age 2 years.^{12,13}

The way forward

Clinicians within the SLT profession have an ethical responsibility to effectively assess and manage their clients in the client's first language, even where a language mismatch between client and clinician exists. Yet this is more frequently unrealised than achieved.⁴ Since the focus of the profession is language (rather than the heart or limbs, for example), the challenge is great and reveals the urgent need to build capacity in the profession to carry out research and development in the local languages.

For SLTs to better serve all who live in our country and advance the knowledge of local languages, an undergraduate speech language pathology curriculum which explicitly focuses on the development of all languages is necessary. Moreover, recruitment of speakers of the local languages into the SLT programme will promote and enhance development of resources in these languages, from a strong and embedded position of linguistic and cultural knowing. In UCT's Faculty of Health Sciences, speech language pathology students are required to study an additional language as part of their curriculum – isiXhosa for English- or Afrikaans-speaking students, and Afrikaans

for students who are not familiar with that language. Students acquire basic conversational skills and perform basic professional tasks in these languages. However, given the nature of our work – with language and its remediation as centre stage – is this sufficient?

Development of contextually relevant assessments and resources for SLTs working in SA is urgently needed. Projects under way and strengthened by interfaculty collaborations focus on the collection of normative data for isiXhosa preschool speech development¹⁶ and the development of reliable and valid assessments of children's speech production in isiXhosa. These – and other similar projects being carried out around the country – aim to develop our understanding of the interactions between different languages in multilingual children, and ultimately advance our knowledge of the most effective interventions for children with speech and language difficulties in all of the local languages.

Masithethe! Masisebenze!

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