



Multilingual Children's Speech Development

TURKISH

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Turkish Authors

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Turkish

- **Commonly spoken in**
 - The Republic of Türkiye (formerly known as Turkey), Northern Cyprus
 - Also spoken by diaspora in parts of the Balkans, Middle East, and Western Europe
- **Dialects and variants**
 - Three major Turkish dialects in Türkiye (Karahan, 1996)
 - the Northeast Black Sea Coast dialect
 - the Eastern dialect
 - the Western dialect
- **Writing**
 - Left to right. Latin alphabet (Roman script)
 - Example: *Kız küçük bir kalemle yazıyor.* [The girls is writing with a short pencil].

Turkish map

- Official / major language
- Diasporic language



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Turkish Speech Components

- **Consonants (21):** /p, b, t, d, k, g, m, n, f, v, s, z, ʃ, ʒ, h, r, j, l, tʃ, dʒ, ɣ/ and three allophones: /k/ - [c], /g/ - [ɟ], /l/ - [ɭ]
- **Consonant clusters (few):** No onset clusters, except for borrowed words. Certain cluster codas:
 - C1= sonorant + C2= obstruent (e.g., *Türk* /tyrc/ 'Turkish')
 - C1= fricative + C2= stop (e.g., *aşk* /aʃk/ 'love')
- **Vowels (8):** /i, y, ε, œ, ω, o, u, a/ (or /ʌ/).
- **Tones (0):** None
- **Phonotactic restrictions:** Canonical syllable type is CV; (C)V(C)(C) are also allowed
 - word-initial and word-final consonants are allowed
 - word initial and word final vowels are allowed
 - vowel clusters are not allowed, except for a few borrowed words (e.g., *saat* /sa:t/ 'hour/clock')
 - vowels in native words are governed by vowel harmony
- **Prosody:** Turkish is a syllable-timed language, and all syllables, regardless of being stressed or unstressed, have more or less equal duration (Kornfilt, 1997; Topbaş & Yavaş, 2006).

Turkish

Age of Acquisition

■ Consonants

- The order of acquisition: plosives> nasals> affricates>glides/liquids> fricatives>flap (Topbas, 2006a; Ege, 2010).
- 90% of children produce almost all sounds at syllable initial and syllable final positions by 3;6 years (Topbas, 2006a).

■ Consonant clusters

- Topbaş (2004/2005); Topbaş & Kopkallı-Yavuz (2008):
- Final /-ntʃ, -nk/ between 3;0-3;6 years
- Final /-ft, -st, -lp, -lk/ between 3;6-4;0 years
- Final /-rt, -rk/ between 4;6-5;0 years

■ Vowels

- No study investigating acquisition of vowels.
- Children acquire the vowel system at an early age and make few vowel errors (Aksu-Koc & Slobin, 1985)

■ Tones

- Not applicable.

Turkish Speech Development

■ Percentage correct

- Percentage of consonants correct (PCC) has been reported to be 42.8% by 2;0 years, 71.42% by 3;0 years, 94.85% by 4;0 years, >97% after 4;0 years of age in 90% of typically developing monolingual children (Topbaş & Yavaş, 2006).

■ Intelligibility

- 22 children with speech sound disorders had a median ICS* score of 27 (out of 35 points) prior to a stimulability intervention, and a median score of 28.5 after the intervention (Özcebe et al., 2021)
- Based on data from 26 children with speech sound disorders, ICS was found to be correlated with PCC measures, and ICS scores varied depending on the severity of the speech sound disorder (Şanlı & Evci, 2022)

■ Common phonological patterns

- Structural simplifications: reduplication, syllable deletion, consonant deletion, word-final consonant reduction, assimilation
- Systemic simplifications: liquid deviation, fronting, stopping, voicing, word-final devoicing

*ICS, Intelligibility in Context Scale (McLeod et al., 2012)

Turkish Children with Speech Sound Disorders

■ Also called

- *Konuşma sesi bozukluğu* 'speech sound disorder', *sesbilgisel/ fonolojik bozukluk* 'phonological disorder', *artikülasyon bozukluğu* 'articulation disorder', *çocukluk çağı konuşma apraksisi* 'childhood apraxia of speech', *dizartri* 'dysarthria'

■ Research has focused on

- Prevalence, development, assessment, and interventions,
- Phonological disorders, childhood apraxia of speech (CAS), cleft lip and palate (CLP), hearing loss

■ Studies (examples)

- Investigation of linguistic and cognitive skills of children with SSD and children with typical speech development (Ateş and Günhan, 2020)
- Differential diagnosis of children with CAS in comparison to children with phonological disorders and those with typical speech development (Polat and Ünal-Logacev, 2021)

Turkish Speech Assessments

- **Türkçe Sesletim-Sesbilgisi Testi-SST** [Turkish Articulation and Phonology Test] (Topbaş, 2005)
- **Ankara Artikülasyon Testi-AAT** [Ankara Articulation Test] (Ege, Acarlar, Turan, 2005)
- **Türkçe Fonolojik Farkındalık Testi- TFF** [Turkish Phonological Awareness Test] (Kazanoğlu, D., & Ünal Logacev, 2020)
- **Türkçe Anlamsız Sözcük Tekrar Testi** [Turkish Nonword Repetition Test] Assessment (Topbaş, Kaçar-Kütükçü, & Kopkallı-Yavuz, 2014)
- **Litmus Cümle Tekrar Testi** [LiTmus-Sentence Repetition Test: Turkish] (Kaçar-Kütükçü & Topbaş, 2020)
- **Erken Okuryazarlık Testi-EROT** [Early Literacy Test] (Kargın, Ergül, Büyüköztürk, & Güldenoğlu, 2015)
- **Nazometrik Değerlendirme Aracı (NADA)** [Nasometric Assessment Scale] (Ünal & Topbaş, 2012)
- **Bağlam içi anlaşılabilirlik ölçeği: Türkçe** [Intelligibility in Context Scale: Turkish Translation] (McLeod, Harrison, & McCormack (2012). S. Topbaş, Trans.)

Turkish Speech Interventions

- **No new/ novel approaches for SSD developed in Türkiye. Frequently used speech interventions with Turkish speaking children with SSD:**
 - Traditional articulation therapy (Dural, 2018)
 - Auditory discrimination, minimal pairs, maximal opposition approach (Biçer et al., 2018)
 - Multiple oppositions (Topbaş & Ünal, 2010; Uz Hasırcı & Ünal-Logacev, 2021)
 - Core vocabulary, and stimulability treatment (Özcebe et al., 2021)
 - Rapid Syllable Transition Training (ReST) or Prompts for Restructuring Oral Muscular Phonetic Targets (PROMPT) for CAS

Reference

Book chapter

- Zengin-Bolatkale, Ünal-Logacev, & Topbaş (2025). Turkish speech development. In S. McLeod (Ed.). *The Oxford handbook of speech development in languages of the world*. Oxford University Press.

Presentation

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- Sharynne McLeod and Helen L. Blake, Charles Sturt University, Australia