



# Multilingual Children's Speech Development

# Slovak

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# Slovak

- **Commonly spoken in**

- Slovakia
- Spoken also by very small diasporas in Czechia, Hungary, Poland and Ukraine

- **Dialects and variants**

- Three major Slovak dialects: western; middle; eastern
  - (Krajčovič, 2018)

- **Writing**

- Left to right. Latin alphabet (Roman script).
- Several sounds are coded with diacritics (ˇ, ´, ¨, ^) placed above letters
  - 10 consonants + 6 vowels
- Example: *Na lúke je päť čiernych oviec a kôň.* (There are five black sheep and a horse in a meadow).

# Slovak map

Official / major language



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# Slovak

## Speech Components

- **Consonants (29):** /p, b, m, f, v, t, d, n, r, r:, s, z, l, l:, ts (c), dʒ (dz), ʃ (š), ʒ (ž), t͡ɕ (č), ʒ͡ (d͡), ɲ (ň), j (j), ʎ (ľ), t͡ʃ (č), d͡ʒ (dž), k (k), g (g), x (ch), h (h)/
  - Presence of palatal sounds /c, ʃ, ɲ, j, ʎ/ is one the most distinctive features of Slavic languages
- **Consonant clusters** – frequent, many types:
  - In all positions of words
  - 2 to 5 consecutive consonants in one cluster (Mistrík, 1984)
    - *strašidlo* /straʃidlo/ ‘ghost’
    - *smršť* /smrʃc/ ‘hurricane’
- **Vowels (15):**
  - Monophthongs (11) - short and long pairs: / a, a:, e, e:, i, i:, o, o:, u, u:, ä /
  - Length may code phonological difference of words: *latka* (piece of wood), *látka* (fabric)
  - Diphthongs (4): / ia, ie, iu, uo/
- **Tones (0):** None

# Slovak

## Speech Components

- **Phonotactic restrictions**

- Slovak is a flecive language where words are created with morphemic affixes or as lexical composites (Mistrík, 1984)
- -> higher syllabic complexity
- Many CV combinations are permitted: V, CV, VC, CVC, CCV, CCC, CCVC, CVCV, CCVC, CCVCC, CCCVC and also CCCC and marginally CCCsCC
- Long words from 1 up to 20 consonants are permitted
- The mean length of words: 5,5 phonemes or 2,3 syllables
- Relatively low number of short monosyllabic words and homonyms
  - Therapy of Minimal pairs becomes somewhat difficult

- **Prosody:** primary stress is always on the first syllable

# Slovak

## Age of Acquisition

- **Consonants**

- Order of acquisition: plosives+nasals > fricatives > affricates > liquids+trills
  - 2 years of age: /p, b, m, t, d, n, c, ʃ, ɲ, ʝ, k, g, h, v, f/
  - 5 years of age: /ʒ, s, z, ʒ, x, ts, ɟ, ɟʒ/
  - 6 years of age: /l, l:, ʎ, r, r:/

- **Consonant clusters**

- Appear first in the middle word position: /sp, st, sk, sn, sl, ʃm, ʃc, dv, zn/ at 2 years
- All are acquired not later than 7 years of age

- **Vowels**

- Typically acquired at 24 months

- **Tones**

- Not applicable

- (Bónová, 2018; Šeboková, 2019; Kešjarová, 2022; Buntová et al., 2020, 2021)

# Slovak Speech Development

- **Percentage correct**

- 81,2 % consonants correct by age 4 years
- 91,8 % consonants correct by age 5 years
  - (Buntová, 2021)

- **Intelligibility**

- ICS\* mean score: 4,23 at age 4 years
- ICS\* mean score: 4,7 at age 5 years
  - (Buntová, 2019)

- **Common phonological patterns**

- Deafrication, stopping, cluster reduction (disappearing at 3-4 years) and depalatalization, sibilant backing, fronting, substitution of liquids and trills (disappearing at 6 years)

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

# Slovak Children with Speech Sound Disorders

- **Also called**

- |                                  |   |  |
|----------------------------------|---|--|
| • Narušenie zvukovej roviny reči | – | speech sound disorder  |
| • Fonologické narušenie          | – | phonological disorder  |
| • Artikulačná porucha            | – | articulation disorder  |
| • Vývinová verbálna dyspraxia    | – | childhood apraxia of speech (= developmental verbal dyspraxia) |
| • Dyzartria                      | – | dysarthria   |

- **Research has focused on**

- Prevalence, assessment, development and interventions
- Speech sound disorders, phonological disorders, childhood apraxia of speech (CAS), cleft lip and palate (CLP)

- **Studies** (examples)

- Phonetic development of typical children of early age (Buntová et al., 2023)
- Early speech and language development of cleft palate children (Oravkinová, 2013)

# Slovak Speech Assessments

- **Artikulačný test**  
[Test of articulation] (Antušeková, 1989)
- **Diagnostika zrozumiteľnosti škálou ICS**  
[Intelligibility in Context Scale – Slovak adaptation] (Buntová, 2018)
- **Vývinový model fonologických procesov**  
[Developmental model of phonological processes] (Buntová et al., 2017)
- **Nazometer - test hodnotenia rezonancie**  
[Test of nasality] (Oravkinová et al., 2001)
- **Dotazník pre rodičov detí s rázštepom**  
[Parent cleft questionnaire] (Šugárová, 2021)
- **Test PEEPS-S**  
[Profiles of early expressive phonological skills - PEEPS test – Slovak adaptation] (Árvai, 2022)
- and others

# Slovak Speech Interventions

- **Artikulačná terapia**  
[Articulation therapy]  
(Antušeková, 1989; Nádvorníková, 1995; Gúthová & Šebianová, 2002)
- **Fonologické terapie:** Minimálne páry; Metaphon; PACT; StiFor; El'koninova terapia fonologického uvedomovania;  
[Phonological therapies: Minimal pairs; Metaphon; PACT; Stimulability therapy; Elkonin phonological awareness therapy;]  
(Buntová et al., 2020, 2022; Mikulajová et al., 2014)
- **Terapie pre deti VVD:** Nuffield terapia; ReST; Dynamické časovanie imitácie
  - [Therapy for CAS: Nuffield Therapy; Rapid Syllable Transition Treatment; DDTC - Dynamic Temporal Tactile Cueing]
- **Artikulačná terapia pre deti s rózštepom**  
[Articulation therapy for children with clefts]  
(Kerekrétiová, 2002; Oravkinová, 2018)
- **Raná intervencia pre deti s rózštepom**  
[Early intervention for children with clefts]  
(Oravkinová, 2010; 2018; in press)

# Reference

## Book chapter

- Buntová, D & Oravkinová, Z. (forthcoming). Slovak speech development. In S. McLeod (Ed.). *The Oxford handbook of speech development in languages of the world*. Oxford University Press.

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