



# Multilingual Children's Speech Development



**Laki**

# **Multilingual Children's Speech Development**

**Akram Ahmadi  
Marjan Larimian**

**Presented by: Marjan Larimian**



# Laki Authors

- **Akram Ahmadi**, Babol University of Medical Sciences, Iran  
[slp347@gmail.com](mailto:slp347@gmail.com)
- **Zahra Malmir**, Hamadan University of Medical Science, Iran
- **Michelle Pascoe**, University of Cape Town, South Africa
- **Talieh Zarifian**, University of Social Welfare and Rehabilitation Sciences, Iran
- **Marjan Larimian**, Babol University of Medical Sciences, Iran,  
[marjan.larimian@gmail.com](mailto:marjan.larimian@gmail.com)

Source: Ahmadi, A. Malmir, Z., Pascoe, M. Zarifian, T. & Larimian, M. (forthcoming). Laki speech development. In S. McLeod (Ed.). *The Oxford handbook of speech development in languages of the world*. Oxford University Press.



**Akram Ahmadi**



**Marjan Larimian**

# Laki

- **Commonly spoken in**
  - Parts of the following provinces in Iran:  
Lorestan, Kermanshah, Ilam, and Hamadan (~1.5% of Iran's population)
- **Dialects and variants**
  - Pische-Kuh and Poshte-Kuh
- **Writing**
  - No writing system

# Laki Map

- Official / major language
- Other regions



The authors acknowledge assistance provided by the Spatial Data Analysis Network (SPAN) at Charles Sturt University, and in particular Craig Poynter, for his work creating this map. Figures/maps/imagery created using ESRI ArcGIS Pro 3.1 software and data contained within ESRI's Living Atlas.

# Laki

## Speech Components

- **Consonants (27):** /b, p, t, d, k, g, ʔ, ɠ, x, h, f, v, s, z, ʃ, ʒ, tʃ, dʒ, ŋ, n, m, l, ɭ, r, r w, j/
- **Consonant clusters (1):** /(C)(C)V(C)(C)/
- **Vowels (8):** /i, æ, e, a, ø, o, y, u/
- **Tones (0):** None
- **Phonotactic restrictions:**  $C_{(1-2)}VC_{(0-2)}$
- **Prosody:** Final syllable

# Laki

## Age of Acquisition

### ■ Consonants

- Early /p, b, t, d, k, f, v, s, ʃ, x, h, j, m, n, L, w, ʒ, tʃ/
- Middle /ʔ, g, r, r, l/
- Late /z, ɠ, ŋ, ʒ/

### ■ Consonant clusters

- No study

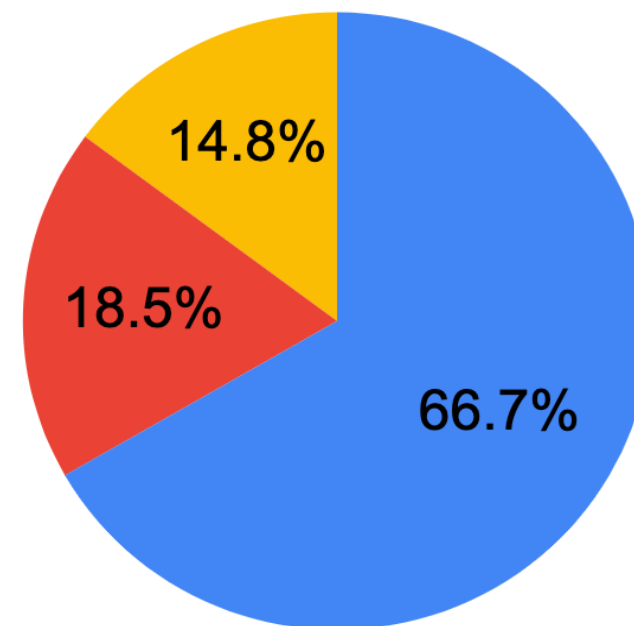
### ■ Vowels

- All the vowels were acquired by 3;5 years

### ■ Tones

- No tones

● Early ● Middle ● Late



# Laki

## Speech Development

- **Percentage correct**
  - 94% consonants correct by 4;11 years
- **Intelligibility**
  - To date there is no study of children's intelligibility
- **Common phonological patterns**
  - To date there is no study of children's phonological patterns

# Laki

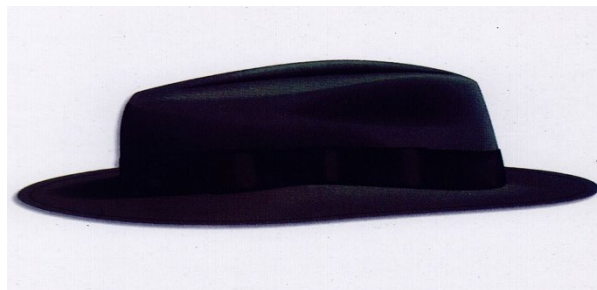
## Children with Speech Sound Disorders

- **Also called**
  - No other title
- **Research has focused on**
  - Typically developing children
- **Studies**
  - To date there is no study of children with speech sound disorders

# Laki Speech Assessments

- **Laki speech test (LST, Ahmadi et al., 2023)**
  - Single-word test that measures speech sound production in both initial and final syllable positions
  - Consists of 65 single words along with their corresponding pictures

*/kelaw/*



*/ʔenæk/*



# Laki

# Speech Interventions

- **Intervention**
  - Currently no interventions created for Laki

# Reference

## Book chapter

- Ahmadi, A. Malmir, Z., Pascoe, M. Zarifian, T. & Larimian, M. (2025). Laki speech development. In S. McLeod (Ed.). *The Oxford handbook of speech development in languages of the world*. Oxford University Press.

## Presentation

- Ahmadi, A. Malmir, Z., Pascoe, M. Zarifian, T. & Larimian, M. (2024). *Laki: Multilingual children's speech development*. Charles Sturt University, Australia. <https://www.csu.edu.au/research/multilingual-speech/languages>
  - Sharynne McLeod & Helen L. Blake, Charles Sturt University, Australia