



Multilingual Children's Speech Development



THAI

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Thai Authors

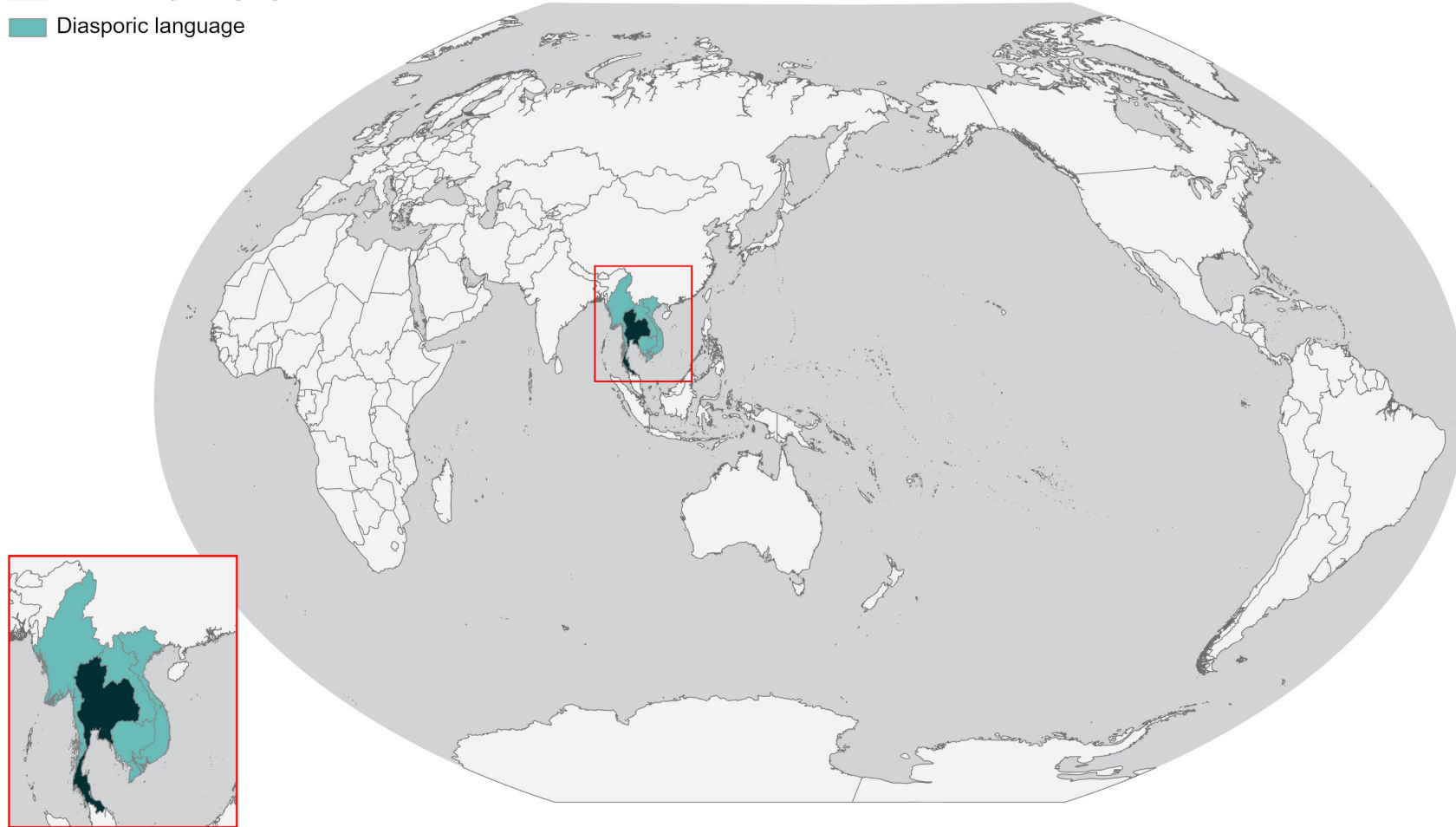
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Thai Map

- Official / major language
- Diasporic language



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Thai

■ Dialects and variants

- Central Thai is the main dialect with Northern, Southern, and Northeastern Thai as regional dialect

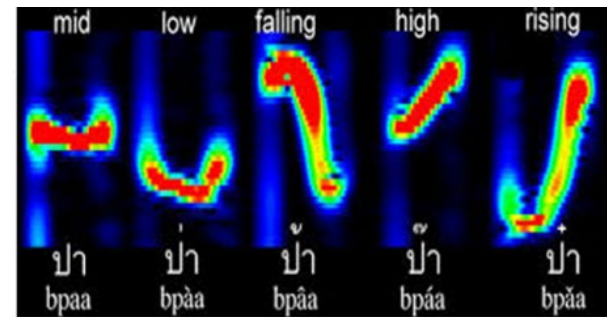
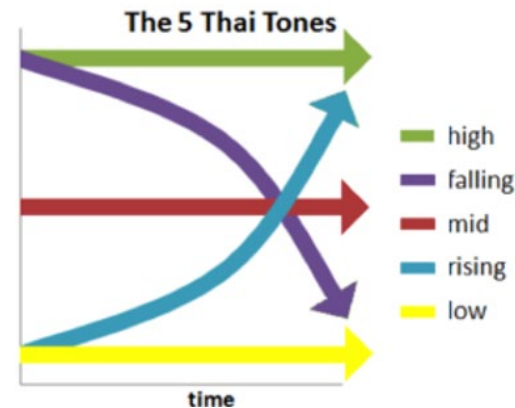
■ Writing:

- Left to right. Thai has unique alphabet (pseudo-alphabet)
- Special features of Thai writing: no spaces between words
- Consonants and vowels are written together uninterrupted in a sentence
- No question marks or capital letters in Thai written script

■ Thai uses diacritics to indicate the five tones

- Example: ๑๓ (Mid tone, to throw), ๑๓ (Low tone, Forest) ๑๓ (Falling tone, Aunt)
๑๓ (High tone, father), ๑๓ (Rising tone, father)

Thai Speech Components



◡	◢	◣	+
mai eak (low)	mai toh (falling)	mai tree (high)	mai jittawa (rising)

- **Consonants (44):** Represent 21 sounds, as several consonants have multiple forms
/ph, ʔp, b, th , ʔt, d, kh ,ʔk, ʔ, m, n, ŋ, r, f, s, h, j, l, w, tɕ, tɕh /
- **Consonant clusters (12):** /k^hw, ʔɔkw, k^hr, ʔkr, k^hl, ʔkl, t^hr, ʔtr, p^hr, p^hl, ʔpr, ʔpl/
- **Vowels (18):** /i, i:, ʊ, ʊ:, u, u:, e, e:, ɤ, ɤ:, o, o:, ɛ, ɛ:, ɔ, ɔ:, a, a:/
Diphthongs (15): /ai, au, eu, ʊɪ, iu, a:i, a:u, e:u, i:a, u:a, w:a, ɛ:u, ɤ:i, u:i, ɔ:i/
Triphthongs (3): /iau, wau, uai/
- **Tones (5):** ป๋า (mid tone, *to throw*), ป่า (low tone, *forest*), ป้า (falling tone, *aunt*), ป๊า (high tone, *father*), ป๋า (rising tone, *father*) (Pirazzi, 1999-2023) <https://slice-of-thai.com/tones/>
- **Phonotactic restrictions:** CV, CCV, CVV, CVVV, CVC plus tone located on vowel
Maximum syllable is (C1) (C2) (V) (T) (C3)
C1 = any consonant, C2 = /w/, /l/, /r/, V = any vowel, T = Tone, C3 = /p/, /t/, /k/, /m/, /n/, /ŋ/
- **Prosody:** There is no prosody/stress in Thai speech, as most words are single units. Syllables with tones are at segmental level, but prosody occurs at suprasegmental/sentence levels

Thai

Age of Acquisition

■ Consonants

- Early: /p, b, m, w, ʔt, t^h, n, tɕ^h, j, ʔk, k^h, h. ʔ/ by 3
- Middle: /p^h, s, tɕ, d, l/ and /f/ by 4 to 5;6
- Late: /r/ after 7;6 (Prathanee et al., 2008 & 2010)

■ Consonant clusters

- Early clusters: / kw, k^hw/ by 7;6
- Late clusters: / k^hl, k^hr, ʔkl, ʔkr, p^hl, p^hr, ʔpl, ʔpr, ʔtr, t^hr/ after 7;6 (Prathanee et al., 2008 & 2010)

■ Vowels

- No systematic studies of Thai vowels and diphthongs except some preliminary clinical studies that indicated Thai children acquired simple vowels by 3 (Prathanee et al., 2008)

■ Tones

- No large-scale systematic studies, but some clinical data showed Thai children acquiring lexical tones as early as 2;0 (Tuaycharoen, 1977)

Thai Speech Development

■ Percentage correct

- 6 final consonants were acquired correctly at 75% at 3;0 to 3;6
- 21 initial consonants were acquired correctly at 75% at 4;6 to 4;11 (Muknguen, 1980)

■ Intelligibility

- Most Thai children can communicate with 80% intelligibility by age 3
- Complex consonants, consonant clusters and complex vowels are mastered by age 7 (Dardarananda, 1993)

■ Common phonological errors

- Final consonant deletion
- Substitution of initial consonants
- Stopping of fricatives or affricates
- /l/ and /r/ production errors
- Cluster reduction (Dardarananda, 1993)

Thai Children with Speech Sound Disorders

- Also known as
 - การพูดไม่ชัดในวัยเด็ก → **Phonological disorders**
 - การแปรเสียงผิดปกติ → **Articulation disorders**
 - อาพาธาเซียในวัยเด็ก → **Childhood apraxia of speech**
 - ดิสซาร์เทรีย → **Dysarthria**
- Insufficient data are available on the incidence of speech sound disorders as primary disorders in Thai language
 - Some clinical data indicates 36% of children with cleft lip/palate showed speech intelligibility issues before surgery (Ooppanasak et al., 2019)

Thai Speech Assessments

- Thai Speech and Language 1 (TSLT1)
(Prathanee et al., 2008)
- Thai Speech and Language 2 (TSLT 2)
(Prathanee et al., 2010)
- Most SLPs develop their own assessment tools using picture cards to assess speech sounds in Thai in their initial speech evaluation

Thai Speech Interventions

Common interventions for SSD used by Thai SLPs are mostly based on

- Traditional articulation and phonology therapy with picture cards and toys
- Phonetic placement based on minimal pair identification and discrimination
- Parent training program (Witoonchart, 2015)
- Co-articulation therapy (Nilsuwankhosit et al., 2017)
- Oral motor learning plus family support (Wattanawongsawang, 2019)

References

Book chapter

- Maroonroge, S., Lorwatanapongsa, P., & Prathanee, B. (forthcoming). Thai Speech Development. In S. McLeod (Ed.). *The Oxford handbook of speech development in languages of the world*. Oxford University Press.

Presentation

- Maroonroge, S., Lorwatanapongsa, P., & Prathanee, B. (2024). *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