

# Information about Zapotec speech

## 1. A comparison between Zapotec and English phonology

Aspect	Language	Number	Details	Source
Syllable-initial consonants	Zapotec	28 consonants	/p, b, t, d, k, g, m, m:, n, n:, ŋ, ŋ:, r, r, f, v, s, z, ʃ, ʒ, ʂ:, z:, x, j, l, l:, w, ts, tʃ/	Stemberger & Lee (2007)
	English	24 consonants	/p, b, t, d, k, g, m, n, ŋ, θ, ð, f, v, s, z, ʃ, ʒ, h, tʃ, ʤ, j, w, ɹ, l/	Smit (2004)
Consonant clusters	Zapotec	Syllable initial consonant clusters	CC, CG, CCG (c = consonant, G = glide)	Stemberger & Lee (2007)
	English	Approx. 29 syllable-initial and many syllable-final consonant clusters	Many 2 and 3 element consonant clusters in initial position including /pl, bl, kl, gl, fl, sl, pɹ, bɹ, tɹ, dɹ, kɹ, gɹ, θɹ, fɹ, ʃɹ, pj, tj, fj, mj, nj, sm, sn, sp, st, sk, spl, spɹ, stɹ, skw/ and many 2 to 4 element consonant clusters in final position	McLeod (2007) Smit (2004)
Vowels and diphthongs	Zapotec	6 vowels + 9 diphthongs	Vowels: /i, e, i, a, u, o/ Diphthongs: /ai, au, ei, ia, ie, iu, ua, ue, ii/	Stemberger & Lee (2007)
	English (US-General American)	14 vowels + 3 diphthongs	Vowels: /i, ɪ, e, ε, æ, ə, ø:, ɜ:, u, ʊ, o, ʌ, ɔ, ɑ/ Diphthongs: /aɪ, aʊ, ɔɪ/ (Smit also lists 5 'r'-colored diphthongs)	Smit (2007)
	English (Canadian)	14 vowels + 3 diphthongs	Vowels: /i, ɪ, e, ε, æ, ə, ø:, ɜ:, ʌ, ʊ, o, ʌ, ɔ, ɑ/ Diphthongs: /ʌɪ, ʌʊ, ɔɪ/	Bernhardt, & Deby (2007)
	English (UK-Received Pronunciation)	12 vowels + 8 diphthongs	Vowels: /i, ɪ, ε, æ, ə, ɜ, u, ʊ, ʌ, ɔ, ɒ/ Diphthongs: /aɪ, aʊ, ɔɪ, eɪ, oʊ, ɪə, eə, ʊə/	Howard (2007)
	English (Australian)	12 vowels + 8 diphthongs	Vowels: /i:, ɪ, e, æ, ɛ:, ɐ, ɔ:, ʊ, ʌ:, ɜ:, ə/ <sup>i</sup> OR /i, ɪ, ε, æ, a, ʌ, ɒ, ɔ, ʊ, u, ɜ, ə/ <sup>ii</sup> Diphthongs: /æɪ, ae, əɛ, əɔ, ɔɪ, ɪə, eɪ, ʊə/ <sup>i</sup> OR /eɪ, aɪ, oʊ, aʊ, ɔɪ, ɪə, eə, ʊə/ <sup>ii</sup>	<sup>i</sup> Harrington, Cox, & Evans, (1997) <sup>ii</sup> Mitchell (1946)
English (New Zealand)	12 vowels + 8 diphthongs	Vowels: /i, ɪ, ε, æ, ə, ɜ, u, ʊ, ʌ, ɔ, ɒ, ɑ/ <sup>i</sup> OR /i, ɪ, e, æ, a, ə, ɜ, ʊ, ʌ, ɔ, ɒ/ <sup>ii</sup> Diphthongs: /aɪ, aʊ, ɔɪ, eɪ, oʊ, ɪə, eə, ʊə/ <sup>i</sup> OR /ai, au, ɔi, ei, ou, iə, eə, ʊə/ <sup>ii</sup>	<sup>i</sup> Bauer & Warren (2004) <sup>ii</sup> Maclagan (2009)	
Tones	Zapotec	4 tones	High, low, falling, rising	Stemberger & Lee (2007)
	English	0 tones	-	
Syllable shape	Zapotec	CCGVVVCG		Stemberger & Lee (2007)
	English	C <sub>(0-3)</sub> VC <sub>(0-4)</sub>	The smallest syllable is V and the largest is CCCVCCCC <i>strengths</i> .	McLeod (2007)

<b>Stress-timed or syllable-timed?</b>	<b>Zapotec</b>		Stress on root-final syllable	Stemberger & Lee (2007)
	<b>English</b>	Stress-timed	Syllables can be strong or weak. Stress also is used for emphasis.	
<b>Varieties</b>	<b>Zapotec</b>		San Lucas Quiaviní Zapotec, Southern Zapotec, Sierra Zapotec	Stemberger & Lee (2007)
	<b>English</b>	Many dialects	Many dialects including General American English, Received Pronunciation (England), Scottish English, Irish English, Australian English, New Zealand English, South African English etc.	
<b>Writing system</b>	<b>Zapotec</b>	Latin script (recent)	No surviving traditional writing system	Stemberger & Lee (2007)
	<b>English</b>	Latin script	Latin script loosely related to phonetic realizations of the consonants and vowels.	

## References

### Zapotec studies

Stemberger, J. P., & Lee, F. (2007). San Lucas Quiaviní Zapotec speech acquisition. In S. McLeod (Ed.), *The international guide to speech acquisition* (pp. 608-616). Clifton Park, NY: Thomson Delmar Learning.

### English studies

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Smit, A. B. (2004). *Articulation and phonology: Resource guide for school-age children and adults*. Clifton Park, NY: Thomson Delmar Learning.

Smit, A. B. (2007). General American English speech acquisition. In S. McLeod (Ed.), *The international guide to speech acquisition* (pp. 128-147). Clifton Park, NY: Thomson Delmar Learning.

## 2. Zapotec speech assessments

None known

## 3. Monolingual speech acquisition (summaries and studies written in English)

Stemberger, J. P., & Lee, F. (2007). San Lucas Quiaviní Zapotec speech acquisition. In S. McLeod (Ed.), *The international guide to speech acquisition* (pp. 608-616). Clifton Park, NY: Thomson Delmar Learning.

#### 4. Multilingual speech acquisition (summaries and studies written in English)

##### **General summaries**

- Goldstein, B. A., & McLeod, S. (2012). Typical and atypical multilingual speech acquisition. In S. McLeod & B. A. Goldstein (Eds.), *Multilingual aspects of speech sound disorders in children* (pp. 84-100). Bristol, UK: Multilingual Matters.
- Grech, H., & McLeod, S. (2012). Multilingual speech and language development and disorders. In D. Battle (Ed.), *Communication disorders in multicultural and international populations* (4th ed., pp. 120-147). St Louis, MO: Elsevier.
- Zhu Hua & Dodd, B. (Eds). (2006). *Phonological development and disorders in children: A multilingual perspective*. Cleavdon, UK: Multilingual Matters.
- Yavaş, M. (2007). Multilingual speech acquisition. In S. McLeod (Ed.), *The international guide to speech acquisition* (pp. 96-100). Clifton Park, NY: Thomson Delmar Learning.

##### **Summaries and studies of multilingual Zapotec speech acquisition**

None known