Information about Dutch speech

1. A comparison between Dutch and English phonology

Aspect	Language	Number	Details	Source
Consonants	Dutch	23 consonants	/p, b, t, d, (c), k, (g), m, n, (ɲ), ŋ, ɾ, f, v, s, z, (ʃ), (ʒ), χ, h, ʋ, j, l/	Mennen, Levelt, & Gerrits (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	Dutch	Syllable-initial and syllable-final consonant clusters	Two and three element consonant clusters in word-initial position, up to four element clusters in word-final position. Dutch can have many consecutive consonant phones (e.g., within words)	Mennen et al. (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 (2007)
Vowels and diphthongs	Dutch	14 vowels + 3 diphthongs	Vowels: /i, y, u, eː, øː, oː, aː, ɪ, ɛ, ɔ, ʏ, ɑ/ Diphthongs: /ɛi, œy, ʌu/	Mennen et al. (2007)
	English (US-General American)	14 vowels + 3 diphthongs	Vowels: /i, ɪ, e, ɛ, æ, ə, ɚ, ɝ, 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, ɛ, æ, ə, ɚ, ɝ, ʉ, ʊ, o, ʌ, ɔ, ɑ/ Diphthongs: /ʌɪ, ʌʊ, ɔɪ/	Bernhardt, & Deby (2007)
	English (UK-Received Pronunciation)	12 vowels + 8 diphthongs	Vowels: /i, ɪ, ɛ, æ, a, ə, ɜ, u, ʊ, ʌ, ɔ, ɒ/ Diphthongs: /aɪ, aʊ, ɔɪ, eɪ, oʊ, ɪə, ɛə, ʊə/	Howard (2007)
	English (Australian)	12 vowels + 8 diphthongs	Vowels: /iː, ɪ, e, æ, ɐː, ɐ, ɔ, oː, ʊ, ʉː, ɜː, ə/[i] OR /i, ɪ, ɛ, æ, a, ʌ, ɒ, ɔ, ʊ, u, ɜ, ə/[ii] Diphthongs: /æɪ, ɑe, əʉ, æɔ, ɔɪ, ɪə, eː, ʊə/[i] OR /eɪ, aɪ, oʊ, aʊ, ɔɪ, ɪə, ɛə, ʊə/[ii]	[i] Harrington, Cox, & Evans, (1997) [ii] Mitchell (1946)
	English (New Zealand)	12 vowels + 8 diphthongs	Vowels: /i, ɪ, ɛ, æ, ə, ɜ, u, ʊ, ʌ, ɔ, ɒ, ɑ/[i] OR / i, ɪ, e, a, ə, ɜ, ʊ, ʌ, ɔ, ɒ/[ii] Diphthongs: /aɪ, aʊ, ɔi, eɪ, oʊ, iə, eə, ʊə/[i] OR /ai, aʊ, ɔi, ei, oʊ, iə, eə, ʊə/[ii]	[i] Bauer & Warren (2004) [ii] Maclagan (2009)
Tones	Dutch	yes/no	Standard Dutch – no Southern Dutch – yes	Mennen et al. (2007)
	English	0 tones	-	

Syllable shape	Dutch	$C_{(0-3)}VC_{(0-4)}$		Mennen et al. (2007)
	English	$C_{(0-3)}VC_{(0-4)}$	The smallest syllable is V and the largest is CCCVCCCC *strengths.*	Smit (2004) McLeod (2007)
Stress-timed or syllable-timed?	Dutch	Stress-timed language		Mennen et al. (2007)
	English	Stress-timed	Syllables can be strong or weak. Stress also is used for emphasis.	
Varieties	Dutch	Large number of regional dialects	Large number of regional dialects (some say 28 dialects)	Mennen et al. (2007)
	English	Many dialects	Many dialects including General American English, Received Pronunciation (England), Scottish English, Irish English, Australian English, New Zealand English, South African English etc.	
Writing system	Dutch	Latin alphabet		
	English	Latin alphabet	Latin alphabet loosely related to phonetic realizations of the consonants and vowels.	

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Comparative summaries

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2. Dutch speech assessments

For a list of speech assessments in Dutch see: www.csu.edu.au/research/multilingual-speech/speech-assessments

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

Summaries of Dutch speech acquisition

Mennen, I., Levelt, C., & Gerrits, E. (2007). Dutch speech acquisition. In S. McLeod (Ed.), *The international guide to speech acquisition* (pp. 327-339). Clifton Park, NY: Thomson Delmar Learning.

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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.

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Studies of multilingual Dutch speech acquisition

Languages	Country	Study	Age of children	Total number of children (no. of multilingual children)**	Typically/ atypically developing children	Speech /language	Production/ perception
Dutch-French	Belgium	De Houwer, A., Bornstein, M. H., & De Coster, S. (2006). Early understanding of two words for the same thing: A CDI study of lexical comprehension in infant bilinguals. *International Journal of Bilingualism, 10*(3), 331-347.	13 months	31 (31)	typical	language	perception

Note. * Studies of typically and atypically developing multilingual children published in English were included; however, studies that only included monolingual children were excluded.**The total number of children may have included both multilingual and monolingual children, so the number in brackets provides the total number of multilingual children.