

Information about Maltese speech

1. A comparison between Maltese and English phonology

Aspect	Language	Number	Details	Source
Syllable-initial consonants	Maltese	22 consonants	/p, b, t, d, k, g, ʔ, m, n, f, v, s, z, ʃ, h, ɹ, j, l, w, ts, tʃ, ɖʒ/	Grech (2007)
	English	24 consonants	/p, b, t, d, k, g, m, n, ŋ, θ, ð, f, v, s, z, ʃ, ʒ, h, tʃ, ɖʒ, j, w, ɹ, l/	Smit (2004)
Consonant clusters	Maltese	Syllable-initial and syllable-final consonant clusters	Mostly two-element consonant clusters.	Grech (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, 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	Maltese	11 vowels + 7 diphthongs	Vowels: /i, ɪ, ɪ:, ɛ, ɛ:, ɐ, ɐ:, ɔ, ɔ:, ʊ, u:/ Diphthongs: /ɐʊ, ɐɪ, ɛʊ, ɛɪ, ɪʊ, ɔɪ, ɔʊ/	Grech (2007)
	English (US-General American)	14 vowels + 3 diphthongs	Vowels: /i, ɪ, e, ɛ, æ, ə, ɝ, ɜ:, ʊ, ʊ, o, ɒ, 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, ɝ, ɜ:, ʊ, ʊ, o, ɒ, ɔ, ɑ/ Diphthongs: /aɪ, ʌʊ, ɔɪ/	Bernhardt, & Deby (2007)
	English (UK-Received Pronunciation)	12 vowels + 8 diphthongs	Vowels: /i, ɪ, ɛ, æ, a, ə, ɜ, ʊ, ʊ, ʌ, ɔ, ɒ/ Diphthongs: /aɪ, aʊ, ɔɪ, eɪ, ɔʊ, ɪə, ɛə, ʊə/	Howard (2007)
	English (Australian)	12 vowels + 8 diphthongs	Vowels: /i, ɪ, e, æ, ɐ, ɐ, ɔ, ɔ:, ʊ, ʊ, ɜ:, ɜ:, ə/ OR /i, ɪ, ɛ, æ, a, ʌ, ɒ, ɔ, ʊ, ʊ, ɜ, ə/ ⁱⁱ Diphthongs: /æɪ, ae, əɜ, æɔ, ɔɪ, ɪə, eɪ, ʊə/ ⁱ OR /eɪ, aɪ, ɔʊ, 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, ʊ, ʊ, ʌ, ɔ, ɒ, ɑ/ ⁱ OR /i, ɪ, e, æ, a, ə, ɜ, ʊ, ʌ, ɔ, ɒ/ ⁱⁱ Diphthongs: /aɪ, aʊ, ɔɪ, eɪ, ɔʊ, ɪə, ɛə, ʊə/ ⁱ OR /aɪ, aʊ, ɔɪ, eɪ, ɔʊ, ɪə, ɛə, ʊə/ ⁱⁱ	ⁱ Bauer & Warren (2004) ⁱⁱ MacLagan (2009)
Tones	Maltese	0 tones	-	Grech (2007)
	English	0 tones	-	
Syllable shape	Maltese	C ₍₀₋₃₎ VC ₍₀₋₂₎		
	English	C ₍₀₋₃₎ VC ₍₀₋₄₎	The smallest syllable is V and the largest is CCCVCCCC <i>strengths</i> .	Smit (2004) McLeod (2007)

Stress-timed or syllable-timed?	Maltese		Long vowels are stressed. Stress on the last syllable in multisyllabic words	Grech (2007)
	English	Stress-timed	Syllables can be strong or weak. Stress also is used for emphasis.	
Varieties	Maltese	Regional variation		
	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	Maltese	Latin alphabet		
	English	Latin alphabet	Roman script loosely related to phonetic realizations of the consonants and vowels.	

References

Maltese studies

Grech, H. (2007). Maltese speech acquisition. In S. McLeod (Ed.), *The international guide to speech acquisition* (pp. 483-494). Clifton Park, NY: Thomson Delmar Learning.

English studies

Bauer, L., & Warren, P. (2004). New Zealand English: Phonology. In E. Schneider, K. Burridge, B. Kortmann, R. Mesthrie & C. Upton (Eds.). *A handbook of varieties of English: Vol. 1. Phonology* (pp. 580-602). Berlin, Germany: Mouton de Gruyter.

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MacLagan, M. (2009). Reflecting connections with the local language: New Zealand English. *International Journal of Speech-Language Pathology*, 11(2), 113-121.

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2. Maltese speech assessments

For a list of speech assessments in Maltese see: www.csu.edu.au/research/multilingual-speech/speech-assessments
Intelligibility in Context Scale: Maltese www.csu.edu.au/research/multilingual-speech/ics

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

- Grech, H. (2006). Phonological development of Maltese-speaking children. In Zhu Hua & B. Dodd (Eds.), *Phonological development and disorders in children: A multilingual perspective* (pp. 135-178). Cleavdon, UK: Multilingual Matters.
- Grech, H. (2007). Maltese speech acquisition. In S. McLeod (Ed.), *The international guide to speech acquisition* (pp. 483-494). 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 of multilingual Maltese speech acquisition

- Grech, H. (2012). Translation to practice: Phonological analysis of the speech of multilingual children in Malta. In S. McLeod & B. A. Goldstein (Eds.), *Multilingual aspects of speech sound disorders in children* (pp. 211-213). Bristol, UK: Multilingual Matters.

Studies of multilingual Maltese speech acquisition

Languages	Country	Study	Age of children	Total number of children (no. of multilingual children)**	Typically/atypically developing children	Speech /language	Production/perception
Maltese-English	Malta	Grech, H., & Dodd, B. (2008). Phonological acquisition in Malta: A bilingual learning context. <i>International Journal of Bilingualism</i> , 12, 155-171.	2;0 – 6;0	241 (93)	typical	speech	production

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.