



Multilingual Children's Speech Development

ENGLISH (Scottish)

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English (Scottish)

- **Commonly spoken in**

- Scotland

- **Dialects and variants**

- Scottish Standard English, Insular Scots (Orkney, Shetland), Northern Scots, Doric (NE), Dundonian, Fife Scots, Highlands and Western Isles Scots, Central Belt Scots, Borders Scots

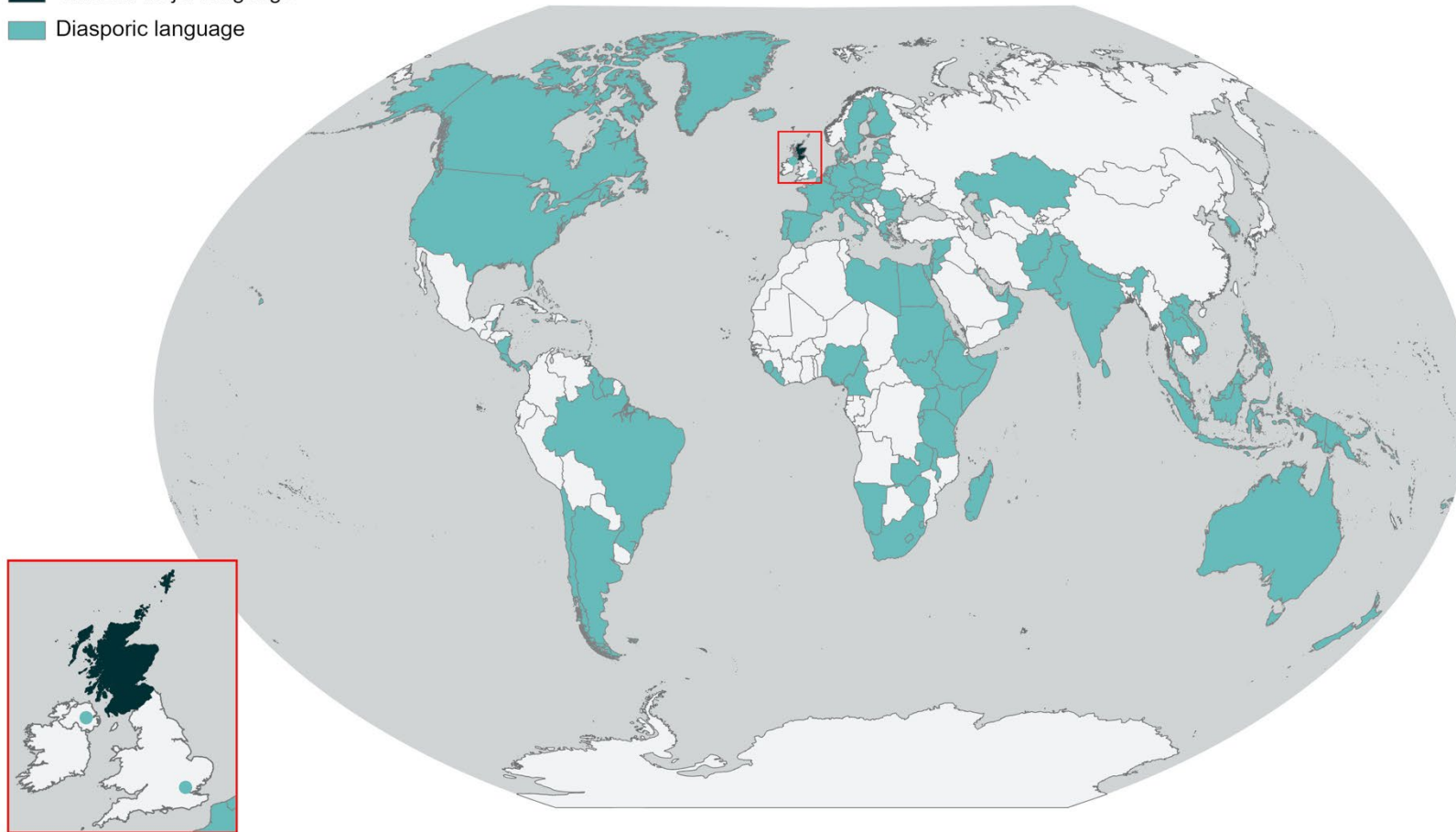
- **Writing**

- Left to right. Latin alphabet (Roman script)
- **“Everhin, but everhin, wis ma fault. Anen it caught lik an unwanted fire. Afore lang evrubdy wis sayin it. Faimly. Mates. Schuilmaisters.”**
(MacDonald, 2003)

Everything, but everything, was my fault. And then it caught like an unwanted fire. Before long everybody was saying it. Family. Friends. Schoolmasters

English (Scottish) Map

- Official / major language
- Diasporic language



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English (Scottish) Speech Components

- **Consonants (24/26):** /p, b, m, f, v, θ, ð, t, d, n, s, z, tʃ, dʒ, ʃ, l, ʃ, ʒ, j, k, g, ŋ, h, w/
optional additional /x/ ([ç~x]) and /w/ and two important allophones [ʔ, r]
- **Consonant clusters (many):** as for English English
- **Vowels (13):** /i(:), ɪ, e, ε, a, ʌ, ɔ, o, ʉ(:), ae, (ʌɪ), ʌʉ, ɔe/
- **Tones (0):** None
- **Phonotactic restrictions:** $C_{(0-3)} V_{(0-2)} C_{(0-5)}$
 - Rhoticity: coda /r/ may phonotactically follow all nine stressed Scottish monophthongal vowels
 - May lack coda /rɪ/, /rɪm/, /lɪm/ and less often /rɪn/, all stem-finally
For example, **pearl** and **peril** are homophones /'pɛrɪl/
- **Prosody:** Stress accent language

English (Scottish)

Selected Phonetic Features

■ Plosives

- Coda glottalled /t/
- Dentalised onset and intervocalic /t/
- Ejectivised coda /p/

■ Fricatives and affricates

- Devoiced coda /z/ and /dʒ/

■ Laterals

- Velarised /l/

■ Rhotics

- retroflex/ tip-up/ bunched/ tapped and labiodental /r/ in onset, intervocalic and coda position; coda derhoticised /r/

English (Scottish) Age of Acquisition

■ Consonants

- **Early** /p, b, t, d, k, g, m, n, ŋ, f, v, s, z, h, w, l, j/
- **Middle** /tʃ, dʒ, ʒ, ʃ/
- **Late** /ɹ/ in onset /θ, ð/
- Acquisition of /x, ɹ/ and [ʔ, r] unknown or optional

■ Consonant clusters

- Assumed similar to English English

■ Vowels

- Acquired by 3 years. Order of acquisition unknown

■ Tones

- None

English (Scottish) Speech Development

- **Percentage correct**

- **3;0-3;11**: consonants 82% (*SD*=13)
- **4;0-5;5**: consonants 90% (*SD*=9)
- **5;6-7;0**: consonants 95% (*SD*=5)

- **Intelligibility**

- To date there is no study of typical children's intelligibility

- **Common phonological patterns**

- Fronting, stopping, cluster reduction, derhoticisation in coda

English (Scottish) Children with Speech Sound Disorders

■ Also called

- phonological delay/disorder, articulation disorder
- childhood apraxia of speech (previously developmental verbal dyspraxia)
- dysarthria

■ Research has focused on

- Instrumental articulatory techniques for assessment and biofeedback, particularly electropalatography and ultrasound
- Persistent SSD, cleft lip and palate (CLP)

■ Studies (examples)

- Abnormal patterns of tongue-palate contact in the speech of individuals with cleft palate (Gibbon, 2002)
- Ultrasound biofeedback treatment for persistent SSD (Cleland et al., 2019)

English (Scottish) Speech Assessments

- **Edinburgh Articulation Test** (Anthony et al., 1971) (out of print)
- **The Profiling Element of Prosodic Systems – Children** (Peppé & McCann, 2003)
- **Diagnostic Evaluation of Articulation and Phonology** (Dodd et al., 2003)
- **Cleftnet Protocol** (Lee et al., 2007)
- **Clinical Assessment of Vowels – English Systems** (Bates et al., n.d.)

English (Scottish) Speech Interventions

- Most common interventions developed in English speaking countries are used, (e.g., minimal pairs, core vocabulary therapy)
- **The Vowel House** (Reid, 2003)
- **Electropalatography** (Gibbon & Wood, 2010)
- **Ultrasound Biofeedback** (Cleland & Preston, 2021)

Reference

Book chapter

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Presentation

- Scobbie, J. M., Cleland, J., Lawson, E. & Schaeffler, S. (2023). *English (Scottish): Multilingual children's speech development*. Charles Sturt University, Australia. <https://www.csu.edu.au/research/multilingual-speech/languages>
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