Supplementary Table 4a Phonemic inventory of English-speaking participants with pathogenic missense/loss-of-function variants disrupting *FOXP2*

	Case	**1a**	**1b**	**1c**	**2**	**3a**	**3b**	**4a**	**4b**	**4c**	**5**	**6**	**17**
	Age at assessment (years; months)	7;3	38;8	30;2	5;3	5;3	41;8	20;10	18;6	16;05	8	13;4	2;10
Expected age of acquisition	**Phonetic feature**												
3;0-3;5	Plosives (bilabial)	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g
	Nasals	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ
	Fricatives (Labiodental, Alveolar, Glottal, Velar, Uvular)	f, v, s, z, h	f, v, s, z, h	f, v, s, z, h	f, v, s, z, h	f, v, s, z, h	f, v, s, z, h	f, v, s#, z#, h	f, v, s, z, h	f, v, s, z, h	f, v, s, z, h	f, v, s, z, h	f, v, s, z, h
	Glides (bilabial, palatal) and liquid (alveolar)	w, j, l	w, j, l	w, j, l	w, j, l	w, j, l	w, j, l	w, j, l	w, j, l	w, j, l	w, j, l	w, j, l	w, j, l
3;6-3;11	Affricate (postalveolar, voiceless)	t͡ʃ	t͡ʃ	t͡ʃ	t͡ʃ	t͡ʃ	t͡ʃ	t͡ʃ	t͡ʃ	t͡ʃ	t͡ʃ	t͡ʃ	t͡ʃ
4;0-4;5	Fricative (palatal, voiced) Affricate (alveolar, voiced)	ʒ d͡ʒ	ʒ d͡ʒ	ʒ d͡ʒ	ʒ d͡ʒ	ʒ d͡ʒ	ʒ d͡ʒ	ʒ d͡ʒ	ʒ d͡ʒ	ʒ d͡ʒ	ʒ d͡ʒ	ʒ d͡ʒ	ʒ d͡ʒ
5;0-5;5	Fricative (postalveolar, voiceless)	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ
6;0-6;5	Glide (alveolar)	ɹ	ɹ	ɹ	ɹ	ɹ	ɹ	ɹ	ɹ	ɹ	ɹ	ɹ	ɹ
7;0 and above	Fricatives (dental, voiceless and voiced)	θ, ð	θ, ð	θ, ð	θ, ð	θ, ð	θ, ð	θ, ð	θ, ð	θ, ð	θ, ð	θ, ð	θ, ð

interdental lisp present. ● Sounds acquired, ● Sounds not yet acquired. Table normative data based on Dodd et al. (62), age at which 90% of n=684 British children acquired speech sounds.

Supplementary Table 4b Phonemic inventory of German-speaking participants with pathogenic missense/loss-of-function variants disrupting *FOXP2*

	Case Age at assessment (years; months)	**7a** 15;3	**7b** 15;3	**8b** 16;8	**10** 9;9	**11a** 41	**11b** 8;5
Expected age of acquisition	**Phonetic feature**						
3;0-3;5	Plosives (bilabial)	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g	p, b, t, d, k, g
	Nasals	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ	m, n, ŋ
	Fricatives (Labiodental, Alveolar, Glottal, Velar, Uvular)	f, v, s*, z*, h, x, ʁ	f, v, s*, z*, h, x, ʁ	f, v, s*#, z*, h, x, ʁ	f, v, s*, z*, h, x, ʁ	f, v, s*, z*, h, x, ʁ	f, v, s*, z*, h, x, ʁ
	Affricate	pf	pf	pf	pf	pf	pf
	Approximants (alveolar, palatal)	j, l	j, l	j, l	j, l	j, l	j, l
3;6-3;11	Affricate (alveolar, voiceless)	t͡s*	t͡s*	t͡s*	t͡s*	t͡s*	t͡s*
4;0-4;5	Fricative (palatal, voiceless)	ç	ç	ç	ç	ç	ç
4;6-4;11	Fricative (postalveolar, voiceless)	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ
Other phonemes in German	Affricate (post-alveolar, voiceless) Fricative (post-alveolar, voiced) Affricate (post-alveolar, voiced)	t͡ʃ ʒ d͡ʒ	t͡ʃ ʒ d͡ʒ	t͡ʃ ʒ d͡ʒ	t͡ʃ ʒ d͡ʒ	t͡ʃ ʒ d͡ʒ	t͡ʃ ʒ d͡ʒ

[z] is not present in Southern German dialects (always substituted by [s]), therefore in parenthesis. # interdental lisp present. ● Sounds acquired, ●Sounds not yet acquired, ●Sounds absent in the speech sample. Table normative data based on Fox & Dodd (63), age at which sounds were acquired by 90% of n=177 German children. *[s], [z], [ts]: in Fox & Dodd (1999), 35% of children were not able to produce these sounds phonetically correct; however, as these sounds are mostly substituted by the interdental sounds [θ] and [ð], these substitutes are taken as allophones. Thus, phonemically, these sounds are rated as phonemically correct.