Table S1. *Dutch target words.*

Word	Pronunciation	Translation
bal	[ˈbɑl]	ball
bed	[ˈbɛt]	bed
beer	[ˈbeːr]	bear
boom	[ˈboːm]	tree
boot	[ˈboːt]	boat
buik	[ˈbœyk]	tummy
deur	[ˈdøːr]	door
dieren	[ˈdiːrə]	animals
dokter	[ˈdɔktər]	doctor/physician
doos	[ˈdoːs]	cardboard box
douche	[ˈduʃ]	shower
duim	[ˈdœym]	thumb
kaas	[ˈkaːs]	cheese
kast	[ˈkɑst]	cupboard
kikker	[ˈkɪkər]	frog
kip	[ˈkɪp]	chicken
koe	[ˈku]	cow
koning	[ˈkoːnɪŋ]	king
paard	[ˈpaːrt]	horse
pan	[ˈpɑn]	pot
peer	[ˈpeːr]	pear
pink	[ˈpɪŋk]	little finger
pizza	[ˈpidza]	pizza
pop	[ˈpɔp]	doll
taart	[ˈtaːrt]	pie
tafel	[ˈtaːfəl]	table
tak	[ˈtɑk]	stick
tas	[ˈtɑs]	bag
tent	[ˈtɛnt]	tent
tijger	[ˈtɛiɣər]	tiger

Note: The children sometimes added the diminutive suffix *–tje* to the Dutch target words. When a monosyllabic word became disyllabic through suffixation, it was considered ‘disyllabic’ in the analyses. Disyllabic words to which a third syllable was added were excluded from the analyses.

Table S2. *German target words.*

Word	Pronunciation	Translation
Ball	[ˈbal]	ball
Bär	[ˈbɛːɐ̯]	bear
Baum	[ˈbaʊm]	tree
Bett	[ˈbɛt]	bed
Biene	[ˈbiːnə]	bee
Birne	[ˈbɪɐ̯nə]	pear
Dach	[ˈdax]	roof
Daumen	[ˈdaʊmən]	thumb
Decke	[ˈdɛkə]	blanket
Doktor	[ˈdɔktoːɐ̯]	doctor/physician
Dose	[ˈdoːzə]	box
Dusche	[ˈduːʃə]	shower
Käse	[ˈkɛːzə]	cheese
Katze	[ˈkat͡sə]	cat
Kette	[ˈkɛtə]	necklace
Korb	[ˈkɔɐ̯p]	basket
Kuh	[ˈkuː]	cow
Küken	[ˈkyːkən]	chick
Pilz	[ˈpɪlt͡s]	mushroom
Pinsel	[ˈpɪnzəl]	paintbrush
Pizza	[ˈpɪt͡sa]	pizza
Pommes	[ˈpɔməs]	French fries
Puppe	[ˈpʊpə]	doll
Puzzle	[ˈpʊzəl]	jigsaw
Tasse	[ˈtasə]	cup
Teller	[ˈtɛlɐ]	plate
Tiere	[ˈtiːʀə]	animals
Tiger	[ˈtiːgɐ]	tiger
Tisch	[ˈtɪʃ]	table
Tür	[ˈtyːɐ̯]	door

Table S3. *Voiceless plosives: Mean VOT values (ms) by place of articulation and vocalic context by language and language background over children.*

	Dutch			German		
	Monolingual	Bilingual	Number of target words	Monolingual	Bilingual	Number of target words
/p/						
open vowel	13	23	2	–	–	0
open-mid vowel	21	22	1	61	36	1
close-mid vowel	16	24	1	–	–	0
close vowel	14	17	2	51	31	5
/t/						
open vowel	26	22	4	60	29	1
open-mid vowel	25	34	2	67	44	1
close-mid vowel	–	–	0	–	–	0
close vowel	–	–	0	84	66	4
/k/						
open vowel	24	33	2	66	47	1
open-mid vowel	–	–	0	74	53	3
close-mid vowel	35	39	1	–	–	0
close vowel	38	44	3	82	68	2

Due to constraints in the selection of target words, no even distribution of open and close vowels across consonantal places of articulation and languages could be achieved. This imbalance does not affect the two analyses comparing the bilinguals to monolinguals in Dutch and in German, as all participants produced the same target words.

The uneven distribution of vocalic contexts could potentially be a conflict in the comparison of the bilinguals' VOT across Dutch and German. To address this concern, we ran an analysis on /k/, which is the only consonantal place of articulation for which the distribution of open and close vowels is approximately even in Dutch and German. For /k/, we have two open and four close (including close-mid) vowels in Dutch and four open (including open-mid) and two close vowels in German. If the language differentiation we observed in the bilinguals were caused by the different distribution of the vocalic contexts instead of being a language effect, we would expect longer VOT in Dutch than in German. However, the analysis shows that despite the larger amount of target words with close vowels in Dutch, the bilingual children produced longer VOT in German /k/ (M=57 ms) than in Dutch /k/ (M=40 ms; β=10.65, SE=3.97, t=2.68, p=.007). Based on these results, we are confident that our finding – that bilinguals produce longer VOT in German than in Dutch – indeed indicates language differentiation and does not result from differences in vocalic contexts between the stimuli used for the two languages.

Appendix S4. *Post-hoc analyses on interactions.*

Monolingual Dutch children and monolingual German children

The main model comparing the monolingual Dutch and German children's VOT of 'voiceless' plosives revealed a Language x Place of Articulation (/p/ vs. /t/) interaction and a Language x Word Length (monosyllabic vs. disyllabic words) interaction. Several post-hoc analyses followed up on these interactions. The first set of analyses confirmed that the effect of Language is significant in both /p/ (β=18.28, *SE*=2.62, *t*=6.99, *p*<.001) and /t/ (β=27.39, *SE*=2.96, *t*=9.24, *p*<.001) and also in both monosyllabic words (β=32.83, *SE*=3.90, *t*=8.41, *p*<.001) and disyllabic words (β=24.35, *SE*=4.09, *t*=5.95, *p*<.001).

Subsequent analyses, conducted separately by language, showed that only the German monolingual children produced shorter VOT in /p/ than in /t/ (German: β=-21.34, *SE*=5.89, *t*=-3.36, *p*<.001; Dutch: β=-6.33, *SE*=3.60, *t*=-1.76, *p*=.078) and shorter VOT in disyllabic than in monosyllabic words (German: β=8.79, *SE*=2.37, *t*=3.71, *p*<.001; Dutch: β=0.085, *SE*=1.31, *t*=0.06, *p*>.250).

The analysis comparing the monolingual children's percentage of prevoiced 'voiced' plosives similarly revealed a Language x Place of Articulation interaction. Post-hoc analyses confirmed that the effect of Language is significant in /b/ (β=1.36, *SE*=0.18, *z*=7.46, *p*<.001) and also in /d/ (β=1.87, *SE*=0.28, *z*=6.63, *p*<.001).

Subsequent by-language analyses indicated that both the Dutch monolingual children and the German monolingual children prevoiced /b/ more frequently than /d/, but the magnitude of the effect was larger in the German monolingual children (β=-1.06, *SE*=0.23, *z*=-4.52, *p*<.001) than in the Dutch monolingual children (β=-0.32, *SE*=0.12, *z*=-2.80, *p*=.005).

Bilingual children in Dutch and in German (Research question 1)

The main model comparing the VOT of 'voiceless' plosives in the bilingual children's Dutch and German revealed a Language x Exposure to German interaction and a Language x Elicitation Task interaction. The first was explored in by-language post-hoc analyses and revealed that children with more exposure to German produced longer VOT in German (β=0.52, *SE*=0.24, *t*=2.17, *p*=.030), but not in Dutch (β=0.15, *SE*=0.14, *t*=1.09, *p*>.250). For the Language x Elicitation Task interaction, post-hoc analyses first confirmed that the effect of Language is significant both in the story elicitation task (β=13.54, *SE*=3.59, *t*=3.77, *p*<.001) and in the game elicitation task (β=16.27, *SE*=3.71, *t*=4.39, *p*<.001). Separate by-language analyses showed that the bilingual children only produced longer VOT in the story task than in the game task when they spoke Dutch (β=-3.14, *SE*=0.92, *t*=-3.42, *p*<.001), but not when they spoke German (β=-1.11, *SE*=1.25, *t*=-0.89, *p*>.250).

Bilingual children and monolingual German children (Research question 2)

The main model comparing the bilinguals' and monolinguals' percentage of prevoiced 'voiced' plosives in German revealed a Language Background x Place of Articulation interaction. Post-hoc analyses confirmed that the effect of Language Background is significant in both /b/ (β=-0.73, *SE*=0.24, *z*=-3.08, *p*=.002) and /d/ (β=-1.32, *SE*=0.37, *z*=-3.54, *p*<.001). Separate by-language analyses indicated that the bilingual children as well as the monolingual children prevoiced /b/ more frequently than /d/, but the magnitude of the effect was larger in the

monolingual children (β=-1.06, *SE*=0.23, *z*=-4.52, *p*<.001) than in the bilingual children (β=-0.41, *SE*=0.15, *z*=-2.79, *p*=.005).