Russian version of *Speakaboo*: Speech development screening test for multilingual children

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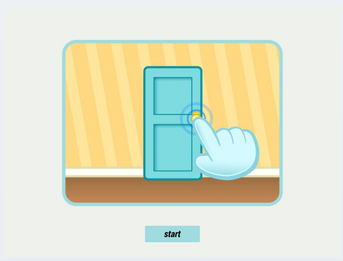
The assessment of language development of multilingual children can be challenging or even impossible in cases when the therapist does not speak all the languages available for the child.

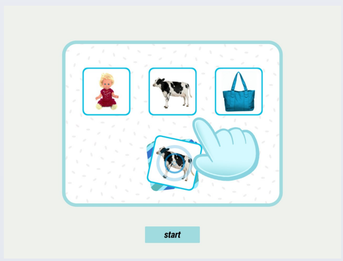
FOCUS

Development and standardization of the first tool for assessing phonological abilities of multilingual children, one of whose native languages is Russian.

SPEAKABOO



Doors for toddlers



Swiping for preschoolers

target audience

- multilingual children aged 2–6 years

test material

- a naming task with 30–40 pictures
- target words reflect the full repertoire of the language's consonants and consonant clusters in syllable-initial and syllable-final positions

layout

- iPad application
- games designed for toddlers (*Doors*) and preschoolers (*Swiping*)
- full assessment takes only 10 minutes

originally developed

- in the Netherlands by *Royal Dutch Kentalis*
- adapted for 10 languages frequently used in the Dutch multilingual community

Speakaboo languages

English, German, Italian, Polish, two Arabic dialects (Egyptian and Moroccan), Somali, Turkish, Rif Berber, Papiamento + Russian

RUSSIAN *SPEAKABOO*

- ✓ description of the language and its phonological system
- ✓ description of the phonological development: consonant acquisition sequence and age and common phonological processes
  - ➢ main body of research focuses on a selection of consonants rather than on the full repertoire of Russian phonemes or reported findings typically come from the observations of individual children
  - ➢ traditional qualitative instruments used by Russian speech language therapists are non-standardized and non-balanced by word length, its syllable structure, target consonant position (syllable-initial/syllable-final), word acquisition age
- ✓ translation of all the existing *Speakaboo* words from Dutch into Russian
  - ➢ 130 items
  - ➢ lexical groups: *food*, *animals*, *house*, *clothes*, *body parts*, *professions*, *vehicles*, *toys*
- ✓ selection of target words
  - ➢ 39 target words
  - ➢ 36 target consonants in syllable-initial position
  - ➢ 25 target consonants in syllable-final position
  - ➢ no voiced consonants in syllable-final position
- ✓ establishing the stimuli order
  - ➢ target word length: from short to long words
  - ➢ syllable structure: from words with syllables acquired first (CV) to words with those acquired lately (CVC)
  - ➢ consonant clusters: from words with no consonant clusters to those with clusters
  - ➢ target word acquisition age: from words acquired earlier (according to CLEX-database for Russian) to words acquired lately
  - ➢ consonant acquisition sequence and age.
- ✓ pilot data collection
  - ➢ 22 Russian speakers
    - 11 men
    - 11 women
  - ➢ aged 17 to 23

PILOT RUSSIAN *SPEAKABOO* VERSION

Stimuli order

Table 1. Stimuli order in Russian *Speakaboo*

№	target word	target phoneme	№	target word	target phoneme	№	target word	target phoneme
1	**so**k (juice)	s- -k	14	ˈpalʲə**t͡s** (finger)	-t͡s	27	mɐrˈko**fʲ** (carrot)	-fʲ
2	t͡ʃa**j** (tea)	-j	15	ˈlo**ʃ**ətʲ (horse)	ʃ- -tʲ	28	**ɐgʊ**ˈrʲe**t͡s** (cucumber)	g-
3	**m**ʲat͡ʃ (ball)	mʲ-	16	**ʒ**iˈraf (giraffe)	ʒ-	29	**t**ʲəlʲɪˈ**f**on (telephone)	tʲ- f-
4	gu**s**ʲ (goose)	-sʲ	17	pʲɪˈtu**x** (rooster)	-x	30	ʃəkɐˈla**t** (chocolate)	-t
5	**du**ʃ (shower)	d- -ʃ	18	**l**ʲɪˈmo**n** (lemon)	lʲ- -n	31	ˈ**d**ʲevət͡ʃkə (girl)	dʲ-
6	ˈmu**x**ə (fly)	x-	19	rʲɪˈmʲe**n**ʲ (belt)	ˈ-nʲ	32	rɐˈ**ʃ**ːoskə (comb)	ʃː-
7	ˈdɨ**n**ʲjə (melon)	nʲ-	20	ˈ**j**upkə (skirt)	j- -p	33	**bʊ**ˈ**t**ɨlkə (bottle)	b- t- -l
8	ˈ**k**ʲivʲjə (kiwi)	kʲ-	21	ˈla**mp**ə (lamp)	-m p-	34	kɐnˈ**f**ʲetə (candy)	fʲ-
9	**t͡s**irk (circus)	t͡s-	22	**v**ɐlˈ**n**a (wave)	v- n-	35	ɐpʲɪ**l**ʲˈsʲin (orange)	-lʲ
10	bor**ʃ**ː (borsch)	-ʃː	23	ˈ**z**ʲebrə (zebra)	zʲ- r-	36	ɐ**f**ˈtobə**s** (bus)	-f -s
11	dvʲe**r**ʲ (door)	-rʲ	24	**m**ə**l**ɐˈ**k**o (milk)	m- l- k-	37	**v**ʲələ**s**ʲɪˈ**p**ʲet (bicycle)	vʲ- sʲ- pʲ-
12	klʲu**t͡ʃ** (key)	-t͡ʃ	25	kɐˈ**t͡ʃ**elʲə (swing)	t͡ʃ-	38	tʲəlʲɪˈvʲi**z**ə**r** (TV)	z- -r
13	ˈ**ʃ**a**r**ʲə**k** (balloon)	rʲ-	26	**g**ʲɪˈtarə (guitar)	gʲ-	39	ɐ**b**ʲɪzʲˈjanə (monkey)	bʲ-

Pilot data analysis

The answer was considered correct if the informant's nomination of the picture contained target consonants that should have been checked by the target word

31 stimuli named correctly in ≥ 85 % of cases are included in the final version

Possible alternative nominations

ʃəkɐˈla**t** (chocolate)	kɐnˈ**f**ʲetə (candy)
ʃəkɐˈla**t**kə (diminutive SG form)	kɐnˈ**f**ʲetkə (diminutive SG form)
ʃəkɐˈla**t**kʲə (diminutive PL form)	kɐnˈ**f**ʲetkʲə (diminutive PL form)

Stimuli named correctly in < 85 % of cases:

- sok (juice) 82 %
- tʲəlʲɪˈvʲizər (TV) 77 %
- t͡sirk (circus) 73 %
- ˈlampə (lamp) 64 %
- ˈʃarʲək (balloon) 59 %
- mɐrˈkofʲ (carrot) 59 %
- ɐbʲɪzʲjanə (monkey) 59 %
- kɐnˈfʲetə (candy) 55 %

New visual stimuli

New target words

Table 2. Excluded and new target words and target consonants that are checked with them

excluded target words		new target words	
sok	juice	**s**ir	cheese
so**k**	juice	ˈmalʲ**t͡ʃ**ə**k**	boy
ɐ**b**ʲɪzʲjanə	monkey	ˈ**b**ʲelkə	squirrel
mɐrˈko**f**ʲ	carrot	no word	
tʲəlʲɪˈvʲizə**r**	TV	si**r**	cheese
tʲəlʲɪˈvʲizər	TV	ˈza**ə**t͡s	hear
ˈʃa**r**ʲə**k**	balloon	ɐgʊˈ**r**ʲe**t͡s**	cucumber

FUTURE DIRECTIONS

Collecting normative data from a group of typically developing monolingual children will help us to clarify separate consonant acquisition sequence and acquisition age. It will allow us to move forward with collecting data from Russian bilinguals.

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