

# Dutch

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## 1. Language description

Dutch is a West Germanic language and is the native tongue of 23 million people in the Netherlands, Belgium, and Suriname. Dutch is also spoken on the former Netherlands Antilles. Dutch is spoken as a second language by approximately 5 million people.

**Table 1**

*Consonant system of Dutch according to Mennen, Levelt & Gerrits (2007) p. 330-331*

	Coronal					Dorsal				
	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Palatal	Velair	Uvular	Faryngal	Glottal
plosives	p b			t d		(c)	k (g)			
nasals	m			n		(ɲ)	(ŋ)			
tap flap				r						
fricatives		f v		s z	ʃ ʒ		x			h
affricates										
liquids				l						
semi vowels		ʋ				j				

*Note: The consonants in parentheses are allophones.*

According to Mennen et al. (2007), there are 28 different Dutch dialects. The two main groups they distinguish are the northern and southern dialects. A major difference between these groups relates to the *voicing* of the fricatives. The voiced fricatives are present in the southern dialects, but are missing in the northern dialects. They also mention a great deal of (individual) variation in the pronunciation of the /r/. Finally, they mention a variation in the pronunciation of the /ʋ/. In the south of the Netherlands and in Belgium, it is often pronounced as /w/.

## 2. Phonological development

The acquisition of phonemes in Dutch has been studied by, among others, Beers (1995) and Fikkert (1996). Table 2 presents the data from the study of Beers (1995) because this study is cited most often. Beers analysed language samples from 45 children at two different moments. The time between the language samples of each child was 6 months. The ages of the children ranged from 1;3 to 4;0.

**Table 2**

*Acquisition of Dutch consonants according to Beers, 1995*

Age	Initial	Final
1;3 tot 1;8	p t m n j	p
1;9 tot 1;11	k	k
2;0 tot 2;2	s x h	t s x
2;3 tot 2;5	b f ʋ	m n
2;6 tot 2;11	l r	
3;0 tot 3;2	d	
later	ʃ	l r f ŋ

A phoneme is considered as acquired if it is realised correctly in 75% of all cases and if more than half of the children in an age group correctly realised the phoneme in more than 75% of the cases. This is how Beers came to the acquisition ages listed in Table 2. In the study by Beers (1995), a correct form was not necessarily an ‘adult’ form. Distortions (such as an interdental /s/) were permitted. However, substitutions and deletions were scored as ‘incorrect’.

### 3. Common phonological processes

The study by Beers (1995) includes an inventory of common phonological processes and the ages at which they occur (Table 3).

**Table 3**  
*Normal simplification processes according to Beers (2003)*

Process	Example	Age groups				
		1;3 – 1;11	2;0 – 2;5	2;6 – 2;11	3;0 – 3;5	3;6 – 4;0
Reduplication	watə̀→wawa	*****	-----	-----		
Assimilation	sok→kok	*****	-----	-----		
Deletion weak syllable	olifant→ofant	*****	-----	-----	-----	
Stopping	sok→tok	*****	-----	-----	-----	
FinalC deletion	vut→vu	*****	-----	-----	-----	-----
Vocalisation	vogəl→voga	*****	-----	-----	-----	-----
Fronting	ku→tu	*****	*****	-----	-----	
CC reduction	spɪn→pɪn	*****	*****	-----	-----	-----
(De)voicing	buk→puk	*****	*****	*****	-----	-----
Gliding	rim→jim	*****	*****	*****	*****	*****

*Note: (\*\*\*\*\* common, ----- rare)*

### 4. Lexical variation

The word TV is often used instead of /teləvisi/. This may be considered correct. The total number of consonants is based on the word /teləvisi/. If the child says TV, the total number of consonants must be changed (-2) in the calculation of the PCC.

The word /pɛn/ is often used instead of the word /stift/ (marker). This is common for children of this age, but try to have the child repeat /stift/. This word is included due to the consonant clusters at the beginning and end of the word

Children regularly use the diminutive. This may also be considered correct.

## 5. Results of typically developing Dutch toddlers

In the spring of 2015, 19 Dutch children of 30 to 47 months old were tested with the paper version of Speakaboo from Kentalis, a lotto game. (Holstvoogd, 2015). The children attended a regular preschool and, to the knowledge of their teachers, had a normal (language) development. The average age of the children was 40.5 months.

The lotto was carried out on site by the researcher. The children were to match the displayed image with the lotto sheet and then name the word. If the child did not spontaneously name the word, the word would be said for repetition. If the child also would not repeat the word, the researcher would continue to the next word.

All expressions of the children were scored on a score sheet. The Dutch test contains a total of 36 words and 77 consonants, whereby the clusters are counted as a single consonant.

Note: This is different in the current version of the score sheets; the consonants of a cluster are counted separately. If for the cluster /st/, a child only realises the /t/, then the /t/ counts for the number of correct consonants. This means the PCC may end up a little higher with the current version of the score sheet.

Because not all words could be assessed (not said or not understood), it was not possible to assess 77 consonants for all children. This has been taken into account in the calculation of the scores. The averages of the group are shown in Table 4.

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**Table 4**

*Average scores of normally developing Dutch children*

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Age	40.5 months
Number of consonants incorrect	10
Number of words not spontaneously named	6.6
Number of consonants assessed	74
Number of consonants correct	64 (74-10)
Percentage Consonants Correct (PCC)	86.5 (64/74*100)

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*Source: (Holstvoogd, 2015)*

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### Example of an average score

#### Case Dutch: Girl, 36 months

Number incorrect	10
Words repeated:	1
Not assessable:	1 word (with 4 consonants)
Assessed:	87-4=83 consonants
Correct:	83-7=76 consonants
PCC	76/83*100=91,6

X: klank is verkeerd gerealiseerd

∅: klank is weggelaten

NG: woord is nagezegd

	Woord										NG	Proces/Opmmerkingen
1.koe	k	u										
2.tas	t	a	s									
3.pop	p	ɔ	p									
4.kip	k	ɪ	p									
5.sok	s	ɔ	k									
6.jas	j	a	s									
7.bed	b	ɛ	t									
8.hok	h	ɔ	k							✓		
9.vis	X	ɪ	s									sis
10.neus	n	ø:	s									
11.wip	w	ɪ	p							✓		
12.maan	m	a:	n									
13.kam	k	a	m									
14.voet	v	u	t									
15.riem	r	i	m							✓		
16.zaag	z	a:	x							✓		
17.rok	r	ɔ	k									
18.pen	p	ɛ	n									
19.mes	m	ɛ	s									
20.boek	b	u	k									
21.doos	d	o:	s									
22.klok	k	l	ɔ	k								
23.bloem	b	l	u	m								
24.spin	s	p	ɪ	n								pin
25.fles	f	l	ɛ	s								
26.stift	s	t	ɪ	X	t					✓		tip
27.kast	k	a	s	t								
28.lamp	l	a	m	p								
29.fiets	f	i	t	s								
30.auto		aʊ	t	o								
31.banaan	b	a	n	a:	n							
32.tv*	t	e:	v	e:								
32.televisie*	t	e	l	ə	v	i	s	i				
33.kado	k	a	d	o:								
34.olifant	o	ɸ	i	f	a	n	t					ofant
35.politie	p	o	l	i	X	i						polisie
36.kabouter	k	a	b	aʊ	t	ə	r					NTB
<b>Totaal aantal consonanten fout</b>											A.	
<b>Totaal aantal consonanten geproduceerd</b>											B.	
87 – aantal consonanten van niet geproduceerde woorden												
<b>(B-A) / B * 100</b>											PCC	

\*beide realisaties mogen goedgekeurd worden.

Speakaboo 0.9 – Scoreformulier Nederlands

Figure 1. Example of score sheet; consonants in clusters counted as single consonant

## 6. Sources

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