## Papiamento

## M. Browne and L. van der Zijden-Holstvoogd

## 1. Language description

Papiamento is a Creole language based on Portuguese and/or Spanish. The language is spoken on the island of Aruba. A variant of Papiamento - Papiamentu - is spoken on the islands of Curaçao and Bonaire. The difference between the two is mostly in the vowels $o$ and $u$, such as in the word for shoe.

| English | Papiamento | Papiamentu |
| :--- | :--- | :--- |
| Shoe | /sapato/ | /sapatu/ |

Together, both variants of Papiamento have approximately 250,000 speakers. About 75,000 of these speakers live outside the islands, including in the Netherlands and Venezuela.
In addition to Dutch, which is still widely used by official bodies, Papiamento has been an official language on Aruba since 2003.
Papiamento has many loan words from Portuguese, Spanish, Dutch, and American English.

## Consonant system

| Papiamento consonant system, based on description of Papiamentu by Kouwenberg and Murray (1994) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Coronal |  |  |  | Dorsal |  |  |  |
|  | Bilabial | Labiodental | Dental | Alveolar | Postalveolar | Palatal | Velar | Uvular | Pharyngeal | Glottal |
| plosives | $\mathrm{p} \quad \mathrm{b}$ |  | t d |  |  | (c) | $k \mathrm{~g}$ |  |  |  |
| nasals | m | (m) |  | n |  | (n) | ( g$)$ |  |  |  |
| Trill/tap |  |  |  | $r$ (r) |  |  |  |  |  |  |
| fricatives |  | f v |  | s z | $\int 3$ |  | x |  |  | h |
| affricate |  |  |  |  | t5 ds |  |  |  |  |  |
| liquids |  |  |  | 1 |  |  |  |  |  |  |
| semi- | (w) |  |  |  |  | j |  |  |  |  |
| vowels |  |  |  |  |  |  |  |  |  |  |

Note: The consonants in brackets are allophones.
Black: also occur in Dutch green: only in Papiamento

## Stress

The stress pattern in Papiamento is similar to that of Spanish; stress on the penultimate syllable in words that end in a vowel or $/ \mathrm{l}, \mathrm{r}, \mathrm{n} /$. Stress on the final syllable in words ending with a different consonant or a diphthong.

## 2. Phonological development

There have not been any known studies into phonological development in Papiamento. In determining the sequence of the words in the test, the acquisition order of consonants in Dutch and Spanish were taken into account.

## 3. Common phonological processes

Because no there have not been any (known) studies into phonological development in Papiamento, there is no information about phonological processes either. In the spring of 2017, speech therapist Melissa Browne tested the words from Speakaboo with normally developing children on Aruba. These are children growing up with Papiamento as their native tongue, but who also speak Dutch. In this study among 21 Aruban children between 40 and 51 months old, the following processes were observed multiple times (table 2).

Table 2
Simplification processes in normally developing Aruban children according to research by Browne (2017)

| Process | Examples | Frequency |
| :---: | :---: | :---: |
| Gliding | porta $\rightarrow$ polta regala $\rightarrow$ legalo botər $\rightarrow$ botal | 35 |
| Fronting | avjon $\rightarrow$ avjom telefon $\rightarrow$ telefom pufi $\rightarrow$ pusi | 12 |
| Stopping | zax $\rightarrow$ zak 3iraf $\rightarrow$ 3irap avjon $\rightarrow$ abjon* | 10 |
| Assimilation | batpak $\rightarrow$ bakpak 3 iraf $\rightarrow$ viraf katjo $\rightarrow$ tatjo | 8 |
| Deletion final consonant | popt $\mathrm{fi} \rightarrow \mathrm{potfi}$ | 6 |
| Deletion weak syllable | naniji $\rightarrow$ niji telefon $\rightarrow$ tefom | 5 |
| Backing | tajo $\rightarrow$ kajo poptfi $\rightarrow$ poktfi bentana $\rightarrow$ dentana | 5 |
| Affrication | 3 iraf $\rightarrow$ dziraf | 4 |
| Deaffrication | dsus $\rightarrow$ dus pufi $\rightarrow$ pusi katjo $\rightarrow$ kaso muta $\rightarrow$ musa | 4 |

*avjon $\rightarrow$ abjon may be related to influence from Spanish. In PapiamentU, the $/ v /$ is $/ f /$ and the $/ b /$ an allophone

The /r/ is replaced by /l/ 32 times, by a /w/ 2 times, and by a/j/ once. This division is obvious if you consider that the bilabial /w/ only occurs as an allophone in Papiamento. The /j/ is a low-frequency consonant, which makes it a lesser candidate for replacement of the $/ \mathrm{r} /$. The overview by Kouwenberg and Murray (1994) only mentions the /j/ as an allophone.
Affrication is a process we would not soon expect to occur in Dutch. In Papiamento, however, the affricates $/ \mathrm{t} /$ and $/ \mathrm{d} 3 /$ are more frequent than the single fricatives $/ \mathrm{J} /$ and $/ 3 /$. This may explain why affrication occurs 4 times in this sample.

## 4. Lexical variation

The image of the baby bottle /botər/ (item 19) is named as /bobo/ (bottle) by many children. This word is also used most by the mothers.
The image of the shoe /sapato/ (item 25) is often named with the word /kets/, which means 'sports shoe'. This image will be changed in Speakaboo in time.

## 5. Results of normally developing Aruban toddlers

In the spring of 2017, 21 Aruban children between 40 and 51 months old were tested with the words from Speakaboo, but offered via a paper lotto game. The children attended a regular playgroup and had a normal (language) development as far as known by the staff. The children had an average age of 45.3 months.

The test was conducted by Melissa Browne, who works as a speech therapists in the Netherlands. She grew up in Aruba with Papiamento as her native language.
The children were tasked with matching the image shown with the same image on a lotto sheet and then naming the word. If the child would not name a word spontaneously, a phonological cue would be given. If the child would then still be unable to say the word, it would be prompted. If the child would then not want to repeat the word, that item would be skipped (this only occurred 3 times in total).
All productions of the children were scored on a score sheet (figure 1). The Papiamento test contains a total of 36 words and 92 consonants, whereby the clusters are counted as two consonants.
Because not all words could be assessed (not said), not all 92 consonants were assessed for all children. This was taken into account in calculating the scores. The averages of this group are shown in table 3.

## Table 3

Average scores of normally developing Aruban children

| Age | 45.3 months |
| :--- | :--- |
| Number of consonants incorrect | 5.3 |
| Number of consonants not spontaneously named | 8.4 |
| Number of consonants assessed | 91.4 |
| Number of consonants correct | $86.2(91.5-5.3)$ |
| Percentage Consonants Correct (PCC) | $94.2(86.2 / 91.5 * 100)$ |

Striking is that most of the children make few phonological errors, but they have to repeat many words. The items that needed to be prompted most are shown in table 4.

Table 4
Items that needed to be read aloud most

| item | frequency |
| :--- | :--- |
| 28. zax (saw) | 17 |
| 34. batpak (bathing suit) | 15 |
| 19. botər (baby bottle) | 15 |
| 29. 3iraf (giraffe) | 15 |
| 21. popti (doll) | 13 |
| 31. drœyf (grape) | 10 |
| 36. telefon (telephone) | 9 |
| 33. bentana (window) | 9 |
| 25. sapato (shoe) | 9 |
| 13. kaji (cabinet) | 8 |
| 23. porta (door) | 7 |

The image of the window was often not recognised, but when the researcher pointed out a window in the room, it was named correctly. Many children could not spontaneously name the saw, but did use a related verb such as cutting.

## Example of an average score

## Case Papiamento: Girl, 44 months

Number of errors:
Words repeated: 7
Unable to assess: 0
Assessed: 92
Correct: 85 (92-7)
PCC:
92.4 (85/92*100)
$X$ : klank is verkeerd gerealiseerd
ø: klank is weggelaten.

NG: woord is nagezegd

| Woord |  |  |  |  |  |  |  | NG | Proces/Opmerkingen |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. bus (bus) | b | œ | S |  |  |  |  |  |  |
| 2. cas (huis) | k | a | S |  |  |  |  |  |  |
| 3. jus (sap) | d3 | u | S |  |  |  |  |  |  |
| 4. bala (bal) | b | a | 1 | a |  |  |  |  |  |
| 5. cama (bed) | k | a | m | a |  |  |  |  |  |
| 6. wowo (oog) | w | 0 | w | 0 |  |  |  |  |  |
| 7. auto (auto) | כט | t | 0 |  |  |  |  |  |  |
| 8. dede (vinger) | d | e | d | e |  |  |  |  |  |
| 9. yabi (sleutel) | j | a | b | i |  |  |  |  |  |
| 10. apel (appel) | a | $p$ | ə | 1 |  |  |  |  |  |
| 11. pushi (poes) | $p$ | u | f | i |  |  |  |  |  |
| 12. peña (kam) | $p$ | e | n | a |  |  |  |  |  |
| 13. cashi (kast) | k | a | X | i |  |  |  |  | $\int \rightarrow 5$ |
| 14. faha (riem) | f | a | h | a |  |  |  |  |  |
| 15. keshi (kaas) | k | e | d | i |  |  |  |  | $\int \rightarrow 5$ |
| 16. mucha (kind) | m | u | t | a |  |  |  |  |  |
| 17. cacho (hond) | k | a | t 5 | 0 |  |  |  |  |  |
| 18. tayo (bord) | t | a | j | 0 |  |  |  |  |  |
| 19. boter (babyfles) | b | $\bigcirc$ | t | ə | N |  |  |  | $r \rightarrow L$ |
| 20. mangel (snoep) | m | a | I | g | ə | 1 |  |  |  |
| 21. popchi (pop) | p | $\bigcirc$ | P | t 5 | i |  |  | V |  |
| 22. avion (vliegtuig) | a | V | j | 0 | $\eta$ |  |  |  |  |
| 23. porta (deur) | $p$ | 0 | 2 | t | a |  |  |  | $r^{*} \rightarrow L$ |
| 24. nanishi (neus) | n | a | n | i | f | i |  |  |  |
| 25. sapato (schoen) | 5 | a | $p$ | a | t | 0 |  | $\checkmark$ |  |
| 26. stul (stoel) | 5 | t | u | 1 |  |  |  |  |  |
| 27. flor (bloem) | f | 1 | 0 | r |  |  |  |  |  |
| 28. zag (zaag) | z | a | X |  |  |  |  | $V$ |  |
| 29. giraf (giraf) | 3 | i | r | a | f |  |  | $\checkmark$ |  |
| 30. blas (ballon) | b | 1 | a | 5 |  |  |  |  |  |
| 31. druif (druif) | d | $r$ | œy | f |  |  |  | $V$ |  |
| 32. regalo (cadeau) | r | e | g | a | 1 | 0 |  |  |  |
| 33. bentana (raam) | b | e | n | t | a | n | a | $\checkmark$ |  |
| 34. badpak (badpak) | b | a | 4 | p | a | k |  | $\checkmark$ | $t \rightarrow K$ |
| 35. galiña (kip) | g | a | 1 | i | n | a |  |  |  |
| 36. telefon (telefoon) | t | e | 1 | e | $f$ | 0 | $\eta$ |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Totaal aantal consonanten fout |  |  |  |  |  |  |  |  | A. 7 |
| Totaal aantal consonanten geproduceerd <br> 92 - aantal consonanten van niet geproduceerde woorden |  |  |  |  |  |  |  |  | B. $\quad 92$ |
| (B-A) / B * 100 | $(85 / \mathrm{g} 2) * 100$ |  |  |  |  |  |  |  | PCC $92.4 \%$ |

Speakaboo - Scoreformulier PAPIAMENTO

Figure 1. Scan of completed Papiamento score form
6. Sources

Daughtridge, K. The Phonology of Curaçaoan Papiamentu
file:///C:/Users/el_zi/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempStat e/Downloads/Example-Chart-Descrips_Papiamentu.pdf
https://meertaligheidentaalstoornissenvu.wikispaces.com/Papiamentu
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