

Phonological Processes Uses in four and a half years old European Portuguese Children

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Introduction:

How is the European Portuguese (EP) consonant system acquisition characterized?

Most of the investigation on EP phonological acquisition is based on longitudinal data of few subjects, aged between 1 and 4 years old (Freitas, 1998; Costa, 2010). A normative study on the EP acquisition process has not yet been done. This kind of study, likewise the one on Brazilian Portuguese conducted by Yavas, Hernandorena & Lamprecht (1992), would identify the phonological processes used by normally developed children, allowing to describe the segmental and syllabic acquisition patterns of EP. This kind of study can have important educational and therapeutic implications, as the identification of a deviant phonology has to be made in reference to what is considered normal or typical development (Lamprecht, 1999:66).

Objectives:

To describe the type and frequency of phonological processes or remediation strategies used by portuguese children, native in northern dialects, aged between 4 years and 6 months (4:6) and 4 years and 11 months (4:11).

STUDY

·Collection of data through a spontaneous naming test specially designed for this purpose: a book with a sequence of five themed drawings that allow spontaneous naming of one hundred twenty-five words composing the corpus.

·Corpus: include nouns, adjectives and verbs and contains at least three occurrences of all consonantal phonemes in initial, medial and final position in the word (except /z/ in initial position, which occurs twice), as well as the various syllabic structures of European Portuguese. The extent of these words is variable and may be monosyllables, disyllables, trisyllables and polysyllables, although most are composed of disyllables (56,8%).

SUBJECTS

·20 male and female normally developing children from two population groups, aged between 4:6 and 4:11.

| Environment | Privileged socio-cultural environment | Unmarkek socio-cultural environment | TOTAL |
|---------------|---------------------------------------|-------------------------------------|-------|
| GENDER | | | |
| MALE | 5 | 5 | 10 |
| FEMALE | 5 | 5 | 10 |

Table 1. Sample characterization

METHOD

·Each child was observed individually and was asked to tell the story from the drawings of the book. When necessary, some cues were given to help eliciting some items (eg.: Is the sky the same colour as the sea? Are all the gifts the same size?).

·An error was considered whenever there was a difference between the child's and adult's realization of a word. After the identification of the phonological process(es) used in each word, they were counted.

·The phonological processes used five or more times by at least 10% of the children were considered age-appropriate; the ones used by less than 10% of the children are considered unusual (See Dodd et al., 2003).

CONCLUSIONS

·At this age group, girls' phonemic accuracy is slightly higher than boys'.

·Socio-cultural background does not affect phonological accuracy;

·The most widely used phonological processes are the ones that simply the syllable structure: cluster reduction and coda deletion. Epenthesis, metathesis (both also used to simplify branching onsets), gliding and unvoicing are also used are also much used;

·The phonological processes considered age appropriate are cluster reduction, coda deletion, gliding, epenthesis and unvoicing.

·Limitations of the study and avenues for future research:

The sample size does not allow the generalization of the results, which brings forth a possible avenue for future research: to increase the sample size in order to get normative data.

Selected References

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RESULTS

Phonological accuracy:

Statistical analyses: made by one of the authors and performed by using SPSS-program (releases 15). The Mann-Whitney U non-parametric tests were used, because the responses were not normally distributed.

·Tendency to a better phonological: boys have a higher number of errors (boys OM=12.90; girls OM=8.10), although the difference is not statistically significant (Z=-1.857, p=.063).
·The difference between the two socio-cultural groups is also not statistically significant (Z=-.309, p=.757), with very similar results in both groups (favoured group OM=10.10; unmarked group OM=10.90).

| | MALE | FEMALE | Z | P |
|---------------|------------------|----------------|--------|------|
| Errors | 12,90 | 8,10 | -1,857 | 0,63 |
| | Privileged group | Unmarkek group | Z | P |
| Errors | 10,10 | 10,90 | -,309 | ,757 |

Table 2. Errors by gender and socio-cultural group

Phonological processes:

The most used phonological processes used are the ones that are the ones that simplify the syllable structure (branching onset – CCV – and branching rhyme – CVC):

- cluster reduction (CCV → CV)
- epenthesis (CCV → CVCV)
- metathesis (CCV → CVC)
- coda deletion (CVC → CV)

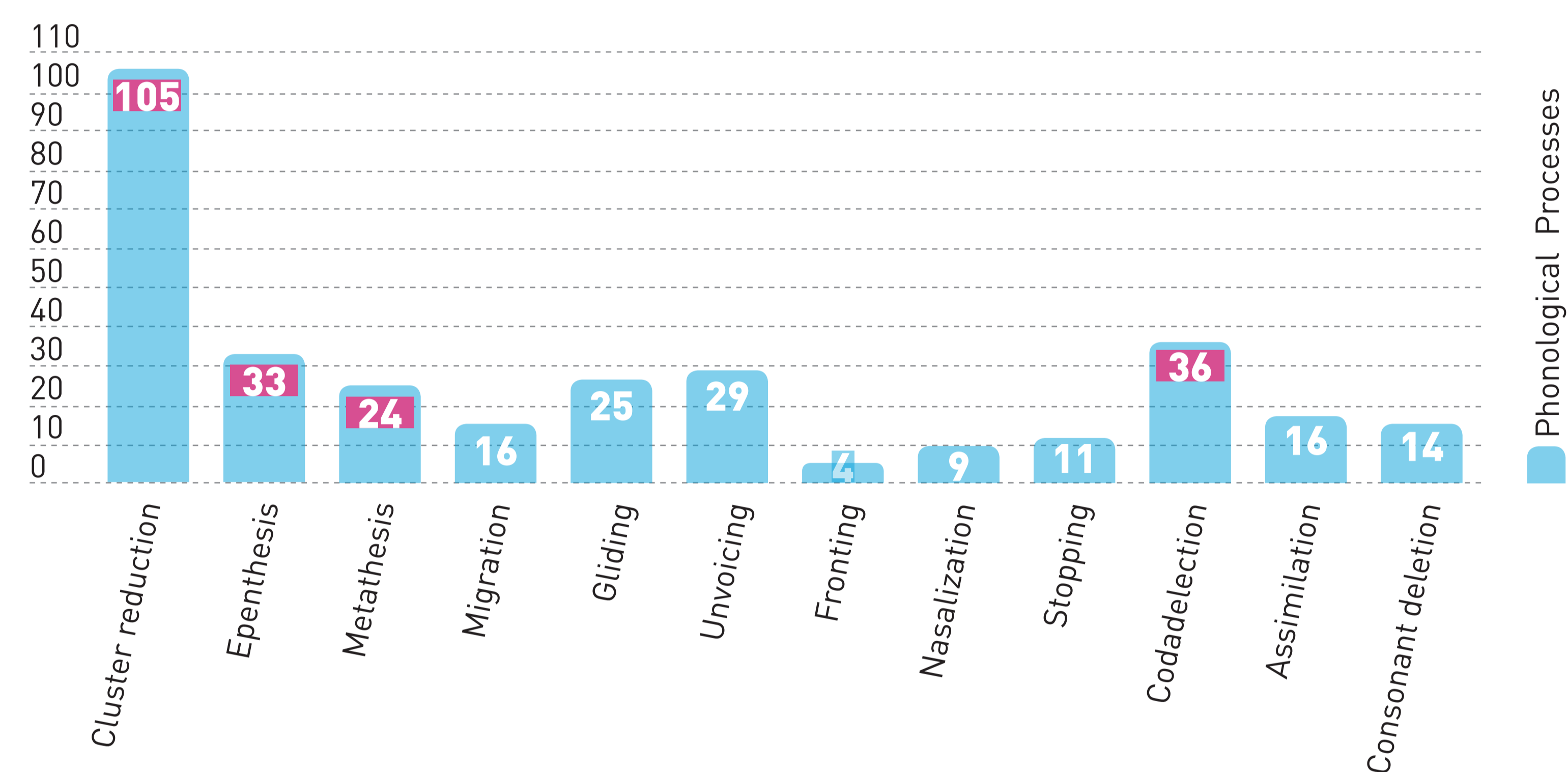


Table 3. Phonological processes frequency.

·The phonological processes used at least five times by more than 10% of children (Dodd et al., 2003) were considered age appropriate:

| Phonological processes | % Children |
|------------------------|------------|
| Cluster reduction | 20% |
| Coda deletion | 20% |
| Gliding | 15% |
| Epenthesis | 10% |
| Unvoicing | 10% |
| Migration | 5% |
| Stopping | 5% |

Table 4. Percentage of children using phonological processes at least five times

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