

The First Flight; Acquisition of Urdu Consonants in Native Children**Shumaila Bari¹**

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Abstract: Urdu is a language which is spoken by more than 100 million people across the world. But, unfortunately, no substantial work has been done on the acquisition of Urdu language in children. For the first time, this paper focuses on children's acquisition of Urdu consonants. The children selected for the study were 6 to 30 months old. The paper also discusses the difference in acquisition of Urdu consonants in both the genders, male and female, of this age group. This study establishes the idea that children (male and female) learn Urdu language differently as the girls were found having acquired more consonants as compared to boys.

Key Words: consonants, babbling, language acquisition, cv & vc templates

1. Introduction

This paper is based on the research conducted through listening to all spoken consonants by children of various age groups and attempts at justifying the differences and developments of consonants in a specific sequence in a specific age group. The stages of language acquisition are:

1. From birth to 6 months (pre-linguistic stage i.e. cooing)
2. From 6-8 months (onset of babbling i.e. the manifestation of phonology)
3. From 10-12 months (first word)
4. From 12-18 months (onset of one word stage i.e. holophrastic stage)
5. From 18-24 months (two word stage)

6. From 24- 30 months (telegraphic speech: multiple words)
7. From 30-onward onset of morphology, syntax, semantic and pragmatics.

These stages mark the development of child language from single vowel and consonant to syntax and semantics. By the age of three years children are able to produce word cluster yet consonants are not clear in their speech. For this cause, the paper focuses on *substitution errors*, a type of error which is made when a child produces one or more component sounds of a word with a different sound or sounds. The paper also focuses on the development of consonants only by the age of 30 months. It also addresses the gender differences in development of consonants i.e. girls utter certain words considerably earlier than boys. This is the basis for any research to be done on factors causing difficulty in utterances of various consonants by some children of the same age group.

2. Literature Review

As a group, vowels are generally acquired before consonants (O'Grady, Michael Dobrovolsky, Francis Katamba (1996). Hodson and Paden (1991); Ingram, (1989) studied the tendency to use CV syllables in preference to more complex syllables by children.

According to Mahler and Dupoux (1990) at around 6-8 months all children produce repetitive syllables like 'dadada'. Even though babbling is language specific, there are significant similarities in babblings cross-linguistically. According to O'Grady, Michael Dobrovolsky, Francis Katamba (1996), in the babblings of babies from 15 languages including English, Thai, Japanese, Arabic, Hindi and Mayan frequently found consonants are [p, b, m, t̪, d̪, m, k, g, s, h, w, j] and infrequently found consonants are [f, v, ʃ, ʒ, s, z, l, r, n]. Cornelia Hamann in Language Acquisition says that the consonants which are very frequent in the words of a language tend to be equally frequent in the babbling of a baby exposed to that language. . Labials are more frequent in French than in English and occurred more often in the babbling of French children than in the babbling production of English children.

At about 10-12 months children speak their first words and at around 20-24 months they start to combine words (Bishop and Mogford 1993:22). Bredford in Contemporary Linguistics (5th edition) describes that stops tend to occur first. According to O'Grady, Michael Dobrovolsky,

Francis Katamba (1996), in terms of the place of articulation, labials are often acquired first, followed (with some variation) by alveolar, velars, and alveo-palatals. Interdentals are acquired last. The typical inventory for two year old in English is stops(p, b, t, d, k, g) nasals (m, n), and fricatives (f, s, h).

Peter (2010) describes that sometimes children voice all initial devoiced consonants but it is infrequent. He also explains that final voiced is also devoiced but it is part of normal speech. Thirdly he explains that children devoice velars more than alveolars and labials.

Peña, Hegde 2000; Smit 1993 present their views that Speech errors are of interest because they provide an important metric of the child's phonological development. According to Srivastava (1974) evidence of stopping in other languages includes studies of Hindi. Stopping refers to the substitution of a fricative for a stop (Peter Richtsmeier; 2010). Martin describes that (1) Stopping is the replacement of a fricative (by a corresponding stop Sing by [tiN]. (2) The next substitution occurs by moving forward of a sound's place of articulation as Ship by [sip] and (3) then the replacement of a liquid by a glide. Cross-linguistically, Locke (1983) concludes that voiced fricatives are most likely to be stopped. The word-initial affricate /dʒ/ is also commonly stopped, and voiceless and word-final fricatives are occasionally stopped, as well.

Smit's (1993) review also found occasional but relatively rare stopping of the sonorants /w/ and /l/. The two- to three-year-old children in Smit's (1993) study exhibit pervasive stopping, but it becomes less frequent at later ages and primarily affects the fricatives /v ð/. A very general phonological rule for stopping: "All non-sonorant consonants are non-continuant, non-strident, non-affricated, and non-lateral" (N. V. Smit, 1973). Bernhardt and Stemberger included such processes as stopping of fricatives, gliding of liquids, and cluster reduction and provide a set of Optimality Theoretic constraints which forbid the co-occurrence of [-sonorant] and [+continuant] features and thereby forbid fricative consonants.

Eimas (1974) investigated the perception of /la / and /ra/ as these sounds are not distinguished in production till quite late. A study done by British and American researchers (2005) found that, while genetics could potentially play a role in language development. XiongXin, a teacher at the Hunan University of Arts and Science, found that girls often have a greater internal motivation for language acquisition than boys, making language acquisition easier for girls.

3. Research Methodology

3.1. Subjects of the Study

To gather the data regarding child acquisition in Urdu consonants, children between the ages of six months to thirty months were surveyed. To check the development precisely, this age group was further divide into five subgroups: 8-10 months, 10-12 months, 12-18 months, 18-24 months and 24-30 months. Four children (two boys and two girls) from first 4 groups(group-A) and six (three from each gender) from last age group(group-B), were selected. Gender was focused upon to see if the gender makes difference in consonant acquisition in children or not.

3.2. Data Collection

Data collection was based on a corpus of Urdu consonants. Mainly four different corpuses were selected for group A and group B i.e. two for each group. One corpus was to check initial consonant development and the other for the final consonant acquisition, amongst each age group. Furthermore, the template for initial consonant of Group A was CV and for final consonant it was of VC template. Similarly, to survey initial consonant template for group B was CV and CVC for final consonant. /ʈ/ and /ʈʰ/, /ɖʱ/ are removed from CV list as no word starts from these consonants. For the same cause, aspirated [m^h, n^h] are removed from both initial and final lists. Similarly [ʒ, v] is not included in VC and CVC list. To check the word list kindly see appendix.

3.3. Experimental Conditions

All children were tempted to speak their respective list of words and were listened carefully. Recording of the produced vocalic sounds by using electronic devices was impossible as it diverted children's attention.

4. Results of the Study

The findings are put in the following tables.

- *Grey shaded* area shows fully developed consonants.

- Consonants with *white space* exhibit substitution by all of the children.
- Consonants in *light shaded* area present that all uttered the consonant wrong except one.
- *Blue shade* shows two were right and one was wrong.
- *Pink* represents that one could not utter the consonant and those who uttered, were wrong.
- All the blank box show unuttered consonants by all.

• Table 1

- 4.1 The acquisition of consonants in CV template is given in Table A.

CV	Age range	8-10 months	10-12 months	12-18 months	18-24 months	24-30 months
B	Boys					
	Girls					
g	Boys					
	Girls					
m	Boys					
	Girls					
N	Boys					
	Girls					
P	Boys					
	Girls					
t	Boys					
	Girls					
L	Boys					
	Girls					

K	Boys					
	Girls					
G	Boys				g	
	Girls				g, k	
t	Boys				t	
	Girls				t	
d	Boys				d	
	Girls				d	
F	Boys					
	Girls				p	
V	Boys					
	Girls				t	
J	Boys				d	
	Girls				d	
H	Boys					
	Girls					
S	Boys				t	t ^h
	Girls				t	t ^h
Z	Boys				d	d
	Girls				d	
f	Boys				t	t, s
	Girls				t	

3	Boys				d̥	J
	Girls				d̥	J
tʃ	Boys				t̥	t̥
	Girls				tʃ ^h	
dʒ	Boys				d̥	d̥
	Girls				d̥	
R	Boys				l	L
	Girls				l	L
X	Boys					
	Girls				k	k ^h
ɣ	Boys					G
	Girls					G
tʃ ^h	Boys					
	Girls					
dʒ ^{fi}	Boys					dʒ, d
	Girls					dʒ
p ^h	Boys					P
	Girls					
b ^{fi}	Boys					
	Girls					
t̥ ^h	Boys					tʃ ^h
	Girls					k ^h

d ^h	Boys					
	Girls					
t ^h	Boys					t
	Girls					t
d ^h	Boys					
	Girls					
k ^h	Boys					ṭ
	Girls					
g ^h	Boys					g, d
	Girls					

• Table A. Urdu language acquisition for initial consonants, tabulated by Urdu native children.

• Table 2

• 4.2 The acquisition of consonants in VC and CVC template is given in Table B.

VC	Age range	8-10 months	10-12 months	12-18 months	18-24 months	24-30 months
B	Boys					
	Girls					
d	Boys					
	Girls					
m	Boys					
	Girls					

N	Boys					
	Girls					
P	Boys					
	Girls					
t	Boys					
	Girls					
L	Boys					
	Girls					
K	Boys					
	Girls					
G	Boys				g	g
	Girls				g	
D	Boys					
	Girls					
t	Boys					
	Girls				t	
d	Boys					
	Girls				d	
F	Boys				F	
	Girls				f	
V	Boys					
	Girls				v	

H	Boys					
	Girls					
S	Boys					tʃ ^h
	Girls				tʃ, t̥	tʃ ^h
Z	Boys				ɰ	dʒ
	Girls				ɰ	dʒ
ʃ	Boys					S
	Girls				tʃ	S
tʃ	Boys				t̥	tʃ ^h
	Girls				tʃ	tʃ ^h
dʒ	Boys					tʃ ^h
	Girls				ɰ	
R	Boys					l
	Girls					l
X	Boys					k
	Girls					k
Y	Boys					k
	Girls					g, k
tʃ ^h	Boys				t̥	
	Girls				tʃ	
dʒ ^h	Boys					tʃ ^h
	Girls					dʒ

b ^h	Boys					b
	Girls					b
t ^h	Boys					t̪
	Girls					t̪
d ^h	Boys					d̪
	Girls					d̪
t ^h	Boys					t̪
	Girls					t̪
k ^h	Boys					K
	Girls					
D ^h	Boys					g, d̪
	Girls					g
t	Boys					l
	Girls					l

- Table 2 Urdu language acquisition of consonants at final position, tabulated of the native Urdu children.

• 5. Discussion on the Results

- It was found that 6-8 months is the onset stage for vocal babbling. It continues by the age of 10 months. St. Martin explains that [p, b, m, t̪, d̪, n, k, g, s, h, w, j] are frequently found in babbling of children from 15 languages. In Urdu consonant acquisition only [b, d̪] is found. Cornelia hamann presents two universally accepted babbling types: canonical babbling and variegated babbling. Both are found in Urdu native children at babbling stage i.e. babababa and babada or dadada and dadaba respectively.
- N. Cornelia Hamann in Language Acquisition says that the most frequent consonants in the words of a language tend to be more frequent in the babbling of a baby exposed to

that language. It is true for Urdu. This is why most frequent consonants in Urdu babbling stage are b and d̪.

- By the advent of first word stage (10-12) other consonants are also included i.e. m, n. As St. Martin explains that consonants are acquired in order of (with some variation) labials, alveolar, velars, and alveo-palatals (retroflex). In Urdu the same order is found for consonant acquisition.
- In Contemporary Linguistics (5th edition) it is mentioned that stops to be occurred first in language acquisition. This is very much true for Urdu language both at initial and final position. Stops are followed by lateral. All the rest of consonant are subjected to substitution errors before they are fully developed.
- Peter (2010) describes that children devoice velars more than alveolar and labials. In Urdu it is found that a child's acquisition starts by voiced labials and dentals but as he moves towards velar consonantal acquisition, voiceless is developed first and voiced are substituted by voiceless as /g/ and /ɣ/ by /k/. Aerodynamic principles* explain why children devoice velars more than alveolar and labials.
- The next substitution he describes, occurs by moving forward of a sound's place of articulation which is again truly stands for Urdu language as it is clear in tables that /s/ is substitution for /ʃ/ (moving forward) both at final and initial position. In Urdu somewhere different substitution is seen by few children regarding affricates and fricatives that fricatives as /s/, /ʃ/ and /z/ are being replaced by affricates /tʃ/ and /dʒ/ respectively. But this type of place substitution is found in other languages when we consider Martin's third type of replacing where Glides move back to substitute laterals. It also indicates that in case of fricatives children are unable to recognize place.
- In case of affricates children are able to recognize place so substitution by moving forward is not true for affricates rather they are replaced by their own aspirated form. Place recognition is also find in case of velars but voiced are devoiced as /g/ and /ɣ/ by /k/.
- Thirdly, Martin describes that laterals are replaced by glides. In case of Urdu it is not true. Urdu does not have /w/ but sound. /j/ is present but it does not replace /l/ rather, /l/ is developed earlier. As Eimas (1974) describes that children are unable to differentiate,

in Urdu /l/ replaces /r/ (recognizing place) and Urdu retroflex /ɭ/; again an evidence of substitution by moving forward.

- Urdu specific consonants i.e. aspirated sounds are substituted by their corresponding non-aspirated sounds.
- It is crystal clear from the table that consonants which are specific only for the Urdu language are developed later. These are velars /X/ and /ɣ/, and all aspirated sounds. Amongst retroflex /ɭ/ and /dɭ/ are acquired earlier but as compared to other stops they develop later. /ɭ/ is not developed even by the age of 30 months.
- Smit (1993) studied that stopping continues by the age of three years. Similar evidences are found in Urdu. In tables by the age of 30 months stops are exhibiting its presence. In Urdu, although substitution moves from stops to other consonants as soon as children develop consonants other than stops yet stops are more frequent substitution. It is also exhibiting the fact that even by the age of 30 months children are unable to acquire all of the consonants of their native language.
- Hodson and Paden, (1991); Ingram, (1989) described that children tend to pronounce CV syllable first as compared to more complex syllabic forms. It is evident from the comparison of table A and B that CV template is acquired by children earlier than VC.
- **6. Conclusion**
- Finally the most important findings of the paper are that two genders (boys and girls) acquire language differently. As described by XiongXin, that girls possess greater internal motivation in acquisition of language than boys. It is also evident in table that girls develop certain consonants earlier than boys.
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APPENDIX

Age-Group	8-24 months	24-30 months
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Temp-Late	CV	VC	CV	CVC
B	با	آب	بلی	سیب
P	پا	آپ	پانی	ناپ
t	تا	آت	طوطا	ریت
t	ٹا	آٹ	ٹوپی	پلیٹ
S	سا	آس	صوفہ	کلاس
d	دا	آد	دادا	شاد
d	ڈا	آڈ	ڈانٹا	لاڈ
K	کا	آک	کوا	ناک
G	گا	آگ	گرا	ساگ
Z	زا	آز	زبیرہ	پیاز
ʃ	شا	آش	شیشہ	کاش
ʒ	ژا		ژالہ	
tʃ	چا	آچ	چڑیا	ناچ
dʒ	جا	آج	جوننا	کاج
D		آنگ		رنگ
N	نا	آن	نانا	نان
M	م	آم	ماتا	کام
X	خا	آخ	خربوزہ	سیخ
ɣ	غا	آغ	غبارہ	باغ

h	ها	آه	ہاتھ	آہ
f	فا	آف	فوجی	صاف
v	ا□		ال□	
r	را	آر	ر□ٹی	چور
l	لا	آل	لاری	ریل
ʈ		اڑ		اڑ
j	یا		یکہ	
b ^h	بہا	آبہ	بھاگا	آبہ
p ^h		پہا	پھولا	
t ^h	تہا	آتہ	تھالی	ساتھ
d ^h	دہا	آدھ	دھاری	سادھ
t ^h	ٹہا	آٹہ	ٹھیلا	کاتھ
d ^h	ڈہا		ڈھیری	
k ^h	کھا	آکھ	کھانا	راکھ
g ^h	گھا		گھوڑا	
tʃ ^h	چھا	آچھ	چھاپا	پوچھ
dʒ ^h	جھا	آجھ	جھاڑ□	باجھ
ŋ ^h		آنگھ		انگھ□