CHAPTER III

TAMIL PHONOLOGICAL STRUCTURE
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TAMIL PHONOLOGICAL STRUCTURE

3.0. General

This chapter gives a brief description of the Tamil language and the structure of the Tamil segmental phonology. The phonetic features nasalization and voice have been explained in detail. It also gives the structure of Tamil phonology that was found in the period of Tolkappiyam and that which is found in the modern age. The primary purpose of this chapter is to expose the phonological pattern of standard Tamil and to compare it with the phonological features collected from the informants, so as to identify the variations arising in Tamil phonological elements.

Tamil serves as a typical example showing diglossic and dialectal variation. The diglossic situation in Tamil obviously reveals the use of two varieties of language in the Tamil speech community with structural and functional differentiation, and these varieties are named as either high variety and low variety or as written variety and spoken variety respectively. The high or written variety is used in formal settings whereas the low or spoken variety is used in informal settings. The term dialect denotes a variety of language used by a group of people in a given
region or society. Tamil is a language spoken by a large number of speakers and so it has developed some social (sociolects) and regional dialects. The geographical barriers and the social divisions of the society separate the people and at the same time, group them into small communities. In spite of these variations in Tamil, a standard form of the language is used for official purpose and for public communication. These dialects, though got differentiated as different varieties, reflect the richness of language and they are often used in the language especially in the creation of functional and standard varieties.

3.1. Speech sounds

Generally, speech sounds are classified into two groups, namely, vowels and consonants.

3.1.1. Vowels

A vowel is defined by Jones (1972:23) as 'a voiced sound in forming which the air issues in a continuous stream through the pharynx and mouth, there being no obstruction and no narrowing such as would cause audible friction'.

The vowels are classified based on two criteria, that is,
1. Tongue position and
2. Lip position

3.1.1. Tongue position

3.1.1.1. Height of the tongue
1. Close vowels
2. Half-close vowels
3. Half-open vowels
4. Open vowels

3.1.1.2. Raising of part of the tongue
1. Front vowels
2. Central vowels
3. Back vowels

3.1.2. Lip position
1. Rounded
2. Unrounded

3.1.2. Consonants

All the other sounds are called consonants. Jones (1972:23) has said that consonants include:

i. all sounds which are not voiced (eg. p, s,ʃ)

ii. all sounds in the production of which the air has an impeded passage through the mouth (eg b, l, rolled r).

iii. all sounds in the production of which the air does not pass through the mouth (eg. m)
iv. all sounds in which there is audible friction (eg. f, v, s, z, h).

The basis for the classification of consonants is the following.

3.1.2.1. The manner of articulation
1. Stops
2. Nasals
3. Fricatives
4. Laterals
5. Flap
6. Trill
7. Semi-vowels

3.1.2.2. The place of articulation
1. Bilabial
2. Labio-dental
3. Dental
4. Alveolar
5. Retroflex
6. Palatal
7. Retroflex continuant lateral
8. Velar
9. Glottal
3.2. Tolkappiyar's phonological pattern

The phonological pattern that existed at the age of Tolkappiyam has been presented briefly below (Athithan, 1989). This helps one to have a comparison of the old Tamil phonological structure with the modern Tamil phonological structure.

3.2.1. Tamil speech sounds

Tolkappiyar identifies 12 vowels and 18 consonants in Tamil. They are classified in the following way:

3.2.1.1. Vowels

kurṟēluttu (short) - /a, i, u, e, o/
netṟēluttu (long) - /aa, ii, uu, ee, ai, oo, au/

3.2.1.2. Consonants

Vallinam (plosives) - /k, c, t, ṭ, t, p, ṁ/
Mellinam (nasals) - /ṅ, ṅ, ṇ, n, m, ṅ/
itaiyinam (midlings) - /y, r, l, v, l, l/

3.2.1.3. Dependant sounds (caarpeluttu)

The occurrences of these sounds are conditional. They are:

1. kurṟiyalikaram (shortened '-i')
2. kurṟiyalukaram (shortened '-u')
3. aaytam (k)
3.2.2. Phonotactics

3.2.2.1. Initial position

3.2.2.1.1. Vowels

In the initial position all the vowels occur

Short vowels - /a, i, u, e, o/

Long vowels - /aa, ii, uu, ee, ai, oo, au/

3.2.2.1.2. Consonants

The following consonants occur initially

/k, t, n, p, m, c, v, ŋ, y, ţ/

3.2.2.2. Final position

3.2.2.2.1. Vowels

In the age of Tolkappiyam all the vowels except diphthong /au/ occurred finally. The diphthong /au/ also occurred finally but its occurrence was conditioned that it had to be preceded by /k/ or /v/.

3.2.2.2.2. Consonants

In the works of Tolkappiyar's period, of the 18 consonants, the following consonants (11) occurred in the word final position.

/ň, ņ, n, m, ņ, y, r, l, v, ž, ţ/

3.2.2.3. Sequential occurrence of phonemes

3.2.2.3.1. Vowels (aḷapetai)

In the age of Tolkappiyam, a short vowel was added after the long vowel to meet with the metrical deficiency.
3.2.2.3.2. Consonants
3.2.2.3.2.1. Medial position

Two types of consonantal clusters that occurred word medially were reported to be found in Tamil at the period of Tolkappiyar. They are:

1. Cluster with non-identical consonants (meymayanku)
2. Occurrence of identical consonants in a sequence (utanilai) - ie. gemination.

3.2.2.3.2.1.1. Clustering of identical consonants

There were seven sets of clusters formed by adding sounds of one group with sounds of another group. They were the following.

1. The combination of first set

\[
\begin{bmatrix}
\text{t} \\
\text{r} \\
\text{l} \\
\text{l}
\end{bmatrix} + \begin{bmatrix}
k \\
c \\
p
\end{bmatrix}
\]

The following were the clusters derived in this way

2. \[
\begin{bmatrix}
\text{l} \\
\text{l}
\end{bmatrix} + \begin{bmatrix}
y \\
v
\end{bmatrix}
\]
These sets of sounds formed the following clusters
/-ly-, -lv-, -ly-, -lv-/

3. In this set, /ň, ň, ň, n, m, ň/ belong to the first group and /k, c, t, t, p, ř/ to the second group. The usual consonants were individually combined with the homorganic consonants of the group.

\[
\begin{array}{c}
\hat{n} \\
ň \\
\hat{n} \\
n \\
m \\
č \\
č
\end{array}
\begin{array}{c}
k \\
c \\
t \\
t \\
p \\
ř
\end{array}
\]

The clusters were
/-ňk-, -ňc-, -ňt-, -nt-, -mp-, -ńř-/

4. This set had the following clusters:

These clusters were formed by the following groups of sounds.

\[
\begin{array}{c}
ń \\
č \\
ř \\
m \\
y \\
v
\end{array}
\begin{array}{c}
k \\
c \\
č \\
ř \\
m \\
y
\end{array}
\]
were combined to have the following clusters

/-ńy-, -ny-, -my-, -vy-/

6. In the sixth set, /m/ and /v/ were combined to form the cluster /-mv-/. 

7. This set was obtained by grouping the following sets of sounds

The clusters that are derived from these sets are

3.2.2.3.2.1.2. Gemination

All the consonants except /r/ and /l/ occurred in gemination.

3.2.2.3.2.1.2.1. Three consonantal clusters

The midlings /y, r, l/ were combined with the following geminations /-kk-, -cc-, -tt-, -pp-, -nn-, -nn-, -nn-, -nn-, -mm-/ to form the following clusters.

```
    kk
   cc
   tt
   pp
   ſn
   ſn
   ſn
   ſn
   ſn
   ſn
   mm
```


3.2.2.3.2.2. Final position

In the Tamil of Tolkappiyam period, only one cluster is reported to have occurred in the word final
position. The alveolar nasal /n/ and a labial nasal /m/ appeared in a cluster form /nm/ in a poetry. The same cluster is not found in any other works reported by Tolkappiyam (eg. /poonm/'poolum').

3.3. The modern Tamil phonological structure

In this section a clear picture of the phonology of modern Tamil is given. There are some differences between the phonological structure of Tamil given by Tolkappiyar and that found in the modern Tamil. This part of the chapter gives not only the structure of segmental phonology, but also the description of phonetic features taken for the study, ie., nasalization and voice.

3.3.1. Segmental phonology

Under the segmental phonology the sounds are grouped into vowels, diphthongs and consonants.

3.3.1.1. Vowels

10 vowels are found in modern Tamil in which 5 are short vowels and 5 are long vowels. They are:

Short vowels : /i, e, a, o, u/

Long vowels : /ii, ee, aa, oo, uu/

In these /i, ii, e, ee/
are known as front vowels, 
/a, aa/
as central vowels, and
/o, oo, u, uu/
as back vowels. Vowels are also classified on the basis of the height of the tongue as follows.

High vowels - /i, ii, u, uu/
Mid vowels - /e, ee, o, oo/
Low vowels - /a, aa/

Table No.3.1. Tamil vowels

<table>
<thead>
<tr>
<th>Tongue position</th>
<th>Front vowels</th>
<th>Central vowels</th>
<th>Back vowels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short Long</td>
<td>Short Long</td>
<td>Short Long</td>
</tr>
<tr>
<td>High</td>
<td>i ii</td>
<td>u uu</td>
<td></td>
</tr>
<tr>
<td>Mid</td>
<td>e ee</td>
<td>o oo</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>a aa</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.3.1.2. Diphthongs

A diphthong is defined by Jones (1972:58) as an independant vowel-glide not containing within itself either a 'peak' or a 'trough' of prominence.
Diphthong may be long or short according to its pronunciation and it may be also wide or narrow according to the movement from the initial position. According to the prominence of the diphthongs they are known as 'rising diphthongs' and 'falling diphthongs'. In Tamil, there are two diphthongs /ai/ and /au/. There are some variants also for the same. The present study is not interested in analysing the quality of the diphthongs. But it focuses on the following features.

1. Is there any change in the pronunciation of diphthongs?
2. Are the diphthongs maintained with due distinction?
   a. If not, in what way they are modified?

The present study does not concentrate on the quality of diphthongs. Instead, it observes whether differences between the diphthongs are maintained or not. If yes, the context where they are maintained and the persons who maintain them are studied. If no, that is, if there are changes, the mode in which they are changed is observed. In the present study of Tamil phonological variables, the above two diphthongs are checked for their occurrence in all the word positions and in all the five selected contexts. The different types of diphthongs identified in this study and the explanations regarding these diphthongs are discussed in chapter IV and a sociolinguistic correlation of the diphthongs is also presented in chapter V.
3.3.1.3. Consonants

On the basis of the consonantal classification, the consonants are grouped taking into account the manner and place of articulation. There are 26 consonants in modern Tamil. They are given in Table No.3.2.

Table No.3.2. Tamil consonants

<table>
<thead>
<tr>
<th>ARTICULATION PLACE</th>
<th>Bila- Labio- Den- Alveo- Retro- Pala- Vel- Global</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>dental</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MANNER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops</td>
</tr>
<tr>
<td>Fricatives</td>
</tr>
<tr>
<td>Nasals</td>
</tr>
<tr>
<td>Laterals</td>
</tr>
<tr>
<td>Flap</td>
</tr>
<tr>
<td>Trill</td>
</tr>
<tr>
<td>Continuant</td>
</tr>
<tr>
<td>Semi-vowels</td>
</tr>
</tbody>
</table>

As far as consonants are concerned some sounds are found to be peculiar to Tamil language only. The dental and retroflex nasals (n, p), the retroflex lateral (l), the alveolar trill (r), and the voiced retroflex continuant lateral (l) are considered as special to Tamil language. There are certain practices in pronouncing these peculiar
sounds. Some instructions suggesting the way these special consonants are to be produced keeping in mind the manner and place of articulation can be given. If the informants understand the proper method of pronunciation of these sounds, they would not certainly change pronunciation of them.

3.3.1.3.1. Manner of articulation

1. Stops

The stop consonants are produced by obstructing the airstream at some point in the oral cavity by the lips or by any part of the tongue. In this manner of articulation, the air passing through the oral cavity is blocked at some point of the oral cavity and then released with a sudden explosion. In Tamil, there are five pairs of stop consonants. They are:

\[ /p, b, t, d, t, d, c, j, k, g/ \]

2. Nasals

The nasal consonants are produced by closing the oral cavity, lowering the soft palate, so that the air passes through the nasal cavity. There are six nasal consonants in Tamil language.

\[ /m, \text{\textit{n}}, \text{\textit{n}}, \text{\textit{n}}, \text{\textit{n}}, \hat{h}/ \]
3. Fricatives

While producing the fricative consonants, the vocal cords are kept in a narrow position, so that the air passing through the trachea pushes the vocal cords causing a friction and escapes through the oral cavity. There are three fricatives in Tamil.

/s, š, h/

4. Laterals

In this, the air that reaches the oral cavity is obstructed by the tongue in the middle of the mouth and the air passes through both the sides of the tongue. The Tamil laterals are:

/l, ɻ, ɭ/

5. Flap

In producing the flap continuant, the tongue is curled back slightly and contacts the alveolar ridge by a single tap. In Tamil, there is only one flap consonant.

/r/

6. Trill

Trill consonant is produced like the flap consonant, but the tongue tip contacts the alveolar ridge and produces more than one or two taps. In Tamil there is only one trill consonant.

/r/
7. Semi-vowels

This is a type of sound that functions as consonant lacking the phonetic features normally associated with consonants. Phonetically its quality is that of a vowel but duration is much less than the typical vowels. The Tamil semi-vowels are:

/v, y/

3.3.1.3.2. Place of articulation

In producing the consonants, two articulators are involved passive and active articulators. The term place of articulation is understood as the place where the active articulator touches the passive articulator. In Tamil speech sounds, the following types of place of articulation based on consonant sounds are found.

1. Bilabial

In this, both the upper lip and lower lip are involved in the articulation. The lower lip, the active articulator, contacts the passive articulator, the upper lip. Since both the lips are involved in the production of these sounds, they are called bilabials. Tamil bilabial consonants are:

/p, b, m/
2. Labio-dental

In this, the lower lip and the upper front teeth are involved. The active articulator is the lower lip and the passive articulator is the upper front teeth. There is one labio-dental consonant in Tamil.

/v/

3. Dental

To produce this sound, the active articulator, tip of the tongue, touches the upper front teeth, the passive articulator. There are three dental sounds in Tamil. They are:

/t, d, n/

4. Alveolar

The active articulator, the tip or blade of the tongue comes into contact with the teeth ridge, the passive articulator. In Tamil speech sounds, five alveolar sounds are found.

/s, n, l, r, r/  

5. Retroflex

The tongue is the active articulator and the alveolar ridge or the hard palate is the passive articulator in producing the retroflex consonants. In the articulation of retroflex the tongue touches the passive articulator, and curls back. There are five retroflex sounds in Tamil.

/t, d, s, n, l/
6. Palatal

The front of the tongue, the active articulator touches the hard palate, that is, the passive articulator during the articulation of palatal consonants. There are four palatal consonants in Tamil. They are:

\[
c, j, ñ, y
\]

7. Retroflex continuant lateral

The production of this consonant is similar to that of the retroflex sound. Here, the tip of the tongue goes near the hard palate, but does not touch it. There is one sound of this peculiar type in Tamil language.

\[
y
\]

8. Velar

In this type of consonant, the back of the tongue is the active articulator and the soft palate is the passive articulator. To produce this sound, the back of the tongue raises and touches the soft palate. In Tamil there are three velar consonants.

\[
k, q, ʰ
\]

9. Glottal

The glottal sounds are produced in the glottis. In this, the vocal cords are the articulators. The glottal sound is produced when the air stream passes through the open glottis with a weak friction. There may be glottalic
catch in the spoken speech sounds but there is only one such sound in Tamil under this class.

3.3.2. Phonemic contrasts

In Tamil language, semantic differences in words are signaled explicitly by keeping in contrast the phonemes in similar contexts. Phonemic contrasts are found in both vowels and consonants.

3.3.2.1. Vowels

Vowels manifest two types of contrasts. They are:

1. Qualitative contrasts
2. Quantitative contrasts

3.3.2.1.1. Qualitative contrasts

Qualitative contrasts are shown by the phonemes with different articulatory characteristics when they occur in similar context.

/a, e/  annai  'mother'
       enennai  'me'
/aa, e/  aatu  'dance'
        etu  'take'
/a, ee/  appam  'an edible item'
          eepappam  'belch'
<table>
<thead>
<tr>
<th>Sound</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/aa, ee/</td>
<td>aakkam</td>
<td>'productivity'</td>
</tr>
<tr>
<td></td>
<td>eekkam</td>
<td>'longing'</td>
</tr>
<tr>
<td>/a, i/</td>
<td>alai</td>
<td>'wave'</td>
</tr>
<tr>
<td></td>
<td>ilai</td>
<td>'leaf'</td>
</tr>
<tr>
<td>/a, ii/</td>
<td>ārkkam</td>
<td>'argue'</td>
</tr>
<tr>
<td></td>
<td>ārkkam</td>
<td>'foresight'</td>
</tr>
<tr>
<td>/aa, i/</td>
<td>āti</td>
<td>'name of a Tamil month'</td>
</tr>
<tr>
<td></td>
<td>īti</td>
<td>'hit'</td>
</tr>
<tr>
<td>/aa, ii/</td>
<td>ātu</td>
<td>'dance'</td>
</tr>
<tr>
<td></td>
<td>ītu</td>
<td>'equal'</td>
</tr>
<tr>
<td>/a, o/</td>
<td>āti</td>
<td>'beat'</td>
</tr>
<tr>
<td></td>
<td>īti</td>
<td>'break'</td>
</tr>
<tr>
<td>/a, oo/</td>
<td>alai</td>
<td>'wave'</td>
</tr>
<tr>
<td></td>
<td>oolai</td>
<td>'palm leaf'</td>
</tr>
<tr>
<td>/aa, o/</td>
<td>ātťu</td>
<td>'shake'</td>
</tr>
<tr>
<td></td>
<td>oťtu</td>
<td>'stick'</td>
</tr>
<tr>
<td>/aa, oo/</td>
<td>ātťam</td>
<td>'dance'</td>
</tr>
<tr>
<td></td>
<td>ootťam</td>
<td>'run'</td>
</tr>
<tr>
<td>/a, u/</td>
<td>ātuppu</td>
<td>'oven'</td>
</tr>
<tr>
<td></td>
<td>utuppu</td>
<td>'dress'</td>
</tr>
<tr>
<td>/a, uu/</td>
<td>āncal</td>
<td>'post'</td>
</tr>
<tr>
<td></td>
<td>uuńcal</td>
<td>'swing'</td>
</tr>
<tr>
<td>/aa, u/</td>
<td>aańmai</td>
<td>'manliness'</td>
</tr>
<tr>
<td></td>
<td>unńmai</td>
<td>'truth'</td>
</tr>
</tbody>
</table>
/aa, uu/ aakkam 'productivity'

uuukkam 'encouragement'

/e, i/ etu 'take'
iitu 'put'

/e, ii/ eṭṭu 'eight'
iīṭṭu 'earn'

/ee, i/ eeṭu 'leaf'
iitu 'put'

/ee, ii/ eeṭu 'leaf'
iīṭu 'equal'

/e, o/ eṭṭu 'eight'
oṭṭu 'stick'

/e, oo/ eṭṭai 'weight'
ooṭai 'stream'

/ee, o/ eeppam 'belch'
opram 'agreement'

/ee, oo/ eeṭu 'leaf'
ooṭu 'run'

/e, u/ eṭṭai 'weight'
ūṭai 'dress'

/e, uu/ en 'number'
un 'flesh'

/ee, u/ eeṭṭu 'to stretch (as in hands)'
unṭu 'propel'
| /ee, uu/ | eekkam | 'longing' |
| /uu/ | uukkam | 'encouragement' |
| /i, o/ | īti | 'thunder' |
| /o/ | oṭi | 'break' |
| /i, oo/ | ītu | 'put' |
| /o/ | oōtu | 'run' |
| /ii, o/ | iiṭṭu | 'earn' |
| /ii/ | oṭṭu | 'stick' |
| /ii, oo/ | iiṭu | 'equal' |
| /oo/ | oōtu | 'run' |
| /i, u/ | iṭai | 'hip' |
| /i, uu/ | utai | 'dress' |
| /i, uu/ | imai | 'eye lash' |
| /u/ | uumai | 'dumb' |
| /ii, u/ | iiṭu | 'equal' |
| /ii/ | utu | 'wear' |
| /ii, uu/ | iiṭṭu | 'earn' |
| /uu/ | uuṭṭu | 'feed' |
| /o, u/ | oppu | 'agree' |
| /u/ | uppu | 'salt' |
| /o, uu/ | oṭṭu | 'stick' |
| /oo/ | uuṭṭu | 'feed' |
| /oo, u/ | oōṭai | 'stream' |
| /oo, uu/ | oōṭtam | 'run' |
| /uu/ | uuṭtam | 'nutrition' |
3.3.2.1.2. Qualitative contrasts

In this contrast, the short vowels are contrasted with long vowels.

/a, aa/  
appam  
aappam  
'an edible item'
/e, ee/  
eṭu  
eetu  
'take'
/i, ii/  
iṭu  
iitū  
'put'
/o, oo/  
oṭi  
ootī  
'break'
/u, uu/  
uṭal  
uuṭal  
'body'

3.3.2.2. Consonants

The contrast between the consonants are given below.

3.3.2.2.1. Plosives

/p, b/  
balam  
'strength'
/t, d/  
ṭai  
'name of a Tamil month'
/t, t/  
caṭṭam  
'law'

/k, k/  
kaḍai  
'story'

/c, c/  
caṭṭam  
'sound'
<table>
<thead>
<tr>
<th>Sound</th>
<th>Tamil</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/d, d/</td>
<td>maḍam</td>
<td>'Choultry'</td>
</tr>
<tr>
<td></td>
<td>maḍam</td>
<td>'religion'</td>
</tr>
<tr>
<td>/t, ḍ/</td>
<td>ṭaṭṭam</td>
<td>'plate'</td>
</tr>
<tr>
<td></td>
<td>ṭaḍam</td>
<td>'way'</td>
</tr>
<tr>
<td>/c, j/</td>
<td>caṭai</td>
<td>'flesh'</td>
</tr>
<tr>
<td></td>
<td>jaṭai</td>
<td>'pair'</td>
</tr>
<tr>
<td>/k, g/</td>
<td>keṭu</td>
<td>'to spoil'</td>
</tr>
<tr>
<td></td>
<td>geṭu</td>
<td>'dead-line'</td>
</tr>
</tbody>
</table>

3.3.2.2.2. Nasals

<table>
<thead>
<tr>
<th>Sound</th>
<th>Tamil</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/m, n/</td>
<td>makam</td>
<td>'a star'</td>
</tr>
<tr>
<td></td>
<td>nakam</td>
<td>'finger nail'</td>
</tr>
<tr>
<td>/m, ŋ/</td>
<td>aamai</td>
<td>'tortoise'</td>
</tr>
<tr>
<td></td>
<td>aaṅai</td>
<td>'order'</td>
</tr>
<tr>
<td>/n, ŋ/</td>
<td>aani</td>
<td>'a name of a Tamil month'</td>
</tr>
<tr>
<td></td>
<td>aaṅi</td>
<td>'nail'</td>
</tr>
</tbody>
</table>

3.3.2.2.3. Laterals

<table>
<thead>
<tr>
<th>Sound</th>
<th>Tamil</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/l, ṁ/</td>
<td>muulai</td>
<td>'corner'</td>
</tr>
<tr>
<td></td>
<td>muuḷai</td>
<td>'brain'</td>
</tr>
<tr>
<td>/l, ŋ/</td>
<td>palam</td>
<td>'a measurement'</td>
</tr>
<tr>
<td></td>
<td>paḷam</td>
<td>'fruit'</td>
</tr>
<tr>
<td>/l, ṁ/</td>
<td>vali</td>
<td>'air'</td>
</tr>
<tr>
<td></td>
<td>vali</td>
<td>'way'</td>
</tr>
</tbody>
</table>
### 3.3.2.2.4. Laterals and flap

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/l, r/</td>
<td>kalai</td>
<td>'art'</td>
</tr>
<tr>
<td></td>
<td>karai</td>
<td>'river bank'</td>
</tr>
<tr>
<td>/l̂, r/</td>
<td>vali</td>
<td>'air'</td>
</tr>
<tr>
<td></td>
<td>vari</td>
<td>'line/tax'</td>
</tr>
<tr>
<td>/l̂, r/</td>
<td>kali</td>
<td>'subtract'</td>
</tr>
<tr>
<td></td>
<td>kari</td>
<td>'coal'</td>
</tr>
</tbody>
</table>

### 3.3.2.2.5. Laterals and Trill

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/l̂, r̂/</td>
<td>kalai</td>
<td>'art'</td>
</tr>
<tr>
<td></td>
<td>kara</td>
<td>'stain'</td>
</tr>
<tr>
<td>/l̂, r/</td>
<td>kuli</td>
<td>'bath'</td>
</tr>
<tr>
<td></td>
<td>kuri</td>
<td>'mark/target'</td>
</tr>
<tr>
<td>/l̂, r̂/</td>
<td>malai</td>
<td>'rain'</td>
</tr>
<tr>
<td></td>
<td>marai</td>
<td>'hide'</td>
</tr>
</tbody>
</table>

### 3.3.2.2.6. Fricatives and stops

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/s, ʂ/</td>
<td>saram</td>
<td>'string'</td>
</tr>
<tr>
<td></td>
<td>taram</td>
<td>'quality'</td>
</tr>
<tr>
<td>/h, k/</td>
<td>hari</td>
<td>'a personal name'</td>
</tr>
<tr>
<td></td>
<td>kari</td>
<td>'coal'</td>
</tr>
</tbody>
</table>

### 3.3.2.2.7. Semi-vowels

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/v, y/</td>
<td>vaar</td>
<td>'strap'</td>
</tr>
<tr>
<td></td>
<td>yaar</td>
<td>'who?'</td>
</tr>
</tbody>
</table>
3.3.3. Phonemic distribution

3.3.3.1. Vowel distribution

All the vowels, except 'o', occur initially, medially and finally in a word. The following table lists the occurrences of the vowels in all the three positions of a word.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Phoneme</th>
<th>Initial</th>
<th>Medial</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>i</td>
<td>ilai</td>
<td>paṭippu</td>
<td>paḷḷi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'leaf'</td>
<td>'studies'</td>
<td>'school'</td>
</tr>
<tr>
<td>2.</td>
<td>ii</td>
<td>iitu</td>
<td>panniirttuli</td>
<td>teenii</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'mortgage'</td>
<td>'drop of rose water'</td>
<td>'bee'</td>
</tr>
<tr>
<td>3.</td>
<td>e</td>
<td>eli</td>
<td>kaṭṭerumpu</td>
<td>enne?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'mouse'</td>
<td>'a kind of ant'</td>
<td>'what?'</td>
</tr>
<tr>
<td>4.</td>
<td>ee</td>
<td>eetu</td>
<td>raanitteenii</td>
<td>avanee</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'leaf'</td>
<td>'a kind of bee'</td>
<td>'that-he only'</td>
</tr>
<tr>
<td>5.</td>
<td>a</td>
<td>anil</td>
<td>tavalai</td>
<td>inṭa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'squirrel'</td>
<td>'frog'</td>
<td>'this-adj'</td>
</tr>
<tr>
<td>6.</td>
<td>aa</td>
<td>aatu</td>
<td>paṭṭaasu</td>
<td>ammaa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'dance'</td>
<td>'cracker'</td>
<td>'mother'</td>
</tr>
<tr>
<td>7.</td>
<td>o</td>
<td>onru</td>
<td>paṭṭinonru</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'one'</td>
<td>'eleven'</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>oo</td>
<td>ooviyam</td>
<td>paṭṭooviyam</td>
<td>avanoo?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'painting'</td>
<td>'silk painting'</td>
<td>'oh-he?'</td>
</tr>
<tr>
<td>9.</td>
<td>u</td>
<td>uṇmai</td>
<td>pasumai</td>
<td>karuppu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'truth'</td>
<td>'green'</td>
<td>'black-adj'</td>
</tr>
<tr>
<td>10.</td>
<td>uu</td>
<td>uuṇcal</td>
<td>vaanaurṭi</td>
<td>roojaappuu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'swing'</td>
<td>'aeroplane'</td>
<td>'rose'</td>
</tr>
</tbody>
</table>
3.3.2.2. Diphthongs

Of the two Tamil diphthongs, /ai/ occurs in all the positions and /au/ occurs initially and medially.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Phoneme</th>
<th>Initial</th>
<th>Medial</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ai</td>
<td>aivar</td>
<td>auvaiyar</td>
<td>puṭavai</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'five people'</td>
<td>'a personal name'</td>
<td>'saree'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>auvaiyar</td>
<td>vauvaal</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>'a personal name'</td>
<td></td>
</tr>
</tbody>
</table>

3.3.3.3. Consonants

All the consonants do not occur in all the positions. The distribution is as follows.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Phoneme</th>
<th>Initial</th>
<th>Medial</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>p</td>
<td>paṇṭu</td>
<td>ṭappu</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>'ball'</td>
<td>'wrong'</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>b</td>
<td>balam</td>
<td>aabaṭṭu</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>'strength'</td>
<td>'danger'</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>t</td>
<td>ṭavaḷai</td>
<td>paṭinonru</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>'frog'</td>
<td>'eleven'</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>d</td>
<td>ḍarmam</td>
<td>kaḍavu</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>'dharma'</td>
<td>'door'</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>ṭ</td>
<td>-</td>
<td>paṭṭaasu</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>'cracker'</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>d</td>
<td>-</td>
<td>aḍimai</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>'slave'</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>c</td>
<td>cakkaram</td>
<td>paccai</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>'wheel'</td>
<td>'green'</td>
<td></td>
</tr>
</tbody>
</table>
8. j jāṭai 'pair' paṅkajam 'a personal name'

9. k kaṭavu 'door' paṅkam 'side/near'

10. g guṇṭu 'bomb' vigram 'idol of a deity'

11. s sarasvati 'a personal name' kasappu 'bitter'

12. s śanmukam 'a personal name' viṣam 'poison'

13. h hanumaan 'a deity' mahaan 'great person'

14. m mayil 'peacock' taamarai 'lotus' maram 'tree'

15*. n nallatu 'good' paṇṭam 'relationship'

16. n - manam 'mind' makan 'son'

17. n - paṇḍam 'money' man 'soil'

18*. n ṇaayiru 'sun' paṅcam 'famine'

19*. n - ṭaṅkam 'gold'

20. l laṭṭu 'sweet' valam 'right side' paṭal 'song'

21. l - kalam 'field' taalppaal 'latch;
3.3.4. Allophonic distribution

The allophonic distribution of the Tamil speech sounds are given below.

3.3.4.1. Vowels

1 /i/

/i/ has two allophones [i] and [I]

(i) [i] - High front unrounded short vowel which occurs in
the medial and final positions

/put[i]ya/ 'new-adj'
/paat[i]/ 'half'

(ii) [I] - Lower high front unrounded short vowel which
occurs elsewhere.

/[I]tu/ 'put'
/[I]lai/ 'leaf'
2 /ii/

/ii/ has only one allophone [ii]

(i) [ii] - High front unrounded long vowel which occurs in all the positions

/[ii]tu/ 'indemnity'

3 /e/

/e/ has two allophones [E] and [e]

(i) [E] - Lower-mid front unrounded short vowel which occurs finally.

/mak[Ē]/ 'son'

(ii) [e] - Higher-mid front unrounded short vowel which occurs elsewhere.

/[e]li/ 'mouse'

4 /ee/

/ee/ has only one allophone [ee]

(i) [ee] - Higher-mid front unrounded long vowel. It occurs in all the positions.

/[ee]ru/ 'climb'

/ěnk[ee]/ 'where'

5 /a/

/a/ has two allophones [^] and [a]

(i) [^] - Lower-mid back unrounded short vowel. It occurs in the medial and final positions

/paṭ[^]vi/ 'post/position'
(ii) [a] - Low central unrounded short vowel. It occurs elsewhere.

/⟨a⟩nai/ 'hug'

6 /aa/

/aa/ has one allophone [aa]

(i) [aa] - Low central unrounded long vowel. It occurs in all the positions.

/⟨aa⟩tu/ 'dance'

/parih[aa]ram/ 'remedy'

/amm[aa]/ 'mother'

7 /o/

/o/ has two allophones [o] and [ɔ]

(i) [o] - Higher-mid back unrounded short vowel. It occurs in the initial and medial positions.

/⟨o⟩tu/ 'stick'

/paṭiŋ[o]nru/ 'eleven'

(ii) [ɔ] - Lower-mid back unrounded short vowel. It occurs elsewhere.

/paṭakk[ɔ]/ 'pendant'

8 /oo/

/oo/ has one allophone [oo]

(i) [oo] - Higher-mid back unrounded long vowel. It occurs in all the positions.

/⟨oo⟩tai/ 'stream'

/kaṭal[oo]ram/ 'sea shore'

/p[oo]/ 'go'
9 /u/

/u/ has two allophones [U] and [i]

(i) [U] - Lower-high back unrounded short vowel. It occurs elsewhere

/[U]varppu/ 'sour'
/K[U]r[U]mpu/ 'mischief'/

(ii) [i] - High central unrounded short vowel. It occurs in the medial and final positions.

/el[i]mpu/ 'bone'
/karupp[i]/ 'black'

10 /uu/

/uu/ has one allophone [uu]

(i) [uu] - High back rounded long vowel. It occurs in all the positions

/[uu]r/ 'town'
/m[uu]lai/ 'brain'
/roojaapp[uu]/ 'rose'

3.3.4.2. Consonants

1 /p/

/p/ Bilabial voiceless plosive and it has three allophones

(i) [p] - Bilabial voiced slit fricative that occurs intervocally or between liquids and vowels.

/ka[p]am/ 'phlegm'
/maar[p]u/ 'chest'
(ii) [p] - Bilabial voiceless unaspirated lax oral plosive which occurs after juncture as the first member of a gemination.

/paṭṭu+[p]puucci/ 'butterfly/

/inţa + [p]paiyan/ 'this boy'

(iii) [P] - The bilabial voiceless unaspirated oral plosive occurs elsewhere

/[P]aavai/ 'woman'

/[P]otţu/ 'forehead mark'

2 /b/

/b/ the Bilabial voiced plosive has one allophone.

(i) [b] - The bilabial voiced unaspirated oral plosive. It occurs in all the positions.

/[b]alam/ 'strength'

/[b]aavam/ 'expression'

3 /ɖ/

/ɖ/ the dental voiceless plosive. It has three allophones.

(i) [ɖ] - The apico-dental voiced slit fricative. It occurs intervocally or between liquids and vowels.

/ka[ɖ]avu/ 'door'

/avar[ɖ]aan/ 'that he (hon)'

(ii) [ɖ] - The apico-dental voiceless unaspirated lax oral plosive. It occurs after juncture as a first member of a gemination.

/taṇṇi+[ɖ]totti/ 'water tank'
(iii) [t] - The apico-dental voiceless unaspirated oral plosive. It occurs elsewhere.

/[t]avil/ 'a musical instrument'

/pa[tu]/ 'ten'

4 /d/

/d/ The dental voiced oral plosive has only one allophone.

(i) [d] - The apico-dental voiced unaspirated oral plosive. It occurs in all the positions.

/[d]aanam/ 'alms'

5 /t/

/t/ The domal/retroflex voiceless plosive has two allophones.

(i) [t̐] - The apico-domal retroflex voiced flap. It occurs intervocally and between liquids and vowels.

/e[t̐]am/ 'place'

/ţa[t̐]am/ 'route'

(ii) [t̐] - The apico-domal retroflex voiceless unaspirated oral plosive. It occurs elsewhere.

/pa[t̐u]/ 'silk'

/kee[t̐]aan/ 'listened-he'
6 /ɖ/

/ɖ/ The domal retroflex voiced plosive has one allophone.

(i) [ɖ] - The apico-dental retroflex voiced unaspirated oral plosive. It occurs in all the positions.
/la[ɖɖ]u/ 'an edible'

7 /c/

/c/ The palatal voiceless oral plosive has three allophones.

(i) [ʂ] - The apico-alveolar voiceless groove fricative. It occurs initially or intervocally or between liquids and vowels.
/[ʂ]uvar/ 'wall'
/pa[ʂ]i/ 'hungry'
/a[ʂ]ṭi vaaram/ 'foundation'

(ii) [ɭ] - The palatal voiceless lax affricate. It occurs after juncture as a first member of a gemination.
/karuppu+[ɭ][caami/ 'personal name'
/manca+[ɭ][caṭṭai/ 'yellow shirt'

(iii) [ɺ] - The palatal voiceless unaspirated affricate. It occurs elsewhere.
/pa[ɺɺ]ai/ 'green'
/ka[ɺɺ]eeri/ 'music concert/office'
8 /j/

/j/ The palatal voiced oral plosive has only one allophone.

(i) [j] - The palatal voiced unaspirated affricate. It occurs in all the positions.
/raa[j]aa/ 'king'
/[j]aanaki/ 'a personal name'

9 /k/

/k/ The velar voiceless plosive has five allophones.

(i) [ç] - The fronto-palatal voiceless slit fricative. It occurs intervocally when followed by /i/.
/aa[ç]iya/ 'such'
/raa[ç]i/ 'a kind of millet'

(ii) [x] - The dorso-velar voiceless slit fricative. It occurs intervocally, when not followed by /i/ and in between liquids and vowels (except /i/).
/ma[x]an/ 'son'
/varu[x]a/ 'let (it) come'

(iii) [k̂] - The dorso-velar voiceless unaspirated palatalized oral plosive. It occurs in gemination either preceded or followed by /y/.
/vaa[k̂k̂]yam/ 'sentence'
/țaa[k̂k̂]yatu/ 'that-it hit'
(iv) [k] - The dorso-velar voiceless unaspirated lax oral plosive. It occurs after juncture as a first member of a gemination.
/vellli+[k]kilamai/ 'Friday'
/talai+[k]katšu/ 'bandage or cloth tied around the head'

(v) [k] - The dorso-velar voiceless unaspirated oral plosive. It occurs elsewhere.
/[k]ayiru/ 'robe'
/pa[kk]am/ 'side/near'

10 /g/

/g/ The velar voiced plosive has two allophones

(i) [g'] - The dorso-velar voiced unaspirated oral plosive. It occurs before /i/.
/cah[g']ili/ 'chain'
/iťitaanh[g']/i/ 'lightning conductor'

(ii) [g] - The dorso-velar voiced unaspirated oral plosive. It occurs elsewhere.
/taň[g]am/ 'gold'
/pan[g]u/ 'share'

11 /s/

/s/ The domal retroflex fricative has one allophone.

(i) /s/ - The apico-domal voiceless groove fricative. It occurs in all the positions.
/u[ʂ]aa/ 'a personal name'
/u[ʂ]nam/ 'heat'
/atir[ʂ]tı́m/ 'luck'
/ka [ʂ] tı́m/ 'difficult'

12 /m/

/m/ The labial nasal has four allophones.

(i) [~] - The nasalization is a co-occurring feature of the word final vowel but marked as a segment.
/paŋ[ɔ]/ 'money'
/vaŋt[ɔɔ]/ 'came-we'

(ii) [n̥] - The dorso-velar palatalized voiced nasal. It occurs before velar plosive when followed by /i/.
/iṭiṭa[ŋ̥]ki/ 'lightning conductor'
/vii[ŋ̥]ki/ 'having swollen'

(iii) [ŋ̥] - The dorso-velar voiced nasal occurs before velar plosive which is not followed by /i/.
/ta[ŋ̥] kam/ 'gold'
/sa[ŋ̥]kam/ 'association'

(iv) [m] - The bilabial voiced nasal. It occurs elsewhere.
/[m]aram/ 'tree'
/a[mm]aa/ 'mother'
/puṣpa[m]/ 'flower'
The dental/alveolar nasal has three allophones

(i) [~] - The nasalization, a co-occurring feature found with word final vowel but marked as a segment.
/av[ā]/ 'that-he'
/vant[āā]/ 'came-he'

(ii) [n] - The apico-dental voiced nasal. It occurs when followed by a dental plosive.
/pa[n]tu/ 'ball'
/sa[n]tanam/ 'sandal'

(iii) [n] - The alveolar voiced nasal. It occurs elsewhere.
/ma[n]am/ 'heart'
/vaṇṭa[n]am/ 'a wishing'

The domal/retroflex nasal has one allophone.

(i) [ŋ] - The apico-domal retroflex voiced nasal. It occurs in the medial and final positions.
/pa[ŋ]am/ 'money'
/ka[ŋ]/ 'eye'

The palatal nasal has one allophone.

(i) [ŋ] - The fronto-palatal voiced nasal. It occurs in the initial and medial positions.
/[ŋ]aanam/ 'wisdom'
/ma[ŋ]cal/ 'yellow'
16 /l/

/l/ The dental/alveolar lateral has one allophone.

(i) [l] - The apico-alveolar voiced lateral. It occurs in all the three positions.

/l/aapam/ 'profit'
/nuu[l]akam/ 'library'
/paa[l]/ 'milk'

17 /l/

/l/ The domal-retroflex lateral has one allophone.

(i) [l] - The apico-domal voiced retroflex lateral. It occurs in the medial and final positions.

/ta[l]am/ 'platform'
/pa[l]i/ 'school'
/tee[l]/ 'scorpion'

18 /l/

/l/ The domal-retroflex continuant has one allophone.

(i) [l] - The apico-domal lateralized retroflex continuant. It occurs in the medial and final positions.

/pa[l]am/ 'fruit'
/ta[tam]/ 'Tamil'

19 /r/

/r/ The alveolar flap has two allophones.

(i) [r] - The apico-alveolar voiced flap. It occurs initially.

/[r]ampam/ 'saw'
(ii) [r*] - The apico-alveolar voiced flap with one tap. It occurs elsewhere.

/ka[r']uppu/ 'black'

20 /ɾ/

/ɾ/ The alveolar trill has one allophone.

(i) [ɾ] - The apico-alveolar voiced trill. It occurs in the medial position, intervocally and in the final position.

/a[ɾ]am/ 'saw'
/a[ɾ]ai/ 'room'

21 /v/

/v/ The labial semivowel has three allophones.

(i) [u̯] - The high back rounded non-syllabic vocoid. It occurs before high back vowel.

/taŋcaa[u̯]uru/ 'a place name'
/kata[u̯]ul/ 'god'

(ii) [v̥] - The labio-dental tense continuant. It occurs when preceded by a labio-dental continuant.

/av[v̥]ay/ 'personal name'
/cev[v̥]aay/ 'Tuesday'

(iii) [v] - The labio-dental voiced continuant occurs elsewhere.

/[v]ayiru/ 'stomach'
/paa[v]am/ 'sin'
/paa[v]ai/ 'woman'
22 /y/

/y/ The palatal semi-vowel has two allophones.

(i) [ɨ] - The high front unrounded tense non-syllabic vocoid. It occurs when preceded by a palatal continuant.

/tay[ɨ]al/ 'stitch'

(ii) [ɨ] - The high front unrounded non-syllabic vocoid. It occurs elsewhere.

/[ɨ]aanai/ 'elephant'

/va[ɨ]al/ 'paddy field'

3.3.5. Nasalization

The position of the velum determines two major categories of consonants, that is, stops and nasals. When the oral sounds are produced the uvula closes the nasal tract, so that the air passes through the oral tract. When the nasals are produced the uvula closes the oral tract. Sometimes when nasal sounds follow the vowels, the air escapes through the nasal and oral tracts simultaneously. In that case, those vowels are nasalized and this kind of articulation is called as 'nasalization'. The same situation is found in Tamil language also. The present study concentrates on the occurrence of nasalization, not in all positions, but in the final position and also in different contexts selected for the study.
3.3.6. Voice

Voice of any segmental sound is determined by the state of glottis. In Tamil, until the modern period voiced plosives were not in use. The use of Sanskrit words and other foreign words in Tamil brought the use of voiced plosives in Tamil. Voiced and voiceless plosives produced with identical point of articulation and articulators are used in identical environments especially in articulating words and thereby they occur in contrast.

/paavam/ 'sin'
/baavam/ 'expression'

And at the same time, there is another situation, where they are non contrastive and do not signal meaning difference among words.

1. /paantu/ 'ball'
/baantu/ 'ball'

2. /taantam/ 'tusk'
/daantam/ 'tusk'

In Tamil writing system, the voicing of the plosives is not made explicit by means of graphemic representation. Voice is understood and interpreted either as contrastive or not, depending upon the context. So the children learning modern Tamil have to use voiced plosives carefully. This study tries to identify whether the informants change the voice of
the plosives. If so, further questions such as the following arise.

1. Is it maintained both in oral language use context and in reading contexts?
2. Whether the variation in voiced plosive is sociolinguistically significant?

This study examines the context and social significance of voicing. In view of this, the occurrence of voice in plosives in the initial, intervocalic and post nasal positions, within the units of word level was observed.

By comparing the characteristic features of Tamil speech sounds discussed so far, variations from the data of the present study were identified and presented in the following chapter.