


MALAYALAM PHONETIC READER

B. SYAMALA KUMARI

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CENTRAL INSTITUTE OF INDIAN LANGUAGES
MYSORE-6

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MALAYALAM PHONETIC READER

CENTRAL INSTITUTE OF INDIAN LANGUAGES
PHONETIC READER SERIES-2

Editor

H. S. BILIGIRI

CIIL Phonetic Reader Series-2

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B. SYAMALA KUMARI



सत्यमेव जयते

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Foreword

The Central Institute of Indian Languages was set up on the 17th July, 1969 with a view to assisting and co-ordinating the development of Indian Languages. The Institute was charged with the responsibility of serving as a nucleus to bring together all the research and literary out-put from the various linguistic streams to a common head and narrowing the gap between basic research and developmental research in the fields of languages and linguistics in India.

The Institute and its four regional centres are thus engaged in research and teaching which lends to the publication of a wide-ranging variety of materials. Materials designed for teaching / learning at different levels and suited to specific needs is one of the major areas of interest in its series of publications. Basic research relating to the acquisition of language and study of language in its manifold psycho-social relations constitute another broad range of its interest. These materials will include materials produced by the members of the staff of the Central Institute of Indian Languages and its Regional Language Centres and associated scholars from Universities and Institutions both Indian and Foreign.

The Central Institute of Indian Languages has initiated the Phonetic Reader Series in Indian languages with a view to presenting the range of Phonetic variation obtaining in this sub-continent and demonstrating the closeness of languages on the basis of Phonetic patterning. These Readers are biased towards learning the sound systems of languages. Thus it is hoped that this series will be of interest to both scholars who are interested in Phonetic studies and to practical learners of languages who wish to make a beginning in their language study.

The language instructors in our Regional Language Centres who had to produce the instructional material while teaching intensive courses of 5½ hours a day deserve to be treated with sympathy. Through their dedicated work these young scholars have made contributions which will go a long way in the emotional integration of the country. If this series even partially fulfils its objectives then our efforts will be amply rewarded.

Central Institute of Indian Languages
Manasagangotri, Mysore-6
22nd March 1972

D. P. PATTANAYAK
Director

Preface

Acquisition of a good pronunciation forms an important part of language learning, especially so if the learner is expected to teach the language he has learnt, to others. Firstly, the learner must acquire the capacity to recognise readily without any error the various speech sounds occurring in the language he is learning. Secondly, he must acquire the capacity to produce them with the help of his own vocal organs. Thirdly, he must acquire the capacity to produce the individual speech sounds he has learnt in sequences. In addition to these three skills, which may be sufficient to gain a good pronunciation, the learner, depending on his needs, has to get a mastery over the orthography of the language he is learning. This involves developing automatic associations between written forms and speech sounds.

The phonetic readers in this series have been designed with the above points in view. They are mainly intended to meet the needs of teachers who receive training in an Indian language other than their mother-tongue at the Regional Language Centres of the Central Institute of Indian Languages. These teachers are expected not only to learn the languages in question but also be able to teach it to their students when they return home.

Each reader consists of a brief exposition about the organs of speech and their functions. It also introduces some technical terms. Then each speech sound is described in detail giving the movements of the vocal organs. Each description is rounded off by the technical term for that sound. Certain sounds which may prove difficult to persons with certain language backgrounds are emphasised. The readers also contain drills for practice. A brief phonemic statement which meaningfully groups the sounds described in the preceding sections is also appended. A statement

about the correspondences between the phonemes of the language studied and the letters used in the conventional orthography comes at the end.

These readers have been tried out on two batches of teacher-trainees and have been revised in the light of experience that has been gained. It may be too much to claim that they are perfect. There are lacunae still to be filled up. The most conspicuous of these is the lack of any information on intonation. Suggestions for improvement are welcome and will be incorporated in the subsequent editions.

Though it is true that certain features of pronunciation can only be learnt with the aid of a teacher, the utility of such readers cannot be underestimated. It is hoped that these readers will be useful to even persons other than those for whom they are specifically intended.

H. S. BILIGIRI

Acknowledgement

It is with a sense of gratitude that I wish to thank Dr. D. P. Pattanayak, Director, Central Institute of Indian Languages for extending his kind help and encouragement in all stages of the preparation of this Reader.

I owe special gratitude to Dr. H. S. Biligiri, Deputy Director, Central Institute of Indian Languages for providing the guidelines and also for the constructive criticisms and fruitful suggestions he made during its preparation.

My thanks are due to Dr. U. P. Upadhyaya, Principal, Southern Regional Language Centre for the useful discussions I had with him regarding the form and presentation of this Reader.

I also wish to express my grateful acknowledgement to my husband Mr. K. V. Srinivasan, Lecturer in Linguistics, Maharaja's College, Mysore, who has read this Phonetic Reader whenever it was rewritten for further improvements and gave invaluable suggestions for the accurate description of various sounds described.

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B. SYAMALA KUMARI

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I. Speech Organs

0. The aim of this reader is to introduce the Malayalam sound, to any non Malayali learner of the language (with special reference to the speakers of Indo-Aryan languages) and help him acquire an acceptable pronunciation of these sounds. For this purpose, the nature and distribution of sounds are described in simple words without going into the minute details of their different shades.

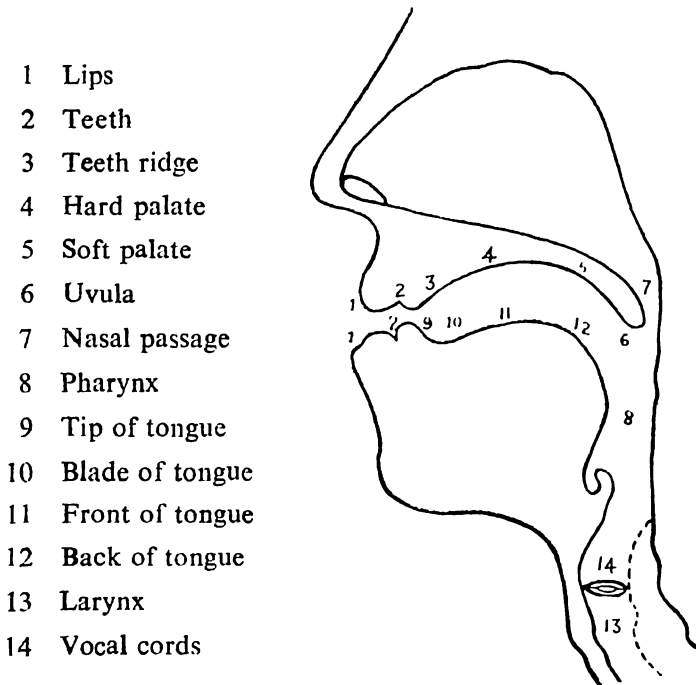
0.1. This reader has three sections. The first one deals with the organs of speech involved in the production of sounds and a few technical terms connected with it. The second section is the reader proper which describes the nature and distribution of Malayalam sounds in simple non-technical terms with illustrative examples. The third section contains three appendices. Appendix-I is a list of contrastive pairs for the purpose of drilling. Appendix-II sheds some light on the phonemic outline of the language. Appendix-III gives in brief, a phoneme-grapheme correspondence.

1.1. Speech Organs

The speech organs involved in the production of various sounds are the following. For convenience they are divided into two: movable and relatively stationary. Movable organs are termed as articulators and stationary organs are the points of articulation. In the production of different sounds, articulators touch or approach the points of articulation. This process is known as articulation. *Lower lip* and *tongue* are the two active articulators. The *upper lip*, *roof of the mouth* and the gum just behind the upper teeth known as *alveolar ridge* are the important

points of articulation. For the sake of ready reference and easiness of description the tongue is arbitrarily divided into the *tip*, the *front* and the *back*. Likewise the roof of the mouth is divided into the *alveo palatal*, *hard palate* and *soft palate* regions. The soft palate is also known as the *velum*. This velum continues down in the back to a little cone of flesh called the *uvula* which hangs free in the back of the mouth.

The diagram showing the organs of speech is given below :



1.2 An important factor to be noted in the production of sounds is the process of voicing. The larynx in the throat contains two lip like elastic membranes which can be drawn close or pulled apart when air passes through them. When a sound is produced if the lip like structures are drawn close and they vibrate producing a buzzing noise technically called the *voice*, the

particular sound is termed as a *voiced sound*. A sound produced the accompanying vibration of the vocal cords is a *voiceless sound*, without

1.3. The various sounds produced by the human speech organs are mainly divided into two: *vowels* and *consonants*, In the production of a vowel sound the tongue and the lip play an important role by their action of modifying the air passage in the oral cavity. The air stream coming from the lungs is allowed to go out without any obstruction in the mouth. On the other hand a consonant is a sound in whose production the air passage is obstructed in any one of the following manners.

Any articulator can press against a point of articulation to close the air stream for a moment and then can be released to produce a *stop* sound.

The air current can be forced to squeeze through a narrow constriction resulting in a hissing noise producing the *fricative* sound.

By closing the median line of the air channel either partially or completely but leaving a free passage on either side of the articulator producing a *lateral* sound.

By making a single or succession of taps with the articulator against the point of articulation producing a *flap or trill* sound.

1.4. Back part of the velum can move against the back of the nasal cavity to create a closure so that air does not come through the nose. When this is opened air comes through the nasal passage producing a *nasal* or *nasalised* sound.

2. Malayalam Sounds

2.1. Vowels

From the point of view of a learner the vowel sounds to be familiar with are the following seven sounds. Out of these, five vowels have short-long distinction. Of the remaining two, one is always short and the other is always long. In this description these twelve vowel sounds are represented as i, ii, e, ee, a, aa, o, oo, u, uu, U and æ

2.1.1. [i]

During the production of this sound, the lips are spread. The front part of the tongue moves towards the front part of the palate thus obtaining the maximum height still avoiding any friction. The soft palate is raised so that no air comes through the nasal passage. The vocal cords also vibrate producing voice. It occurs initially, medially and finally. When it occurs initially, this is always preceded by a shade of the sound [y] technically known as an onglide of [y]. In such situations, first it starts from the position of [y] in which the mid part of the tongue moves towards the palate, but soon it changes that position and moves to the front to produce [i]. This vowel sound [i] is called the short, unrounded, high, front vowel.

^y illa	'no, not'	kiṭṭu	'to get'	kari	'soot'
^y iṣṭam	'like'	kaṭṭil	'cot'	ciri	'smile'
^y itRa	'this much'	tiriyu	'turn'	vari	'row'

^y iḍi	'thunder'	tolikku	'to peal'	kaḍi	'bite'
^y iṭṭu	'put'	poḍikku	'to powder'	paṇi	'work'

2.1.2. [ii]

This sound is pronounced in the same way as [i] i.e. the tongue height and the lip position are same with the maximum height and maximum lip spreading. But this sound has got more duration. In its production the soft palate is raised and the vocal cords vibrate. It occurs in all the three positions, i.e., initially, medially and finally. In the initial position this has also an onglide of [y]. This is the long, unrounded, high, front vowel.

^y iicca	'house fly'	kiiri	'mongoose'	tii	'fire'
^y iṭṭi	'rose wood'	miin	'fish'	nii	'you' Sg.
^y iiyal	'an insect'	tiiram	'shore'	chii	'an exclamation of contempt'

^yiisvaran 'God' jirakam 'cumin seed'

^yiinja 'fibre' piili 'eye lash'

2.1.3.* [e]

While producing this sound the lower jaw is lowered a little so that the mouth is half closed and the front part of the tongue is raised towards the alveolar ridge. But the tongue height is not as much as it is for the production of [i]. During its production soft palate is raised and there is vibration of vocal cords. This sound occurs initially, medially and finally. In the initial position, like [i] this sound also has a shade of [y]. This is called the short unrounded, mid, front vowel.

* Sounds marked in this way indicate that those are the probable areas of difficulties to a speaker of an Indo-Aryan Language.

y _e la	'leaf'	keṭṭi	'tied'	nin <u>ṅ</u> ne	'you' (obj)
y _e llaam	'everything'	peṭṭi	'box'	avi <u>ḍ</u> e	'there'
y _e era	'worm'	veṭṭi	'cut'	avare	'them'
y _e eppool	'when'	resam	'juice'	ava <u>ṅ</u> c	'him'
y _e eṅgil	'if'	veral	'finger'	ava <u>ḷ</u> e	'her'

2.1.4. [e c]

This sound is produced like [e] with all its articulatory characteristics. The only notable difference is that it has longer duration. This occurs in the initial, medial, and final positions. In the initial position it has an onglide of [y] like the previous sounds [i], [ii] and [e]. It is known as the long, unrounded, mid, front vowel.

y _e eelam	'cardamom'	ke <u>e</u> ṭṭu	'heard'	avane <u>e</u>	'he only'
y _e eeṅṅu	'to sob'	v <u>e</u> ṭṭa	'hunting'	ammec	'mother!' (voc)
y _e eeṅi	'ladder'	pee <u>ḍ</u> i	'fear'		
y _e eeRi	'increased'	ve <u>e</u> la	'job'		
y _e eela	'field'	pee <u>ṅ</u> a	'pen'		

2.1.5. [a]

While producing this sound, the mouth is open and the lips are neutral in position. The movement of the tongue is relaxed and the tongue is as low as possible. While producing this sound the velum is raised and there is vibration of vocal cords. This occurs Initially, medially and finally. The descriptive label for this sound is short, low, back vowel.

amma	'mother'	mala	'mountain	koḍa	'umbrella
acchan	'father'	maṇam	'smell'	toḍa	'thigh'
ara	'half'	vala	'net'	poka	'smoke'
aviḍe	'there'	vara	'line'	aṇa	'dam'
ala	'wave'	taram	'short'	paśa	'gum'

2.1.6. [a a]

In the production of this sound the mouth is open and the lips are neutral as for the production of [a]. But the tongue position is lower and backer than [a]. The raising of the velum and the vibration of vocal cords are just like as they are for other vowels. This has got more duration than [a]. It occurs in all the three positions *i.e.*, initially, medially and finally. The descriptive label for this sound is long, low back vowel.

aama	'tortoise'	paal	'milk'	mahaa	'great'
aana	'elephant'	kaal	'leg'	acchaa	'father!'
					(voc.)
aaśa	'hope'	maala	'garland	vaa	'come'
aayi	'became'	vaal	'tail'	taa	'give'
aaḍu	'to swing'	caaram	'ash'		

2.1.7. *[o]

In the production of this sound, the lips are somewhat rounded. The back part of the tongue raises towards the soft palate. The tongue height is little lower than that for [e]. The soft palate is raised and the vocal cords vibrate. It occurs only initially and medially. When it occurs initially, this sound has an onglide of [w] *i.e.*, during its production the tongue starts to produce a fronter sound like [w] but soon retracts back and produces the sound [o]. This sound is described as the short, mid,back, rounded vowel.

^w oruma	'unity'	kola	'murder'
^w oppam	'together'	pokkam	'height'

^w oṭṭakam	‘camel’	toṭṭi	‘bucket’
^w oru	‘one’	moṭṭa	‘shaven head’
^w oraaḷ	‘one person’	poḷḷa	‘hollow’

2.1.8. [o o]

This sound is produced in the same way as [o] but it has got a longer duration. This occurs in the initial, medial and final positions. In the initial position just like its shorter counterpart this too has an onglide of [w]. This sound is described as the long, mid, back, rounded vowel.

^w ooḍi	‘ran’	poole	‘like’	poo	‘go’
^w ooḍa	‘gutter’	tooḍa	‘an ornament’	avanoo	‘is he?’
^w oola	‘palam leaf’	koora	‘a fish’	caṅṅoo	‘some-where’
^w ooṇam	‘a festival’	coora	‘blood’		
^w ooram	‘coast’	mooḷ	‘daughter’		

2.1.9. [u]

In the production of this sound the lips are completely rounded. The back-most part of the tongue is raised towards the soft palate much higher than that for [o] or [e]. The air does not come through the nasal cavity because of the raising of velum. This sound is accompanied by the vibration of the vocal cords. It occurs initially, medially and finally. In the initial position this sound also has onglide of [w] like the mid-back vowels [o] and [oo]. The descriptive label for this sound is short, high, back, rounded vowel.

^w umma	'kiss'	tuppi	'spat'	kuru	'seed'
^w ucca	'after-noon'	kuṭṭi	'child'	puḷu	'worm'
^w uttaram	'answer'	kuṭṭa	'basket'	varu	'to came'
^w ural	'mortar'	puRam	'page'	vannu	'came'
^w unnam	'aim'	kuḷi	'bath'	kaṇḍu	'saw'

2.1.10. [u u]

This sound is the longer counterpart of [u]. The lip and the tongue position, the initial onglide of [w], everything is same as for [u] but this has longer duration. The raising of the soft palate and the vibration of the vocal cords are there during the production of this vowel sound also. It occurs initially, medially and finally.

^w uuham	'guess'	kuura	'roof'	varuu	'please come'
^w uuma	'dumb'	duuram	distance	maṅuu	'Manu' (voc.)
^w uuḷaṅ	'fox'	cuural	'cane'		
^w uuṭṭu	'to feed'	muula	'corner'		
^w uunnu	'to support'	cuul	'broom-stick'		

2.1.11. [U]

During the production of this sound the lips are spread. The back of the tongue is raised towards the soft palate as in the production of [u] but a little lower. The soft palate is raised and there is vibration of vocal cords. It does not occur in the initial position. In the medial position it is in free-variation with [u]. Finally it is in contrast with [u]. The descriptive label for this sound is short, high, back, unrounded vowel.

irup <u>a</u> tU / irU <u>a</u> patU	'twenty'	na <u>a</u> lU	'four'
kar <u>u</u> ttU / karU <u>u</u> ttU	'strength	te <u>e</u> kkU	'teak' teek <u>u</u> 'to rub'
to <u>l</u> uttU / to <u>l</u> UttU	'cow shed'	va <u>a</u> kkU	'word'
		v <u>a</u> kkU	'edge' v <u>a</u> kk <u>u</u> 'to place'

2.1.12. [æ]

While producing this sound the lips are neutral. The front part of the tongue moves forwards. The tongue is as low as it is for the production of the sound [a]. This has got more duration than the short vowels [i], [e], [a], [o] and [u] but not as long as the long vowels [ii], [ee], [aa], [oo] and [uu]. The soft palate is raised and vocal cords vibrate. It occurs in the medial position in some of the loan words from English. The descriptive label for this sound is long, low, front vowel.

k <u>a</u> ma <u>R</u> a	'camera'
b <u>a</u> ttU	'bat'
k <u>a</u> ra <u>tt</u> U	'carrot'
b <u>a</u> ngU	'bank'
m <u>a</u> jik	'magic'

2.2. Consonants

The various consonant sounds in Malayalam are grouped under different heads on the basis of their manners of articulation.

2.2.1. Stops

2.2.1.1. [p]

The air coming from the lungs without carrying any vibration of the vocal cords is completely stopped for a moment by pressing the lower lip against the upper lip. The soft palate is raised so

that no air passes through the nose. When the lips are released, the air escapes from the mouth producing an explosive sound. This sound occurs initially, medially with length and in clusters.

peṭṭi	'box'	kappal	'ship'
peena	'pen'	tuppal	'spitting'
paṭṭi	'dog'	kuppi	'bottle'
pattU	'ten'	kopRa	'dry coconut'
pRaani	'creature'	svopnam	'dream'

2.2.1.2. [P]

The lower lip presses against the upper lip to make a closure, but the closure is not tight so that a little air escapes even before plosion. There is weak vibration of the vocal cords. But there is no passage of air through the nasal cavity. This sound occurs only between vowels. It is called weakly voiced bilabial fricativised stop.

paaPam	'sin'
aPaayam	'danger'
aParaṅ	'the other man'
śaaPam	'curse'
kooPam	'anger'

2.2.1.3. [ph]

The air streams coming from the lungs which carries no vibration of the vocal cords is stopped by pressing the lower lip against upper lip as in the production of [p]. But the parting of the lips creating the plosion takes place with strong force so that a puff of air accompanies. This is known as aspiration, and the sound thus produced is an aspirated sound. During the production of this sound the soft palate is raised to close the entry

of air into the nasal passage. This [ph] occurs initially and medially in loanwords from Sanskrit. The descriptive label for this sound is voiceless, aspirated, bilabial stop.

phalam	'result'	kapham	'phlegm'
phaliTam	'joke'	aapharaṇam	'ornament'
pharani	'jar'		
phayam	'tear'		
phaaram	'weight'		

2.2.1.4. [b]

The air current coming from the lungs which carries the vibration of the vocal cords is stopped for a moment and then released making a plosion. This stopping is caused by pressing the lower lip against the upper lip. During its production no air comes through the nasal passage. This occurs initially and medially. It is called the voiced bilabial stop.

belam	'strength'	kambu	'stick'
baabu	'a name'	tumbi	'beetle'
bimbam	'image'	cembu	'copper'

2.2.1.5. [t]

During the production of this sound the tip of the tongue firmly presses against the back of the upper front teeth in such a way that no air escapes. The soft palate is raised and vocal cords do not vibrate. The tongue tip is released producing a plosion. This sound occurs initially medially with length and in clusters. It is known as the voiceless, dental stop.

tatti	'knocked'	tatta	'parrot'
teṇḍi	'beggar'	cattu	'died'

tuuṇU	‘pillar’	patti	‘hood of the snake’
taram	‘sort’	raatRi	‘night’
tRaani	‘ability’	maatRam	‘only’

2.2.1.6. *[T]

During the production of this sound the tongue tip presses against the back of the upper teeth as in the production of [t]. But a little air escapes even before plosion because the contact of the articulator with the point of articulation is not tight. The soft palate is raised and there is weak vibration of the vocal cords. This sound occurs between vowels and in clusters after y.

paaTi	‘half’
paTi	‘a grafted plant’
caTi	‘deceit’
paTa	‘foam’
koyTu	‘harvested’
neyTu	‘weaved’
peyTu	‘showered’

2.2.1.7. [th]

This is an aspirated sound like [ph] during whose production a puff of air accompanies the plosion. The tongue tip presses against the back of the front teeth and blocks the air for a moment and releases it with force. The soft palate is raised and there is no vibration of the vocal cords. This occurs initially and medially in loan words from Sanskrit. This sound is called the voiceless aspirated dental stop.

thaaṇam	‘money’	retham	‘chariot’
thaaraaḷam	‘liberal’	katha	‘story’

2.2.1.8. [d]

During the production of this sound the tongue tip presses against the back of the upper teeth to make a closure as it for the production of [t]. But there is vibration of the vocal cords and so the air obstructed carries voice. The soft palate is raised to prevent the entry of air into the nasal cavity. When the contact is released resulting in a plosion this sound is produced. This occurs initially and medially. It is called voiced dental stop.

deya	'kindness'	maryaada	'gentlemanliness'
duuram	'distance'	pandU	'ball'
doośa	'rice-cake'	aadyam	'first of all'
daaṅam	'gift'	sammaRdam	'pressure'

2.2.1.9. *[t̪]

In producing this sound the tongue tip is tightly pressed against the alveolar ridge behind the upper teeth and the lateral margins of the tongue are in contact with the teeth and gums in such a way as to form a tight closure. The soft palate is raised and there is no vibration of the vocal cords. When the stoppage is released this plosive sound is produced. This sound occurs only in between vowels and that too with length. It is known as the voiceless alveolar stop.

kaaṭṭU	'wind'
paatṭa	'cockroach'
paatṭu	'to winnow'
maaṭṭam	'change'
kayaṭṭam	'progress, promotion'

2.2.1.10. [d̪]

This sound is produced in the same way as [t̪] by making a contact of the tongue tip against the alveolar ridge. The

difference in the manner of production from that of [t̪] is that there is vibration of the vocal cords. The soft palate being raised allows no entry of air into the nasal cavity. This occurs only in clusters and that too after the homorganic nasal. This is described as the voiced alveolar stop.

acch <u>a</u> nde	‘father’s’
e <u>n</u> de	‘my’
ni <u>n</u> de	‘your’

2.2.1.11. [t̪]

To produce this sound the tongue tip is curled so that its underneath portion points upwards and touches against alveopalatal region or the hard palate itself to close the air stream. The vocal cords do not vibrate and no air comes through the nasal cavity because of the raising of velum. When the contact is released a plosive sound is produced. This occurs initially, medially with length and clusters. This is known as the voiceless retroflex stop.

t̪Reyin	‘train’	paṭṭi	‘dog’
t̪ṣiiṇam	‘tiredness’	vaṭṭi	‘basket’
t̪sema	‘patience’	iṣṭam	‘like’
t̪saamam	‘famine’	kaṭṭi	‘party’
t̪seyam	‘tuberculosis’	paṭṭi	‘bird’

2.2.1.12. [t̪ʰ]

This sound is produced in the same manner as [t̪] with the curling of the tongue tip and making a contact with the alveopalatal or palatal region. When the contact is released resulting in plosion, a puff of air accompanies it as in the case of [ph] or [th]. This aspiration makes it different from [t̪]. This sound also is produced while there is no vibration of the vocal cords. The soft palate being raised does not allow the entry of air into the nasal cavity. This

occurs only medially and that too in loan words from Sanskrit. This is known as voiceless aspirated retroflex stop.

paaṭham	'lesson'
kaṭhiṅam	'difficult'
kaṭhaara	'dagger'
viṭṭhi	'fool'

2.2.1.13. [ḍ]

It is another plosive sound produced in the same way as [ṭ]. But it is different from [ṭ] in the aspect of voice. During its production the vocal cords vibrate. The soft palate is raised as in the production of all stop sounds. It occurs initially and medially. This is described as voiced retroflex stop.

ḍeppi	'small box'	ooḍu	'to run'
ḍookṭaR	'doctor'	paaḍam	'field'
ḍRaama	'drama'	kaṅḍu	'saw'
		vaṅḍU	'bee'

2.2.1.14. [c]

In its production the mid part of the tongue is placed in broad and firm contact with the hard palate. The margins of the tongue are in contact with the teeth and the gums laterally. The breath carrying no vibration of vocal cords is then released. A plosive sound is thus obtained, when no air passes through the nasal cavity. This occurs initially, medially with length and in clusters. It is described as the voiceless palatal stop.

ciri	'smile'	pacca	'green'
ceyTu	'did'	koccu	'little'
cattu	'died'	puucca	'cat'

ciitta	'bad'	niścayam	'decision'
ciitti	'cotton cloth'	vRiścikam	'a malayalam month'

2.2.1.15. *[C]

The point of articulation as well as the manner for the production of this sound is the same as for [c]. But the contact of the blade of the tongue with the palate is not firm so that a little air comes out before plosion. There is weak vibration of the vocal cords also. The soft palate is raised allowing no entry of air into the nasal cavity. This sound occurs in between vowels and it is described as weakly voiced palatal fricativised stop.

paaCakam	'cooking'
vaaCakam	'sentence'
aalooCaṅa	'thought, proposal'
viCaaram	'thought'
pariCayam	'acquaintance'

2.2.1.16. [c h]

This sound is produced in the manner as that of [c]. The point of articulation is also same. But the plosion takes place with an accompanying puff of air making it an aspirated sound. This occurs initially and medially in loan words from Sanskrit. It is called the voiceless aspirated stop.

chaaya	'shade'	acchan	'father'
		sveeccha	'one's own desire'

2.2.1.17. [j]

This sound is also produced with the same tongue position and in the same manner as that of [c]. But the breath which is stopped carries vibration of the vocal cords. The soft palate is raised as

in the production of all stop sounds allowing no entry of air into the nasal cavity. This sound occurs initially and medially and is described as the voiced palatal stop.

jaaTi	'caste'	puu ja	'worship'
iaaTakam	'horoscope'	haajaR	'attendance'
jeyam	'victory'	haRji	'petition'
jenmam	'birth'	añju	'fine'
		lejja	'shyness'

2.2.1.18. [k] In the production of this sound, the back of the tongue is raised and it makes contact with the soft palate making a closure of the air current. The soft palate is raised so that no air escapes through the nasal passage. The compressed air is let out when the tongue is released making an explosive sound. During the production of this sound, the vocal cords do not vibrate. This sound occurs initially, medially with length and in clusters.

kaḷa	'weed'	tookku	'gun'
kaaḷa	'ox'	pokku	'to raise'
kara	'bank, land'	cakka	'jack fruit'
kala	'art'	vakku	'edge'
kRimi	'worm'	rektam	'blood'
kRemam	'order'	śakti	'strength'

2.2.1.19. *[K]

This sound is produced by making the tongue to have a contact with the soft palate, holding the air current for a moment as in the production of [K]. But the contact is not as tight as it is for the production of [k]. So a little air escapes even before plosion as in the production of [P], [T] and [C]. Besides, there is weak vibration of the vocal cords. But the soft palate remains raised

This sound occurs in between vowels and in medial clusters after [y] and [l]. This is known as the weakly voiced velar fricativised stop.

paKa _l	'day time'	ceyKa	'doing'
poKa	'smoke'	poyKa	'tank'
aKa _m	'inside'	na _l Ku	'to give'
paKa	'revenge'		
paKu _t i	'half'		

2.2.1.20. [k^h]

During the production of this sound, the back of the tongue presses against the soft palate. But the plosion takes with the accompanying puff of air, as in the production of [ph], [th] and [ch]. The vocal cords do not vibrate and the soft palate raises to prevent the entry of air into the nasal cavity. This, like the other aspirated stops occurs initially and medially in loan words from Sanskrit. This is described as the voiceless aspirated velar stop.

ka _h am	'weight'	meekham	'cloud'
ka _h i	'mine'	na _h am	'nail'
ka _h aa _T i	'fame'	aakhaa _T am	'stroke'

2.2.1.21.

In addition to above mentioned velar stops, another palatalised velar stop occurs with length in between vowels. This is represented as [kk^ç]. This sound is pronounced like [k] but during its articulation the tongue touches the hindmost part of the palate instead of the soft palate as in the case of the production of [k]. This is also a voiceless stop sound during whose production there is no vibration of the vocal cords. No air current escapes through the nasal cavity to nasalise it. This is

distinct from the [k] sound produced with length in intervocal position. The examples given below show the difference between [kk] and [kk̄] making differences in meaning.

vakkU	‘edge’	vakk̄U	‘put’
teekkU	‘teak’	teekk̄U	‘rub’
vikkU	‘stammering’	vikk̄U	‘sell’

2.2.1.22. [g]

During the production of this sound the back part of the tongue makes contact with the soft palate as in the production of [k]. But the air current held up by the stoppage carries vibration of the vocal cords. The soft palate is raised stopping the escape of air through the nasal passage. This sound occurs initially and medially. The descriptive label for this sound is voiced velar stop.

geTi	‘direction’	veegam	‘speed’
gusti	‘wrestling’	paṅgu	‘share’
giiTam	‘song’	vaRgam	‘race’

2.2.1.23.

It is to be noted that the voiced stops b, d, ḍ, j and g do not have their aspirated counterparts bh, dh, ḍh, jh and gh like the voiceless stops. The voiced aspirated sounds of Sanskrit loans are either deaspirated or devoiced in Malayalam.

bhaar >	phaaram / baaram	‘weight’
bhaaryaa >	phaarya / baarya	‘wife’
dhan >	thanam / danam	‘wealth’
madhur >	mathuram / maduram	‘weight’

2.2.2. Nasals**2.2.2.1. [m]**

In the production of this sound the lips are firmly pressed against each other so that there is no escape of air stream for a while. The soft palate is lowered and the air comes freely through the nasal cavity. The vocal cords are vibrated. This occurs in the initial, medial and final positions. The descriptive label for this sound is bilabial nasal.

mala	‘mountain’	cuma	‘cough	nakham	‘nail’
mattU	‘churning rod’	aama	‘tortoise’	koḷam	‘pond’
maṅasU	‘mind’	amma	‘mother’	kalam	‘pot’
maṅṅU	‘soil’	cembu	‘copper’	samayam	‘time’
maavU	‘mango tree’	tumbi	‘beetle’	koopam	‘anger’

2.2.2.2. [n]

During the production of this sound the tip of the tongue touches the back of the upper front teeth. The soft palate is lowered so that air escapes through the nasal passage. Vocal cords vibrate. It occurs in the initial and medial position.

nammaḷ	‘we’ (incl)	muunnU	‘three’
nalla	‘good’	panni	‘pig’
naaḍU	‘country’	vannu	‘came’

2.2.2.3. [ŋ]

In the production of this sound the tip of the tongue firmly presses against the alveolar ridge to block the air passage. The soft palate is lowered allowing the air to pass through the nasal cavity. The vocal cords vibrate. This occurs in the medial and final positions. This is the alveolar nasal.

a <u>ṅ</u> a	'elephant'	ava <u>ṅ</u>	'he'
pa <u>ṅ</u> i	'fever'	accha <u>ṅ</u>	'father'
ka <u>ṅ</u> ni	a malayalam month' unmarried girl	ma <u>ṅ</u>	'deer'

2.2.2.4. [ṅ]

In the production of this sound the tongue tip is curled back and it touches the palate thereby making a closure of the air passage. The soft palate is lowered letting the air into the nasal cavity. The vocal cords vibrate. This sound occurs in the medial position. It is the retroflex nasal.

pa <u>ṅ</u> am	'money'	ma <u>ṅ</u> U	'sand'
ka <u>ṅ</u> u	'to see'	pu <u>ṅ</u> U	'sore'
ma <u>ṅ</u> am	'smell'	ka <u>ṅ</u> U	'eye'
co <u>ṅ</u> a	'smartness'	co <u>ṅ</u> naambU	'lime'

2.2.2.5. [ṅ̃]

In the production of this nasal sound, the mid part of the tongue touches the hard palate closing the air flow for a while. The soft palate is lowered and the air comes through the nose. The vocal cords vibrate. This occurs in the initial and medial positions. Medially it occurs only with length or with homo-organic stop *i.e.*, [j]. This is known as the palatal nasal.

ṅ̃ <u>a</u> ṅ̃	'I'	paṅ̃jaara	'sugar'
ṅ̃aṅ̃ <u>ḍ</u> U	'crab'	aṅ̃ju	'five'
ṅ̃aayaR	'Sunday'	maṅ̃ṅ̃a	'yellow'
ṅ̃aaRa	'a tree'	kuṅ̃ṅ̃U	'baby'
ṅ̃aṅ̃ṅ̃aḷ	'we' (excl)	saṅ̃ji	'bag'

2.2.2.6. [ŋ]

During the production of this sound the mouth is completely blocked by raising the back of the tongue to touch the front part of the soft palate. The soft palate is lowered so that air can pass through the nose. The vocal cords vibrate. It occurs medially with lenth or in clusters. It is called the velar nasal.

maañña	'mango'	pañti	'row'
teeñña	'coconut'	pañgU	'share'
taññu	'to halt'	vañgU	'hole'

2.2.3. Fricatives

2.2.3.1. [f]

During the production of this sound, the lower lip touches the back of the upper teeth but does not make a closure to block the air stream. Through the passage in between, the air forces its way making a hissing sound. The soft palate is raised and the vocal cords do not vibrate. This sound occurs initially and medially in loan words from English. This is voiceless labiodental fricative.

'fæŋ'	'fan'	aafisU	'office'
fooŋ	'phone'	aafiisaR	'officer'
fiiisU	'fees'		

2.2.3.2. [s]

During the production of this sound the blade of the tongue approaches the alveolar ridge allowing the air to squeeze out producing a hissing noise. The soft palate is raised and the vocal cords do not vibrate. This sound occurs initially and medially. It is called the voiceless blade alveolar fricative.

sammata <u>m</u>	'consent'	maasam	'month'
sammaa <u>n</u> am	'gift'	vayasU	'age'
saari	'sari'	vastu	'property'

2.2.3 3. [ʃ]

The tip of the tongue curls back and reaches towards the hard palate leaving space for the air to squeeze out. The soft palate is raised and the vocal cords do not vibrate. The air squeezes out producing a hissing sound. This occurs in the initial and medial position. It is called the voiceless retroflex nasal.

ʃaappu	'shop'	vaRʃam	'year'
ʃaʃti	'sixth'	kaʃtam	'difficult'
		kaʃaayam	'decoction'
		viʃam	'poison'
		paʃti	'bird'

2.2.3.4. [ʃ]

During the production of this sound the mid part of tongue is raised towards the front part of the palate allowing the air to squeeze through in between producing the hissing sound. The sides of the tongue are in firm contact with the teeth and gum preventing the lateral escape of the air. The passage between the tongue and the palate is a little broader than that for [s]. The soft palate is raised and there is no vibration of the vocal cords. This sound occurs in the initial and medial position. It is called the voiceless palatal fricative.

śakti	'strength'	paśa	'gum'
śaku <u>n</u> am	'omen'	vaśam	'side'
śalyam	'trouble'	vaaśi	'obstinacy'
śa <u>n</u> i	'saturn	viśappu	'hunger'

2.2,3.5. [h]

In its production the mouth is kept as in the production of any vowel. The air stream is then squeezed out in friction. The soft palate is raised. The vocal cords vibrate. It occurs in the initial and medial position and is called the voiced glottal fricative.

haaram	'garland'	mahaa	'great'
haajaR	'attendance'	graham	'planet'
haRji	'complaint'	palahaaram	'snacks'

2.2.4. Laterals

2.2.4.1. [l]

In the production of this sound the tip of the tongue is placed on the teeth ridge in such a way that there is complete blockage of air in the middle of the mouth but air is let out through the sides of the tongue. The soft palate is raised. The vocal cords vibrate. This sound occurs in the initial, medial and final positions. It is called the voiced alveolar lateral.

lookam	'world'	veela	'job'	paal	'milk'
liila	'game'	vala	'net'	vaal	'tail'
leelam	'auction'	tala	'head'	mutal	'capital'

2.2.4.2. *[ɭ]

For the production of this sound the tongue tip is curled back and it touches the palate closing the air passage but lets the air stream out through the sides of the tongue. The soft palate is raised. The vocal cords vibrate. This sound occurs in the initial, medial and final positions. The initial occurrence is limited only to one word. This sound is called the voiced retroflex nasal.

looha	'dress of the christian priest'	va a	'bangle'	vaa	'sword'
		va am	'boat'	tee	'scorpion'
		ta u	'to push'		

2.2.4.3. *[l]

For producing this sound the tongue tip is curled back and it reaches towards the palate making a partial closure. The air is let out through the sides as well as over the tongue, with slight friction. The soft palate is raised and the vocal cords vibrate. This sound occurs medially. It is called the voiced retroflexed palatal fricativised lateral.

ma a	'rain'
vaa a	'plantains'
ku ji	'pit'
pa m	'fruit'
pu am	'worm'

2.2.5. Flap and trill

2.2.5.1. [r]

For producing this sound the tongue touches the alveolar ridge for a single tap. The rest of the tongue is low and during the tap it is laterally contracted. The soft palate is raised. The vocal cord vibrates. It occurs initially and medially. It is called as the voiced alveolar flap.

raatRi	'night'	kari	'soot'
rektam	'blood'	vari	'line'
roomam	'hair'	ciri	'smile'
		graamam	'village'

2.2.5.2. *[R]

In the production of this sound the tip of the tongue makes rapid vibrations against the alveolar ridge. The soft palate is raised to prevent the escape of air through the nasal cavity. The vocal cords vibrate. This occurs in the initial, medial and final positions. It is called as the voiced alveolar trill.

RooḍU	'road'	kaRi	'curry'	kayaR	'rope'
Roṭṭi	'bread'	taRi	'loom'	payaR	'pulses'
Raaṇi	'queen'	coRi	'itches'	ṅaayaR	'Sunday'
		kaRpuuram	'camphor'		
		vaRgam	'race'		
		aaRti	'desire'		
		maRdam	'pressure'		

2.2.6. Frictionless continuants

2.2.6.1. [v]

In producing this sound, the lower lip touches the back of the upper front teeth and in that position air is let out chiefly through the sides without any friction. The soft palate is raised. The vocal cords vibrate. It occurs initially and medially. It is called the voiced labiodental frictionless continuant.

vannu	'came'	avaṅ	'he'
vara	'line'	kavi	'poet'
vaṭṭi	'dried up'	covva	'Tuesday, Mars'

2.2.6.2. [y]

For the production of this sound the mid part of the tongue raises and nearly touches the palate but the air escapes without any friction, through the sides as well as above the tongue. The

soft palate is raised. The vocal cords vibrate. This occurs initially, medially and finally. It is called the voiced palatal frictionless continuant.

yendRam	'machine'	paayal	'moss'	kay	'hand'
yoogam	'luck'	kayaR	'rope'	ney	'ghee'
yoojikku	'to agree'	ceyyu	to do'		

3. Appendices

3.1. Appendix 1—Contrasting pairs for drill

3.1.1. Vowels

i and ii

y _i ri	‘sit’	y _{ii} Ra <u>n</u>	‘wet’
y _i ḍu	‘put’	y _{ii} ḍU	‘mortgage’
miTi	‘limit’	miiTe	‘above’
piḍi	‘handle’	biiḍi	‘beedi’
ciṭṭi	‘chit’	ciṭṭi	‘cotton’
maTi	‘enough’	tii	‘fire’
pa <u>n</u> i	‘fever’	nii	‘you’ (sg)

i and e

y _i innU	‘today’	y _e ennU	‘which day’
y _i ippooḷ	‘now’	y _e eppooḷ	‘when’
y _i iṭṭu	‘put’	y _e eṭṭU	‘eight’
kiṭṭi	‘got’	keṭṭi	‘tied’
ciṭṭi	‘chit’	ceṭṭi	‘a surname’
pa <u>n</u> i	‘fever’	ava <u>n</u> e	‘him’

ii and ee

y _{ii} iinda	‘a fruit’	eendu	‘to limp’
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tiiram	'shore'	teerU	'chariot'
tii	'fire'	atee	'that itself'

i and a

^y innU	'today'	annU	'that day'
^y ippool	'now'	appool	'then'
^y ivide	'here'	avide	'there'
^y innane	'this way'	annane	'that way'
kiṭṭi	'got'	kaṭṭi	'thickness'
piḍi	'handle'	paḍi	'step'
cirikku	'to smile'	carikku	'to tilt'
eli	'rat'	ela	'leaf'
paali	'a language'	paala	'a tree'

ii and aa

^y iirU	'lice'	aarU	'who'
^y iisvaran	'God'	aaśvaasam	'relief'
kiilU	'tar'	kaalU	'leg'
viiran	'brave man'	vaaram	'week'
viiṭṭi	'returned'	vaaṭṭi	'dried up'
eḍii	'the term of a address for female singular'	eḍaa	'the term of address for male singular'

i and o

^y iinnU	'today'	^w onnU	'one'
^y iru	'two'	^w oru	'one'

kiṭṭi	‘got’	koṭṭi	‘knocked’
piḍi	‘handle’	poḍi	‘dust’

ii and oo

^y iirU	‘lice’	^w oorU	‘acidity in water’
^y iiRpam	‘dampness’	^w oorMa	‘memory’
^y iiyal	‘a fly’	^w oovU	‘an outlet’
tiiram	‘shore’	tooran	‘a dish’
kiira	‘a plant’	koora	‘a fish’
tii	‘fire’	aToo	‘is that’

i and u

^y iruṭṭi	‘darkened’	^w uruṭṭi	‘rolled’
^y ippam	‘now’	^w uppu	‘salt’
^y ima	‘eyelash’	^w uma	‘a name’
kiṭṭi	‘got’	kuṭṭi	‘child’
cirikku	‘to smile’	curukku	‘to brief’

e and ee

^y ela	‘leaf’	^y eela	‘field’
^y ettu	‘to reach’	^y eettan	‘a plantain’
cela	‘few’	ceela	‘sari’
vela	‘price’	veela	‘work’
avane	‘him’	avaneē	‘he only’

e and a

y _e nnu	‘which day’	annu	‘that day’
y _e ppooḷ	‘when’	appooḷ	‘then’
y _e vide	‘where’	avide	‘there’
keṭṭi	‘tied’	kaṭṭi	‘thickness’
peṭṭi	‘box’	paṭṭi	‘dog’
ceṭṭi	‘a surname’	caṭṭi	‘pot’
veṭṭi	‘cut’	vaṭṭi	‘basket’
avane	‘him’	pana	‘palmyra tree’

ee and aa

y _{ee} ela	‘field’	aala	‘blacksmith’s workshop’
y _{ee} Ri	‘increased’	aaRi	‘cooled’
keeRi	‘climbed’	kaaRi	‘spat with noise’
peeḍi	‘fear’	paḍi	‘sang’
aTee	‘that itself’	aTaa	‘there, yonder’

e and o

y _e nnu	‘which day’	w _o nnu	‘one’
y _e ri	‘hot taste’	w _o ru	‘one’
y _e ruma	‘she buffalo’	w _o ruma	‘unity’
vela	‘price’	kola	‘murder’

ee and oo

y _{ee} ela	‘field’	w _{oo} la	‘palm leaf’
y _{ee} lam	‘cardamom’	w _{oo} lan	‘a curry’

ceela	'sari'	coola	'shade'
peerU	'name'	poorU	'fight'
teetta	'projection'	toot <u>t</u> a	'(he) who failed'
avanee	'he only'	avanoo	'is he?'

e and u

^y eraṭṭi	'double'	^w uruṭṭi	'rolled'
^y eḷḷU	'sesame'	^w uḷḷU	'mind'
^y eḍukku	'to take'	^w uḍukku	'to wear'
keṭṭi	'tied'	kuṭṭi	'child'
ceera	'snake'	cuura	'a fish'
avanee	'he only'	manuu	'Manu' (voc)

a and aa

aṇa	'dam'	aaṇa	'swearing'
amma	'mother'	aama	'tortoise'
ala	'wave'	aala	'blacksmith's workshop'
kalam	'pot'	kaalam	'time, season'
kaḷa	'weed'	kaaḷa	'ox'
vaḷa	'bangle'	vaaḷa	'a fish'
taḷam	'hall'	taaḷam	'rhythm'
paṬa	'foam'	aṬaa	'there, yonder'

a and o

aruma	'bet'	^w oruma	'unity'
annU	'that day'	^w onnU	'one'

kannU	'calf, young one'	konnu	'killed'
kallU	'stone'	kollu	'kill'

aa and oo

aarU	'who'	^w oorU	'acidity in water'
aala	'blacksmith's workshop'	^w oola	'palm leaf'
paalU	'milk'	poole	'like'
taaram	'star'	toora <u>n</u>	'a dish'
caala	'a place'	coola	'shade'
paara	'crowbar'	poora	'not sufficient'
kaara	'a fish'	koora	'a fish'
aTaa	'there, yonder'	aToo	'is that' ?

a and u

amma	'mother'	^w umma	'kiss'
ala	'wave'	^w ula	'oven, fireplace'
aḍukku	'to approach'	^w uḍukku	'to wear'
kaṭṭi	'thickness'	kuṭṭi	'child'
caṭṭi	'pot'	cuṭṭi	'locket'

aa and uu

aama	'tortoise'	^w uuma	'dumb'
aana	'elephant'	^w uuna	'gum'
kaara	'a fish'	kuura	'roof'
caal	'channel'	cuul	'broom stick'

o and u

w occa	'noise'	w ucca	'afternoon'
w onnU	'one'	w unnam	'aim'
w oraa	'one person'	w uru u	'to roll'
toppi	'hat'	tuppi	'spat'
kottti	'knocked'	ku tti	'child'
co tti	'became lean'	cu tti	'locket'

o and oo

w oppam	'together'	w ooRma	'memory'
w orU	'one'	w oorU	'acidity in water'
toppi	'hat'	tooppU	'grove'
ko ttu	'to knock'	koo ttU	'coat'
to tti	'bucket'	too tti	'scavanger'

u and uu

w uma	'a name'	w uuma	'dumb'
w unnam	'aim'	w uunam	'dificiency'
kuru	'seed'	kuura	'roof'
puRam	'page'	puuram	'a star'
kuppi	'bottle'	kuuppi	'folded'
curam	'tunnel, pass'	cuura	'a fish'

u and U

teekku	'to rub'	teekkU	'teak'
vakku	'to place'	vakkU	'edge'
i du	'to put'	i dU	'put' (singular imperative)

i, e, a, o and u

y _i nnU	y _e nnU	w _a nnU	w _o nnU	w _u nnam
kiṭṭi	keṭṭi	kaṭṭi	koṭṭi	kuṭṭi
ciṭṭi	ceṭṭi	caṭṭi	coṭṭi	cuṭṭi
	peṭṭi	paṭṭi	poṭṭi	
		taṭṭi	toṭṭi	

3.1.2. Consonants

3.1.2.1. Stops

p and b

paalam	'bridge'	baalan	'boy'
paala	'a tree'	baala	'girl'
paava	'doll'	baava	'a name'

p and t

pappa	'a name'	tatta	'parrot'
pala	'many'	tala	'head'
paalam	'bridge'	taalam	'plate'
paRa	'tell'	taRa	'floor'
paaRaavU	'guard'	taaRaavU	'duck'
paali	'a language'	taali	'the ornament which forms the symbol of marriage for Hindus'
paTi	'grafted plant'	tavi	'laddle'
kuppi	'bottle'	kutti	'pierced'

p and ṭ

tappi	'searched'	vaṭṭi	'dried up'
tuppi	'spat'	cuṭṭi	'revolved'
kuppi	'bottle'	kuṭṭi	'stump'

p and t̥			
appam	'cake'	caṭṭam	'rule'
vaapaa	'father'	caaṭṭa	'whip'
p and c			
pattU	'ten'	cattu	'died'
pacca	'green'	cappa	'uneven'
p and k			
pallU	'tooth'	tallU	'beating'
pappa	'name'	takka	'suitable'
appam	'cake'	akkam	'number'
t and t̥			
patti	'hood'	paṭṭi	'stuck'
pattal	'sticking'	vaṭṭal	'fried eatable'
t and t̥			
patti	'hood'	paṭṭi	'dog'
katti	'knife'	kaṭṭi	'thickness'
t and c			
taccu	'stitched'	tatta	'parrot'
cattu	'died'	pacca	'green'
tinnu	'ate'	cin̄ni	'scattered'
takka	'suitable'	cakka	'jack fruit'
t and k			
takka	'suitable'	kakka	'shell'
paṭa	'foam'	paKa	'revenge'

c and k

caakkU 'sac' kaaccu 'to warm'

vaaccU 'watch' vaakkU 'word'

Nasals

3.1.2.2.

m and n

maamaṇ 'uncle' naamam 'name'

pammi 'stealthily' panni 'pig'

kammi 'deficiency' kannU 'calf'

m and ṇ

aama 'tortoise' aṇa 'elephant'

tammil 'in between' tannil 'in oneself'

vaamam 'left' vaṇam 'sky'

taamasam 'delay' paṇakam 'drink'

m and ṇ

aama 'tortoise' aṇa 'swearing'

koomaram 'devil dancer' caṇakam 'cowdung'

amma 'mother' aṇṇi 'squirrel'

kammi 'deficiency' kaṇṇi 'link'

m, ṇ and ṇ

aama aṇa aṇa

m, n and ñ

pammi pañṇi pañṇi

m and ñ

aama 'tortoise' mañña 'mango'

n and ñ

namma	'we' (incl)	ñañña	'we' (excl)
-------	-------------	-------	-------------

ñ and ñ

mañña	'turmeric'	mañña	'dimness'
-------	------------	-------	-----------

mm, nn, nn, nn, ññ and ññ

kammi	kannU	kann̩i	kaṇṇi	kaññi	maññi
'deficiency'	'calf'	'a month'	'link'	'gruel'	'faded'

3.1.2.3. Laterals

l and |

kali	'anger'	ka i	'game'
kala	'art'	ka a	'weed'
tala	'head'	ta a	'anklet'
talam	'surface'	ta am	'hall'
vala	'net'	va a	'bangle'
paalam	'bridge'	paa am	'rail'
kaalam	'season'	kaa an	'a curry'
vaal	'tail'	vaa	'sword'
aval	'beaten rice'	ava	'she'

l and |

mala	'mountain'	ma a	'rain'
vali	'to pull'	va i	'path'
toli	'skin'	to i	'kick'
palam	'a measure'	pa am	'fruit'
kali	'anger'	ka i	'a measurement of length'

aala	'blaksmith's workshop'	aa am	'depth'
vaala	'a fish'	vaa a	'plantain'
and			
vaaja	'a fish'	vaa a	'plantain'
coo am	'maize'	caa i	'an insect'
paa am	'rail'	aa am	'depth'
ku i	'bath'	ku i	'pit'
cu i	'wrinkle'	cu i	'whirl pool'
poi yu	'to be broken'	poi yu	'to drop off'

l, ! and !

kali	ka i	ka i
vaalU	vaa U	vaa U
koolU	koo U	koo a
taalam	taa am	taa e

| and d

ku i kku	'to bathe'	ku d kku	'to drink'
po i kku	'to destroy'	po d kku	'to powder'
ta i kku	'to sprinkle'	ta d kku	'to be fat'

| and d

pa am	'fruit'	pa dam	'picture'
va i	'path'	va di	'stick'
ka i	'a measurement of length'	ka di	'bite'
cuu u	'to pierce'	cuu dU	'heat'

koola	'bribery'	kooḍi	'crore'
vaalu	'to live'	vaaḍu	'to dry up'

3.1.2.4. Flap and Trill

kari	'soot'	kaRi	'curry'
tari	'dust'	taRi	'loom'
kara	'land'	kaRa	'stain'
cori	'shower'	coRi	'itches'
ciri	'smile'	ciRi	'lip'
paara	'crowbar'	paaRa	'rock'

r, R, l, ḷ and ḽ

kari	kaRi	kali	kaḷi	kḷi
tari	taRi	—	taḷi	—
vaara	—	vaala	vaaḷa	vaḷi
vara	—	vala	vaḷa	vaḷa
paara	paaRa	paala	paaḷa	paalU

3.1.2.5. Continuants

v and y

covva	'mars'	koyyu	'to harvest'
oovU	'cutlet'	pooyi	'went'

3.1.3. Some more words for drill

Words of different canonical shapes

1. CVCV

kaḍi	'bite'	kari	'coke'
kara	'land'	kaRa	'stain'

kaḷi	'play'	kali	'anger'
kali	'roll of thread'	kiḷi	'bird'
kili	'bag'	kuRi	'raffle'
cori	'shower'	coRi	'itches'
tala	'head'	taḷa	'anklet'
paṇi	'fever'	paṇi	'job'
paKa	'grudge'	poKa	'smoke'
mala	'mountain'	mala	'rain'
vala	'net'	vaḷa	'bangle'
śaṇi	'saturn'	śeri	'right'

2. CVCCV

kañṇi	'gruel'	kaṇṇi	'link'
kaṇṇi	'name of a month'	kammi	'deficiency'
kallu	'stone'	kaḷḷu	'toddy'
kunnU	'hill'	kuñṇU	'baby'
canda	'market'	caṇḍa	'quarrel'
taṭṭu	'hit'	taṭṭi	'frame'
tekkU	'south'	teṇṇU	'coconut tree'
pallU	'teeth'	pullU	'grass'
mañṇU	'snow'	maṇṇU	'sand'
muṭṭa	'egg'	moṭṭa	'shaven head'
veṇḍa	'ladies finger'	vaṇḍU	'bee'
śakti	'strength'	śaṭRu	'enemy'

3. CVVCV

kaaḍU	'forest'	coora	'blood'
-------	----------	-------	---------

kaalU	'leg'	cooRu	'rice'
kaaḷa	'bull'	jaaTi	'caste'
kaaśU	'money'	jiivi	'creature'
kiiśa	'pocket'	naaḷU	'day'
kuuli	'wage'	naavU	'tongue'
cuuḍU	'heat'	paaRa	'rock'
kuura	'roof'	paara	'crowbar'
cuula	'kiln'	paava	'doll'
		puuvU	'flower'

4. CVCVCV

kaTakU	'door'	kaḍuva	'tiger'
karaḍi	'bear'	kaḷavU	'theft'
kalivU	'ability'	celarU	'some people'
celavU	'expenditure'	tavaṇa	'instalment'
taKiḍU	'a piece of tiny metal'	pakuTi	'half'
paTivU	'practice'	valuTU	'right'
veRaKU	'firewood'		

5. CVVCCV

kaappi	'coffee'	paaṭṭU	'song'
kaaṭṭU	'wind'	paambU	'snake'
caaRjU	'charge'	puucca	'cat'
ciippU	'comb'	poottU	'buffalo'
teekkU	'teakwood'		
teenṇa	'coconut'		

6. CVCVM

kalam	'pot'	kalam	'thrashing floor'
taram	'sort'	taḷam	'big room'
paḍam	'picture'	paṇam	'money'
maram	'tree'	moRam	'winnownig basket'

7. CVCVCVM

jenanam	'birth'	maranam	'death'
divasam	'day'	dehanam	'burning digestion'
pakaram	'substitute'	takaram	'tin'

8. CVVCVM

kaalam	'season'	kaalan	'a curry'
caayam	'paint'	caaram	'ash'
cuuḷam	'whistle'	cooḷam	'maize'
daaham	'thirst'	duuram	'distance'
neeram	'time'	niiḷam	'blue'
maanam	'prestige'	maasam	'month'
laabam	'profit'	looham	'metal'

9. CVCCVM

dukkham	'sorrow'	nakham	'nail'
mokham	'face'	meccam	'better'
vaṇṇam	'width'	vallam	'basket out of lever'

10. CVCVCCU

kaRuppU	'black'	naRukkU	'raffle'
kuruppU	'sprout'	naḍUkkU	'middle'

cerippU	‘slipper’	vaḷakkU	‘quarrel’
comappU	‘red’	veḷakkU	‘lamp’
taṇuppU	‘cold’		
tarippU	‘pairs’		

11. CVCVC

kaḍal	‘sea’	kayaR	‘rope’
taṇal	‘shade’	kaṇal	‘burning charcoal’
maḱaṇ	‘son’	makaḷ	‘daughter’
vayal	‘field’	veyil	‘heat of the sun’

12. CVCCVC

kappal	‘ship’	kammal	‘ear ornament’
kaḷḷan	‘thief’	kallam	‘lie’
kollaṇ	‘blacksmith’	kollam	‘year’
ṇāṇṇaḷ	‘we’ (excl)	nammaḷ	‘we’ (incl)

13. VCCV

^w ucca	‘afternoon’	^w ucci	‘peak of the head’
eṇṇa	‘oil’	ellU	‘bone’
eṭṭU	‘eight’	ennU	‘which day’

14. VCVC

ayal	‘neighbourhood’		
avaḷ	‘she’	}	Distant demonstrative
avaR	‘they’		
ivan	‘he’	}	Proximate demonstrative
ivaḷ	‘she’		
ivaR	‘they’		

15. VCVCCV

akattU	‘inside’	akatṭU	‘separate’
irippU	‘sitting’	irumbU	‘iron’
irunnu	‘sat’	iratṭi	‘double’
urukkU	‘steel’	erappU	‘noise’
eRakkU	‘unload’	ninakkU	‘for you’
eṇikkU	‘for me’		

3.2. A Note on the Phonemics of Malayalam

3.2.1. Vowels

Malayalam has eleven vowel phonemes, represented in this discussion as /i, ii, e, ee, a, aa, o, oo, u, uu / and /U/. The short vowels /i e, a, o/ and /u/ in the word final position are a little longer than in other environments. They have half long duration in those environments which is non-phonemic. In monosyllabic words, finally all vowels are long.

The short vowel /o/ does not occur in the word final position. The front vowels /i/ and /e/ and back vowels /o/ and /u/ have an onglide of /y/ and /w/ respectively in the word initial position. The low back vowel /a/ has an allophone [ə] a central vowel in the medial position excepting the first syllable. This [ə] does not occur with length. /U/ occurs in the medial position in free variation with /u/. Otherwise it occurs only word finally.

In addition to the above six vowels, there is a low front vowel [æ] which occurs with length in certain loan words from English. Its distribution is limited only to medial position.

3.2.2. Consonants

Consonants of Malayalam include 11 stops, 6 nasals, 4 fricatives, 3 laterals, 1 flap, 1 trill and 2 frictionless continuants. Of these, stops, nasals, 2 laterals and the continuants contrast

with length in the intervocal position. They are known as geminates.

Of the eleven stops ten are grouped into five pairs each with voiced and voiceless counterparts. The alveolar stop has no voiced counterpart. It has only a voiced allophone which occurs after homorganic nasal.

The voiceless stops /p c t k/ have a very lenis voiced fricativised allophone each. In the case of /p/ and /c/ this allophone occurs intervocally. With respect to /t/ this occurs in between vowels as well as in consonant clusters after /y/. The voiced fricativised allophone of /k/ occurs intervocally and also in consonant clusters after /l/ and /y/. All these allophones were represented in this reader with their corresponding capital letters [P T C K] respectively. All stop sounds occurring after homorganic nasals are considered as allophones of voiced stop phonemes.

In addition to the four fricatives /s ʃ ʒ/ and /h/ there is another labiodental voiceless fricative /f/ which occurs in certain English loans. This is also given only a marginal status like the vowel phoneme /æ/. All these fricatives except /h/ are voiceless.

Among the six nasals only /m/ occurs in all the three positions. /ñ/ and /n/ occur non-finally whereas /ɲ/ and /ŋ/ occur non-initially. /ñ/ occurs only medially either with length or in consonant clusters. All the nasals occur as geminates medially.

Out of the three laterals /l/ occurs in all the three environments *i.e.*, initially, medially and finally. /l/ mostly occurs in the medial and final positions. But a single occurrence of /l/ in the initial position is also noted. /l/ and /l/ have geminates intervocally. /l/ occurs only in the medial position.

The flap /r/ occurs non-finally but the trill /R/ occurs initially, medially and finally. Continuants /v/ and /y/ occur with length in the intervocal position. /v/ does not occur non-finally whereas /y/ occurs initially, medially and finally.

Regarding aspiration, in Malayalam, there is the distinction between voiceless aspirated and unaspirated sounds. The aspirated sounds occur in Sanskrit loans. But these are not given independent phonemic status considering the principle of economy. They can be considered as sequences of a stop +h. This is possible because there is no such cluster of a stop +h which will be in contrast with this aspirated stop in Malayalam. The voiced aspirated stops of Sanskrit words 'are pronounced either as voiceless aspirated sounds or as just voiced stops without aspiration. In other words, voiced aspirated sounds of Sanskrit may either be deaspirated or devoiced in Malayalam.

3.2.3. Phonemic Inventory

Vowels-11

i, ii	u, uu
	U
e, ee	o, oo
a, aa	

Consonants-28

	Bila- bial	Labio- dental	Dental	Alve- olar	Retro- flex	Palatal	Velar	Glottal
Stops	pb		td	t̪	ʈɖ	cj	kg	
Nasals	m		n	ɳ	ɳ̠	ɲ	ŋ	
Frica- tives				s	ʃ	ʃ		h
Laterals				l	ɭ	ɭ		
Flaps				r				
Trill				R				
Frictionless continuants		v				y		

Marginal phonemes-2

- /æ/ Low front vowel
- /f/ Voiceless labiodental frictionless continuant

3.3. *Phoneme-Grapheme Correspondence*

3.3.1.

Malayalam script is broadly phonemic though in certain cases phonemes and graphemes may not correspond to each other exactly, resulting in an overlap for a learner. In total the graphemes are more in number (49) than the phonemes (39).

3.3.2.

Examining the phoneme-grapheme equivalents, we find that exact phoneme-grapheme equivalents are possible in the case of the following units. They are :

1. The ten vowels (five pairs of short and long vowels)
2. All the voiceless and voiced stops except the alveolar stop /t/
3. The four nasals /m ṅ ñ ṇ/
4. The laterals /l ɭ l /
5. The flap and trill /r R /
6. The frictionless continuants /v y /

In the following instances however there is no one to one correspondance either because of the sharing of the same symbol by two phonemes or because of the availability of a separate symbol for a phoneme sequence which already has independent graphemes. The details are given below.

1. The alveolar stop is represented by the duplication of the symbol for the alveolar trill /R/

2. The dental and alveolar nasal phonemes share a common graphemic symbol.

3. The phonemic sequence /Ri/ or /Ru/ has an independent graphemic representations in conformity with the Devanagari script. This occurs in the case of Sanskrit loans only.

4. The phonemic sequences /ay/, /av/, /ph/, /bh/, /th/, /dh/, /ṭh/, /ḍh/, /ch/, /jh/, /kh/ and /gh/ have separate graphemes.

5. The short high unrounded vowel phoneme /U/ does not have a corresponding grapheme. In the word final position it is represented by a diacritical mark put above the allograph of the grapheme corresponding to the vowel phoneme /u/. Medially it has the same symbol as for /u/.

3.3.3.

The marginal phonemes /æ/ and /f/ are represented by the allograph of the grapheme corresponding to the phoneme /aa/ and the grapheme representing the phonemic sequence of voiceless bilabial stop +h respectively.

3.3.4.

The geminated consonants are represented by the duplicated symbols of the respective consonants. The duplication is either complete or partial.

3.3.5.

Though the voiced retroflex stop phoneme has a corresponding grapheme, its occurrence in that way is very limited. Because in the intervocal position, in most of the words this is represented by the grapheme for /ṭ/ the voiceless retroflex stop. This is always an area of confusion for the new learner.

3.3.6.

Out of the consonant phonemes /n ṇ y R l ḷ/ which can occur even without a vowel in the medial or final positions have independent modified symbols. All consonants, if they are to be represented as unreleased *i.e.*, pronounced without a vowel, a diacritical mark is put above the symbol representing the concerned consonant.

3.3.7.

The graphemic representation of the sequence the dental nasal + any stop should be pronounced as the homorganic nasal + stop.

3.3.8.

The graphemic representation for the sequence a nasal + voiceless homorganic stop such as / nt, n̥t̥, ñc / should be read as the nasal + homorganic voiced stop as / nd, n̥d̥, ñj /.

3.3.9.

The symbol O of the orthography is to be read as /am/ when it is in the final position. Medially it represents either the phoneme /m/ or the homorganic nasal corresponding to the following stop.

3.3.10.

The dental or velar nasal+voiced stop cluster represented by the corresponding graphemes are either pronounced in the same way (*i.e.*, nasal+voiced stop) or as nasal+nasal cluster.

3.3.11.

The graphemic representation with the graphemes for /k/ and /s/ are pronounced as /t̥s̥/ cluster. This occurs either word initially or word medially.

Note—Examples for all the statements made, are given in the illustrative chart which follows this note.

3.3.12.

Example chart for statements made in 3.3.2 to 3.3.11.

3.3.2.

1. /i/ /ii/ /e/ /ee/ /a/ /aa/ /o/ /oo/

ഇ ഇു എ ഏ അ അതു ഒ ഓ

/u/ /uu/

ഉ ഉു
2. /p/ /b/ /t/ /d/ /t/ /d/ /c/ /j/ /k/ /g/

പ ബ ത ദ ട ള ച ജ ക ഗ
3. /m/ /n/ /ñ/ /ṅ/

മ ന ഞ ണ
4. /l/ /l/ /l/

ല ല്ല ഴ
5. /r/ /R/

ര റ
6. /v/ /y/

വ യ
7. /t/

ട റ്റ
8. /n/ and /ṅ/

ന
9. /Ri/ or /Ru/

ഋ
10. /ay/ /av/ /ph/ /bh/ /th/ /dh/ /th/ /ḍ/

ഏ ഐ ഹ ഭ ഡ ഡ റ റ

/ch/ /jh/ /kh/ /gh/

ഛ ഞ ഞ ഞ

11. /U/ as in /pU/ /tU/ /kU/ etc.
 പു തു കു

3.3.3.

/æ/ as in /kyæmaRa/ 'camera'
 കയാമറ

/f/ as in /fisU/ 'fees'
 ഫീസ്

3.3.4.

/pp/	/bb/	/tt/	/dd/	/tt̪/	/dd̪/	/cc/	/jj/
പ്പ	ബ്ബ	ത്ത	ദ്ദ	ട്ട	ഢ്	ച്	ജ്ജ
/kk/	/gg/	/mm/	/nn/ and /n̪n/	/ŋŋ/	/ññ/	/ŋ̃ŋ̃/	
ക	ഗ്ഗ	മ്മ	ന്ന ന്ന̪	ണ്ണ്	ഞ	ങ്ങ	
/vv/	/yy/	/ll/	/ll̪/	/ss/	/ss̪/		
വ	യ	ല	ല̪	സ്സ	സ̪		

3.3.5.

/paaḍu/ 'to sing'
 പാടൂ

3.3.6.

/n/	/ṇ/	/-R/	/-l/	/-l̪/	/p/	/t/	/l/	/y/ etc.
ൻ	ണ	ർ	ൽ	ൾ	പ്	ത്	ഴ്	യ്

3.3.7.

/mp/	/iṅk/
മ്പ	ങ്ക

3.8.8.

/nd/	/ṅt/	/cj/
ന്ദ	ണ്ട	ഞ്ച

3.3.9.

/-am/	as in	/maram/	/ambujam/	/aṅgam/
		മരം	അംബുജം	അംഗം

3.3.10.

/nd/ or /nn/ /ŋg/ or /ññ/ as in /indira/ or /innira/
 ഇന്ദിരാ
 /aṅgam/ or /aṅṅam/
 അംഗം

3.3.11.

/tʃ / as in / tʃiiṅam/ , / paʃʃi /
 ക്ഷി ക്ഷീണം പക്ഷി

3.3.12.1.

Examples for phoneme-grapheme correspondence in detail

Phoneme or phoneme sequence	Grapheme	Allographs	Examples		Meaning
			Phonemically	Graphemically	
1	2	3	4	5	6
/i/	ഇ	-i	iviḍe	ഇവിടെ	'here'
			ciri	ചിരി	'smile'
/ii/	ഈ	-ii	iicca	ഈച്ച	'fly'
			viiti	വിതി	'width'
/e/	എ	-e	eviḍe	എവിടെ	'where'
			keṭṭu	കെട്ടു	'tie'
/ee/	ഏ	-ee	eelam	ഏലം	'cardamam'
			keeraḷam	കേരളം	'Kerala'
/a/	അ		amma	അമ്മ	'mother'
			kaḍala	കടല	'Bengal gram'
/aa/	ആ	-aa	aaṅga	ആന	'elephant'
			kaalam	കാലം	'season'
/ay/	ഐ	-ay	ayśvāryam	ഐശ്വര്യം	'prosperity'

/o/	ഒ	ഒ — ാ	oṭṭakam	ഒട്ടകം	'camel'
			koti	കൊതി	'desire'
/oo/	ഓ	ഓ — ാ	ooḍu	ഓടു	'run'
			coora	ചോര	'blood'
/u/	ഉ	ഊ ഉ	umma	ഉമ്മ	'kiss'
			kutira	കുതിര	'horse'
			tuṇi	തൂണി	'cloth'
			puRam	പുറം	'page'
			nuṇa	നണ	'lic'
			varu	വര	'come'
/uu/	ഊ	ഊ ഉ	uuma	ഊമ	'dumb'
	ഊ	ഊ	kuura	കൂര	'roof'
		ഊ	tuṇṇ	തൂൺ	'pillar'
			puuram	പുരം	'a star'
			nuul	നൂൽ	'thread'
			ruupa	രൂപ	'rupee'
/U/			pattU	പത്തു്	'ten'
			maRukU	മറുകു്	'mole'
			atU	അതു്	'that'
			cuurU	ചുരു്	'odour'
/av/	ഔ	ഔ — ഊ or -ഊ	kavtukam	കൗതുകം	'curiosity'
/k/	ക		kaḍala	കടല	'Bengal-gram'
			paka	പക	'revenge'
/kh/	ഖ		khaṇi	ഖനി	'mine'

/kk/	ക	akkam	അക്കം	'number'
/ky/	കൃ	vaakyam	വാക്യം	'sentence'
/kl/or/kl/	കു	kliptam	കുരിപ്പം	'limited'
		k aavU	റവ്	'tin coating'
/kv/	കവ	pakvam	പകവം	'mature'
/kṣ/	ക്ഷ	ṭṣiiṇam	ക്ഷീണം	'tiredness'
/kRi/	കൃ	kRiṣi	കൃഷി	'agriculture'
/kR/	കൃ	kRemam	ക്രമം	'order'
/g/	ഗ	gaṇam	ഗാനം	'song'
/gh/	ഘ	khaṇam	ഘനം	'weight'
/gn/	ഗ്ന	nagṇam	നഗ്നം	'naked'
/gm/	ഗ്മ	yugmam	യുഗ്മം	'pair'
/gy/	ഗൃ	yoogyam	യോഗ്യം	'suitable'
/gr/	ഗ്ര	graham	ഗ്രഹം	'planet'
/gRi/	ഗൃ	gRiham	ഗൃഹം	'house'
/gl/	ഗ്ല	g aani	ഗ്ലാനി	'gloom'
/ṅṅ/	ങ്ങ	maāṅṅa	മാങ്ങ	'mango'
/c/	ച	caayam	ചായം	'paint'
/cc/	ച്ച	pacca	പച്ച	'green'
/ch/	ചര	chaaya	ചരായ	'shade'
/cch/	ച്ഛ	acchan	അച്ഛൻ	'father'
/cy/	ചൃ	achyutaṅ	അചൃതൻ	'a name'
/j/	ജ	jaati	ജാതി	'caste'
/jj/	ജ്ജ	majja	മജ്ജ	'lymph'
/jv/	ജവ	jvaram	ജവരം	'typhoid'

/jh/	ശ			
/jR/	രൂ	vajRam	വരൂ	'bimond'
/ñ/	ഞ	ñaan	ഞാൻ	'I'
/ññ/	ഞ്ഞ	mauñā	മഞ്ഞ	'yellow'
/ñc/	ഞ്ച	añjU	അഞ്ചു്	'five'
/t/	ട	ṭeppU	ടേപ്പു്	'tape'
		paḍa	പട	'army'
/tt/	ട്ട	paṭṭi	പട്ടി	'dog'
/ṭR/	ട്ര	ṭReyiñ	ട്രെയിൻ	'train'
/ḍ/	ഡ	ḍeppi	ഡപ്പി	'box'
/ḍḍ/	ഡ്ഡ	iḍḍali	ഇഡ്ഡലി	'idlis'
/ḍh/	ഡ	muuṭhan	മൂഡൻ	'fool'
/ḍR/	ഡ്ര	dRaama	ഡ്രാമ	'drama'
/ṇ/	ണ	paṇam	പണം	'money'
/ṇṇ/	ണ്ണ	kaṇṇi	കണ്ണി	'link'
/ṇt/	ണ്ട	ceṇḍa	ചെണ്ട	'drum'
/ṇḍ/	ണ്ഡ	maṇḍalam	മണ്ഡലം	'field'
/t/	ത	taram	തരം	'sort'
/tt/	ത്ത	tatta	തത്ത	'parrot'
/th/	ഥ	ratham	രഥം	'chariot'
/tR/	ത്ര	raatRi	രാത്രി	'night'
/ty/	ത്യ	tyaagam	ത്യാഗം	'sacrifice'
/tv/	ത്വ	tatvam	തത്വം	'principle'
/tm/	ത്ഥ	aatmaavU	ആത്മാവു്	'soul'
/ts/	സ	ulsaaham	ഉത്സാഹം	'enthusiasm'

/tbh/	ത	ulphavam	ഉത്ഭവം	'source'
/d/	ദ	daanam	ദാനം	'gift'
/dy/	ദ്യ	sadya	സദ്യ	'feast'
/dr/	ദ്ര	dravam	ദ്രവം	'solid'
/ddh/	ദ്ധ	butthan	ബുദ്ധൻ	'Buddha'
/dh/	ധ	thanam	ധനം	'wealth'
/n/	ന	nalla	നല്ല	'good'
/n̄/	ന	pani	പനി	'fever'
/nn/	ന്ന	panni	പന്നി	'pig'
/nn̄/	ന്ന	panna	പന്ന	'fern'
/nm/	ന്മ	nanma	നന്മ	'virtue'
/nt/	ന്ത	candam	ചന്തം	'beauty'
/nd/	ന്ദ	indira	ഇന്ദിര	'a name'
/ny/	ന്യ	nyaayam	ന്യായം	'justice'
/ñk/	ങ്ക	paṅga	പങ്ക	'fan'
/np/	മ്പ	cembU	ചെമ്പ്	'copper'
/nR/	ന്റ	ende	എൻറെ	'mine'
/nv/	മ്പ	anveesa ṇam	അന്വേഷണം	'inquiry'
/p/	പ	pata	പത	'foam'
/ph/	ഫ	phalam	ഫലം	'result'
/pp/	പ്പ	appam	അപ്പം	'cake'
/pn̄/	പ്ന	svapnam	സ്വപ്നം	'dream'
/pR/	പ്ര	pRaayam	പ്രായം	'age'
/py/	പ്യ	kapyaaR	കപ്യാർ	'priest'

/pɪ/	പ	pɪaavU	പ്ലാവു	'jack fruit tree'
/b/	ബ	belam	ബലം	'strength'
/bh/	ഭ	phayam	ഭയം	'fear'
/br/	ബ്ര	brahmaavU	ബ്രഹ്മാവു	'Brahma'
/bɪ/	ബ്ല	bɪayɔU	ബ്ലയിഡ്	'blade'
/bd/	ബ്ദ	ṣabdham	ശബ്ദം	'noise'
/bhy/	ഭ്യ	asabhyam	അസഭ്യം	'uncultured'
/m/	മ	maram	മരം	'tree'
/mɳ/	മ്ല	nimṅam	നിമ്ലം	'low'
/my/	മ്യ	saamyam	സാമ്യം	'resemblance'
/mɪ/	മ്ലി	mɪaṅgam	മ്ലാനം	'sad'
/mR/	മ്ര	taamRam	താമ്രം	'copper'
/y/	യ	paayasam	പായസം	'payas':
/yy/	യ്യ	vayya	വയ്യ	'unable'
/r/	ര	resam	രസം	'juice'
/ry/	ര്യ	kaaryam	കാര്യം	'matter'
/l/	ല	liila	ലീല	'name'
/ll/	ല്ല	nalla	നല്ല	'good'
/l/	ള	vaḷa	വള	'bangle'
/ll/	ള്ള	kaḷḷam	കള്ളം	'false'
/l/	ഴ	maja	മഴ	'rain'
/v/	വ	vara	വര	'line'
/vv/	വ്വ	covva	ചൊവ്വ	'mars'
/vy/	വ്യ	vyaayaamam	വ്യായാമം	'exercise'
/vR/	വ്ര	vRaṅgam	വ്രണം	'sore'

/ṣ/	ശ	ṣeri	ശരി	'right'
/ṣṣ/	ശ്ശ	niṣṣeeṣam	നിശ്ശേഷം	'completely'
/ṣv/	ശവ	ṣvaasam	ശ്വാസം	'breath'
/ṣc/	ശ്ച	aaṣcaryam	ആശ്ചര്യം	'wonder'
/ṣy/	ശ്യ	ṣyaama	ശ്യാമ	'a name'
/ṣR/	ശ്ര	ṣRii	ശ്രീ	'prosperity'
/ṣl/	ശ്ല	ṣlookam	ഘട്ടാകം	'stanza'
/ṣ/	ഷ	maṣi	മഷി	'ink'
/ṣṭ/	ഷ്ട	kaṣṭam	കഷ്ടം	'difficulty'
/ṣṇ/	ഷ്ണ	kaṣṇam	കഷ്ണം	'piece'
/s/	സ	sammaanam	സമ്മാനം	'gift'
/ss/	സ്സ	manassU	മനസ്സ്	'mind'
/st/	സ്ത	vastu	വസ്തു	'thing'
/sṇ/	സ്ണ	sṇeeham	സ്നേഹം	'love'
/h/	ഹ	haaram	ഹാരം	'garland'
/hy/	ഹ്യ	sahyaṇ	സഹ്യൻ	'sahya mountain'
/hṇ/	ഹ്ണ	cinṇam	ചിഹ്നം	'symbol'
/R/	റ	taRa	തറ	'road'
/Rk/	ർക്ക / ക്ക	taRkkam	തർക്കം/തക്കം	'dispute'
/Rp/	ർപ്പ / പ്പ	takaRpaṇ	തകർപ്പൻ/ തകപ്പൻ	'devastating'
/Rt/	ർത്ത / ത്ത	ooRtu	ഓർത്തു/ ഓത്തു	'remembered'

II PHONETIC READERS

- 1 Kannada Phonetic Reader
- 2 Malayalam Phonetic Reader
- 3 Tamil Phonetic Reader
- 4 Telugu Phonetic Reader
- 5 Assamese Phonetic Reader
- 6 Kashmiri Phonetic Reader
- 7 Punjabi Phonetic Reader
- 8 Sindhi Phonetic Reader
- 9 A Pidgin Language Phonetic Reader
- 10 Manipuri Phonetic Reader
- 11 Ao Naga Phonetic Reader
- 12 Angami Naga Phonetic Reader
- 13 Sema Naga Phonetic Reader
- 14 Tripuri Phonetic Reader
- 15 Thaadou-Kuki Phonetic Reader

III SCRIPT

- 1 An Introduction to Tamil Script
- 2 An Introduction to Telugu Script

IV TEACHING MANUALS**a) Basic and Intensive Courses**

- 1 An Intensive Course in Malayalam
- 2 An Intensive Course in Telugu
- 3 An Intensive Course in Tamil
- 4 An Intensive Course in Kannada
- 5 An Intensive Course in Punjabi
- 6 An Intensive Course in Marathi
- 7 An Intensive Course in Gujarati
- 8 An Intensive Course in Sindhi
- 9 An Intensive Course in Assamese

b) Intermediate Courses

- 1 An Intermediate Course in Malayalam
- 2 An Intermediate Course in Tamil
- 3 An Intermediate Course in Kannada
- 4 An Intermediate Course in Telugu
- 5 An Intermediate Course in Assamese
- 6 An Intermediate Course in Oriya
- 7 An Intermediate Course in Punjabi
- 8 An Intermediate Course in Marathi
- 9 An Intermediate Course in Gujarati

c) Advanced lessons/selections from literature

- 1 Advanced Course in Kannada
- 2 Advanced Course in Telugu
- 3 Advanced Course in Tamil
- 4 Advanced Course in Marathi
- 5 Advanced Course in Gujarati
- 6 Advanced Course in Malayalam

V READING SKILLS

- 1 Reading Skills Workbook in Kannada
- 2 Reading Skills Workbook in Marathi
- 3 Reading Skills Workbook in Tamil
- 4 Reading Skills Workbook in Hindi
- 5 Reading Skills Workbook in Assamese
- 6 Reading Skills Workbook in English
- 7 Teaching Efficient Reading
- 8 Pathana Kaushalamu (Abhyasa Dipika)
- 9 Pathana Kaushalamu (Pathya Dipika)

VI MISCELLANEOUS**a) Bridge course**

- 1 Pre and Post Test (Kannada bridge course)
- 2 Vyasanga Shikshaka (Kannada bridge course)
Parts 1 — 2
- 3 Vyasanga Shikshaka (Kannada bridge course)
Parts 3, 4 & 5

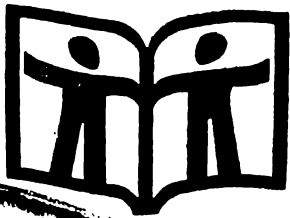
b) Adalita Lekhana**c) Others**

- 1 *Vartavaha*: Bulletin No. 1 to 10
- 2 Language Teaching - A selected Bibliography

VII CONFERENCES AND REPORTS

- 1 National Conference on Dictionary Making in Indian Languages (25th, 26th, 27th and 28th March, 1970)
- 2 Conference of Heads of Tribal Research Bureaus/Institutions, etc., in India (4th, 5th and 6th August, 1971)
- 3 Analytical Word-list-1 (ending-wise)

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